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**Exploring breathwork paradigms of
South African singing education lecturers**

by

Gerhardus Cornelius Potgieter

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Dr Ronél de Villiers

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“It's the time of the breathwork field. Many of us that have been called to it many decades ago, we've known that this is the most central and powerful medicine for humanity. The most sensual and powerful nutrient. It's democratic. It literally belongs to everyone. It's an equal opportunity employer. Everyone has the right to do it. Everyone needs to do it. We have known it is embedded in every part of our body. The more they study the brain, the more they discover that the respiratory circuits are embedded in every place that they can find in the neural brain, but then also in the cardiac brain and then in the enteric brain, in the gut. It's like this respiration, this breathing. Then the breathwork that is the understanding of receiving that and utilizing it for our personal growth, for our emotional well-being, and our physical well-being, there is probably no more sacred treasure on this planet than the breath for each person ... To be able to breathe fully is to be able to love fully. To be able to breathe fully is to be able to self-express fully. To be able to breathe fully is to be able to be creative fully.”

- Jessica Dobb -

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Mr Gert Potgieter

Humanities Education

24 February 2022

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DEDICATION

To all my students of the present day and yesteryear: you ignited the flame of this research endeavour. I gained much on this voyage of discovery. Thank you!

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ABSTRACT

This study explored the breathwork paradigms of South African Singing Education Lecturers (SASingEdL) through the lens of a Life Skills educator. The current South African Curriculum and Assessment Policy (CAPS) requires Life Skills educators to teach the concepts of 'breathing awareness', 'breath control', and 'breathing exercises' in the school classroom. Within the Life Skills curriculum, these breathwork teaching and learning (BWTL) concepts are categorised under the 'warm up and play' topic of the Performing Arts category. More specifically, these concepts form part of 'vocal warm-up', i.e., singing. However, exactly why and how these concepts should find application in the classroom is poorly articulated in the CAPS. Subsequently, learner textbooks reflect a meagre effort towards BWTL. One specific learner textbook series used in South African schools ignores the subject altogether.

There is compelling evidence from educational studies in the Americas (USA, Canada), Oceania (Australia, New Zealand), Europe (Germany), and the Far East (Japan, India, Singapore, Taiwan) that demonstrates how BWTL plays a beneficial role in learner well-being. Thus far, to my knowledge, no noteworthy study in this regard has been undertaken in South Africa. With the aid of breathwork, learners can address their anxiety levels, regulate their emotions, and attain mental focus. However, the benefits of well-being derived from breathwork require a fair degree of breathwork literacy. Therefore, it is vitally important for Life Skills educators to be well prepared in breathwork concepts to enable them to convey these to the learners.

This study envisioned an emergent singing education breathwork teaching and learning (SingEdBWTL) framework for use by Life Skills educators. Such a breathwork framework can guide lecturers at Higher Education Institutions to aid future educators, assist Life Skills educators to animate breathwork concepts in the school classroom and be a valuable tool for future BWTL research in South Africa.

Underpinning this qualitative interpretative study, the Russian Systema Method seven principles of breathing (RSMSPB) was employed as a theoretical framework. Besides extensive literary reviews on breathwork principles and the role of breathwork for well-being, data were gathered primarily through nine semi-structured

interviews, supported by document analysis. The deductive data analysis approach culminated in a proposed Singing Education Breathwork Quotient (SingEdBWQ).

Keywords: breathwork teaching and learning; singing education; breathwork principles; breathwork and well-being

Ricky Woods Academic Editing Services

Ricky Woods Academic Editing Services
Cell: +27 (0)83 3126310
Email: rickywoods604@gmail.com

Editing of Doctoral thesis

Name of Editor: Marietjie Alfreda Woods

MA (Ricky) Woods

Ma'wot

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ABBREVIATIONS AND ACRONYMS

BWTL	Breathwork Teaching and Learning
CAPS	Curriculum and Assessment Policy Statement
FET	Further Education and Training
GDE	Gauteng Department of Education
MusEd	Music Education
POPIA	Protection of Personal Information Act
RSM	Russian Systema Method
RSMSPB	Russian Systema Method Seven Principles of Breathing
SASingEdL	South African Singing Education Lecturers
SDG3	3rd Sustainable Development Goal of the United Nations
SDG4	4th Sustainable Development Goal of the United Nations
SingEd	Singing Education
SingEdBWTL	Singing Education Breathwork Teaching and Learning
SingEdBWQ	Singing Education Breathwork Quotient

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CHAPTER 1:

ORIENTATION AND BACKGROUND – *BREATHING IN*

1.1 THE FIRST IN-BREATH

While the human body can survive for a few weeks without food and for a few days without water, it can only survive a few minutes without breathing (Aideyan *et al.* 2020; Morningstar 2018; DiStefano 2016; McKeown 2015; Indik 2009; Nugent 2009; Ramacharaka 2008; Briffa 2002; Rama *et al.* 1996; Carter & Weber 1994; Yesudian & Haich 1959). According to Clarke (2019), and Vasiliev and Meredith (2006), we can consider breathing to be the most fundamental function of our body because of the key role it plays in most of our physiological and psychological processes. However, because it is an automatic bodily function, the deceptive simplicity of this everyday process is easily overlooked amidst the sophistication and complexity of our modern-day society (Peyton 2019; Morningstar 2018; Sheikhbahaei & Smith 2017; Ruth 2015; Barrier 2009; Frederick 2007; Emmons & Chase 2006; Douglas & Patenaude-Yarnell 2005; Edwards 2005; Sell 2005; Fried 2000; Hymes 1996). Gilchrist (2014:01m:39s) comments, “Breath. Your most essential tool in life, is neglected”. Also, Chatterjee (2020) states that we are living in a breath illiterate society. Currently, incorrect and mindless breathing habits are rife and contribute to an array of pathological health outcomes (Aideyan *et al.* 2020; Nestor 2020; Fountain 2019; Brulé 2017; Vranich 2016; McKeown 2015; Gilchrist 2014; Lee & Campbell 2013; Novotny & Kravitz 2013; Nugent 2009). It has therefore become imperative for the matter of breath literacy to be addressed.

In September 2015, the United Nations General Assembly announced 17 global sustainable development goals as a transformative, universal framework to address three interwoven dimensions of our global existence: People, Planet and Prosperity. These goals, to be achieved by the year 2030, were adopted by nearly 200 nations (Jha *et al.* 2016). The Sustainable Development Goal 4 (SDG4) envisions quality education for all. Through quality breathwork teaching and learning (BWTL) learners can gain valuable life skills to navigate their well-being. Sustainable Development Goal 3 (SDG3) is “good health and well-being”, and it aims to “ensure healthy lives

and promote well-being for all ages” (Jha *et al.* 2016; United Nations 2015). Although BWTL is alluded to in the Curriculum and Assessment Policy Statement (CAPS) for Life Skills (Department of Basic Education 2011a; 2011b; 2011c; 2011d), there is a remarkable stillness in the South African academic educational literature regarding breathwork literacy. What needs to be taught, why it should be taught, and how it should be taught are not clearly articulated. The possibilities that it holds for contributing towards broad-based well-being in school communities are also largely unexplored. Breathwork is inherent and embedded in singing (Kulkarni *et al.* 2013), a component of the Life Skills programme in South African schools, and therefore, pertinent to the music education field of study on a theoretical and practical level. Indik (2009:131) states that “singing is amplified breathing” and Davids and LaTour (2021:19) write: “Breathing is *the* foundation of singing.” Also, Skoog (2004), and Decker (1977) regard correct breathing as the most substantial contributor to good singing. Singing education (SingEd) is therefore suited ideally to opening the door leading towards advancing BWTL. To arrive at a guiding teaching and learning framework for Life Skills educators to impart the fundamentals of breathwork concepts meaningfully to learners is at the heart of the proposed research that will investigate breathwork paradigms of South African Singing Education Lecturers (SASingEdL).

In this introductory chapter, the reader has the opportunity of ***breathing in*** the rationale, background and context, focus and purpose, and research questions of this breathwork exploration. Also, abridged introductory information is included regarding the key concepts, relevant literature, proposed research methodology, and ethical premeditations.

1.2 BACKGROUND AND CONTEXT

While analysing the CAPS in order to develop music learner books for non-specialist teachers in the Grade 4–6 Intermediate Phase, I encountered the terminology “breathing awareness”, “breath control”, and “breathing exercises” (Department of Basic Education 2011b:12,34). The latter ignited the question: How are Life Skills teachers, many of whom are not trained singers but generalist teachers, equipped at

South African Higher Education Institutions to comply with this demand of the curriculum? Also: Are lecturers at Higher Education Institutions mindful of the teaching requirements of the CAPS? In this regard, De Villiers (2021:3) cites “higher education and school practise breaches” as a negative factor of South African music education teacher training. In the CAPS document, no detailed explanation is presented or suggested of precisely what these breathing concepts entail or how to impart them to learners, merely the instruction to do so. It is assumed that educators know exactly what the mentioned terminology implies and how to make manifest aspects of breathwork in their classrooms. A frequently used Life Skills textbook merely indicates to learners, “Your teacher will show you how to breathe” (Amato *et al.* 2020a:34), and that is the extent of BWTL for the entire first term in Grade 4. Akin to the CAPS, the authors of this textbook seem to rely on the assumption that the educator is schooled in BWTL methodology.

For educators, tertiary vocational training is crucial to preparing them for their careers. De Villiers (2017:6) reasons that effective teaching depends on lecturers equipping student teachers with essential theoretical knowledge and practical skills. Prinsloo (2007:167) concluded in her study on the perceptions of Life Skills teachers that the Life Skills programme “requires expert skills from teachers” and further comments that the quality and quantity of training are not always sufficient (Prinsloo 2007). Relevant to the proposed research is the opinion of Barrier (2009:2) that “[i]t is very important to have an understanding of breathing and how it works. One does not want to teach improper breathing to students”. The questions therefore arise about what, why and how SASingEdL prepare student educators to navigate breathwork requirements in the classroom? In her research article *Music teachers’ usage of the breathing and voice exercises in song teaching*, Gul (2018) communicates the results of her field survey study among 228 teachers from 47 cities in Turkey. Gul (2018) explored reasons given by music teachers for often using, partially using, and never using breathing exercises in song teaching. Only 33% of the research participants indicated that they regularly use breathing exercises. The balance of 67% felt uncomfortable with and inadequate to engage in breathwork teaching. This research result asks the question: Why would most Turkish music teachers feel ill-equipped to introduce breathing exercises if this is an actual requirement of the teacher training course content (Özgül 2017)? It is evident that

breath literacy within SingEd is placed “very low down on the agenda” (Sell 2005:73) both internationally and nationally. No evidence could be found of similar surveys in South Africa.

According to Collyer (2009:153), when singing teachers are asked, “what do you need to sing well?”, despite answering “good breathing”, “there remains a large gulf between research into breathing for singing and its influence in the teaching studio”. Also, Alt (1990:33) believes that “[t]he teaching of breath management is misunderstood by students more often than any other aspect of singing”. Employing phenomenological interviews, Rooney (2016:159) investigated vocal pedagogical approaches of acclaimed vocal coaches and one of the key findings was that there existed “much disagreement between the interviewees about how to teach breathing”. A variety of reasons seem to exist for the disparate methods of BWTL within SingEd.

Animosity towards scientific investigations into singing as an art resulted in some voice teachers looking at “scientific inquiry as a useless and pernicious evil” (Davis 2009:7). Sell (2005:69) adds: “Some teachers even have a fear that science will take over, defensively declaring science has no place in art.” Smith (2007) believes that a SingEd scientific approach is misaligned with the big picture. Naseth (2012:39) comments: “Historically, proponents of scientifically based and non-scientifically based methods have often disagreed about the validity of each other’s ideas, many times at the expense of pedagogical progress.” As a result, many books and articles on breathwork within the domain of SingEd are written from the point of personal and practical experience rather than from that of scientific inquiry (Croad 2020; Daniels 2020; Fountain 2019; LeBorgne & Rosenberg 2019; Blades 2018; Rooney 2016; Fedson 2009; Boshkoff 2008; Countryman & Sung Ha 2007; Frederick 2007; Alt 1990; Christl 1983). The latter has resulted in many contradictory methods and terminologies used for conveying breathwork techniques because of a lack of familiarity with scientifically accepted respiratory semantics (Michael 2010; Collyer 2009; Davis 2009; Sell 2005; Freed 1991; Doscher 1987; Spillane 1987). Emmons (1988:30) asks, “Where breathing for singing is concerned, there seem to be hundreds of concepts. How is that possible?” It is clear that breathwork, the key component of SingEd, begs scientific investigation. Therefore, this scientific inquiry

aimed to identify common BWTL principles to guide educators through this “topic of great confusion” (Skoog 2004:2).

Rooney (2016), Michael (2010), Emmons and Chase (2006), and Laukkanen (2003) view conflicting BWTL methods as the result of personal perceptions of kinaesthetic feedback that were handed down from educator to student over many generations. LeBorgne and Rosenberg (2019), Emmons (1988), and Doscher (1987), on the other hand, argue that because each individual singer differs physically and psychologically, a variety of breathing methodologies exist. As a result, Lyle (2011:316) remarks that “a single ‘best method’ may not be forthcoming”.

There is, at present, a significant body of Western scientific investigation in various disciplines regarding the significance of optimal respiration: sports science (Vranich & Sabin 2020; Guinness *et al.* 1986); dietary science (Meerman 2019; Briffa 2002); sleep science (McKeown 2020; Veltheim & Muiznieks 2013; Guilleminault & Sullivan 2014); healthcare sciences (Lord *et al.* 2010; Bonilha *et al.* 2009; Eley & Gorman 2008; Goleman 1996). In addition, the breathwork (see 1.6.1) and well-being (see 1.6.6) connection is inherent in many Eastern modalities like yoga, tai chi, chi gong, karate, meditation and mindfulness practices (Clarke 2019; Lee & Campbell 2013; Edwards 2008; Bottomley 2004a; 2004b; Taylor 2004). In this regard, Selby (2003:25) writes: “It’s been known for thousands of years that the simple act of being aware of our breathing can transform our lives for the better”. Lee and Campbell (2013:10) add: “With those ancient practices and knowledge, coupled with an emerging body of scientific study on the effects of being able to draw even one good breath, we’re beginning to wake up to a powerful tool for life.”

Many recent international studies conducted by nurses, psychologists and non-SingEd teachers have been undertaken in schools where breathwork was employed either as a singular or as part of a larger intervention strategy, with the aim to measure the success of self-regulation skills, often termed ‘mindfulness’, taught to learners. The latter affected classroom behaviour, and emotional management positively, reduced anxiety and enhanced mental alertness crucial in academic performance (Browne 2020; Cornell 2019; McCoy 2019; Mitchell 2019; King 2018 *et al.*; Rowley 2018; Haines *et al.* 2017; Dietrich 2016; Thomas, 2014; Brown 2013; Buchler 2013).

The basic premises of these investigations are that breathing impacts our physiological and psychological well-being. Because the primary focus in singing is on breathing mechanics, I believe that SingEd is truly underestimated in addressing well-being and quality education, as accentuated by the SDG3 and SDG 4 (see 1.1).

For the BWTL concepts within the CAPS document to come to fruition, it is vital for educators to be empowered in fundamental breathwork literacy knowledge and skills. What is needed is guiding principles for BWTL that start at Higher Education Institutions and are consecutively filtered down to manifest in school classrooms. Aside from generalist Life Skills teachers who touch the lives of thousands of students daily, educators responsible for training individual singing students, vocal ensembles, and choirs could also benefit from an exploration of breathwork. There is a strong possibility that BWTL guiding principles could prove helpful in improving and advancing breathwork literacy in South African schools.

1.3 RATIONALE AND MOTIVATION

As a professional music educator, I have always felt the obligation to reciprocate to the profession that shaped me. Endeavouring to empower both teachers and learners, I have developed learner workbooks, both published and unpublished, in theory of music, aural training and class music. Several of my choral compositions and arrangements also assist colleagues to fulfil their vocational demands. As the CAPS document requires breathwork to be integrated in the classroom, I need to gain insight regarding this subject and, in so doing, to construct guiding principles that can aid the teaching and learning thereof. Lyle (2011:310) says that, although “we have made many advances in voice science, there is still a lack of agreement among voice teachers regarding the subject of breathing”.

My personal motivation for engaging in this study is to substantiate my observational and intuitive knowledge about the benefits of breathwork with scientific literature and empirical research exploration. As an accompanist of choirs, vocal coach, class music teacher, energy healthcare practitioner and also a past and present participant in various modalities that include breathwork as part of their disciplines: yoga, tai chi,

chi gong and meditation, I have always been intrigued by its transformative abilities. Murray-Harvey (2010:112) writes: “The evidence is mounting that when schools attend to the non-academic dimensions of wellbeing they are, at the same time, optimising opportunities for academic success”. Becoming “breath-conscious” (Westmacott-Brown 2019:10) could positively impact the quality of life of the South African populace, a constitutional aim highlighted by the South African Minister of Basic Education Angie Motshekga (Department of Basic Education 2011b: Introduction).

We live in an era when the meeting of science and ancient wisdom is an area of emergent academic inquiry (Çorak 2019; Ashton 2011; Ramacharaka 2008; Braud & Anderson 1998; Johnsen 1996; Rama *et al.* 1996). On this Lee and Campbell (2013:16) write: “Breathing correctly matters. Together the ancient wisdom and the growing body of scientific evidence build a compelling case for how breathing impacts your life”. In this transdisciplinary exploration, I drew on the body of knowledge about the fundamentals of breathwork from both SingEd and non-SingEd literature. Highlighting the role and significance of breathing through scientific re-searching, re-looking, and re-discovering could stimulate alternative paths for academic discourse and investigation within SingEd specifically and education at large. I believe this exploration into the niche area of BWTL, as it manifests within the modality of SingEd, can make a noteworthy contribution to the scholarly body of knowledge.

1.4 FOCUS AND PURPOSE

This study focuses on exploring the nature and value of breathwork delineators. To reach this aim, not only were six SASingEdL consulted but also three breathwork experts, one each in the fields of martial art, healthcare and Life Skills education. These non-SingEd research participants were consulted to aid the researcher in navigating the inconsistent SingEd breathwork literature and research landscape. The SASingEdL included two vocal methodology specialists, i.e., opera singer trainers, two choral masters and two music education lecturers.

The purpose of the research is to identify fundamental breathwork delineators.

Potentially, such research could assist Life Skills educators in navigating and addressing the prescribed CAPS concepts of “breathing awareness”, “breath control”, and “breathing exercises” within South African schools (Department of Basic Education 2011b:12,34). A singing education breathwork teaching and learning (SingEdBWTL) framework is envisioned that can be of assistance to Life Skills educators.

1.5 RESEARCH QUESTIONS

To explore the breathwork landscape, the following research questions guided the scientific exploration:

- What are the breathwork paradigms of South African singing education lecturers?
- Why should breathwork concepts be included in a singing education breathwork teaching and learning framework?
- How is breathwork of significance to well-being?

1.6 CONCEPT CLARIFICATION

1.6.1 Breathwork

The term ‘breathwork’ is a union of two concepts, breath and work. The Oxford English Dictionary defines ‘breath’ as “air taken into or sent out of the lungs [or] an instance of breathing in or out” (Soanes *et al.* 2006:85) and ‘work’ as an “activity involving mental or physical effort done in order to achieve a result” (Soanes *et al.* 2006:886).

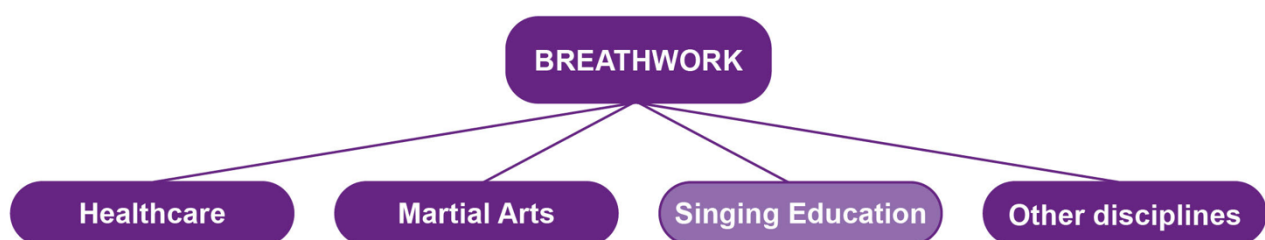


Figure 1.1: Breathwork disciplines (Potgieter 2023).

In application, ‘breathwork’ is an umbrella term that denotes the conscious use of breathing for a specific outcome. Therefore, breathwork manifests in unique ways within distinctive modalities. From a healthcare perspective, we read that breath awareness and conscious breathing are utilised for healing, growth, personal awakening and transformation in body, mind and spirit (Brulé 2017). For example, the intentional control of breathing patterns is utilised as a therapeutic intervention by numerous clinical mental health counsellors (Aideyan 2020). Also, we read about “the close association of breathwork with martial arts and survival applications” (Vasiliev & Meredith 2006:130). For example, firefighters are trained to remain calm and to conserve oxygen by employing breathwork techniques (Vranich & Sabin 2020). Breathwork is also fundamental to SingEd (Davids & LaTour 2021; Kulkarni *et al.* 2013; Indik 2009). For example, a vibrator, i.e., the vocal cords, requires a generator, i.e., breath, to produce sound which is fundamental to singing (Smith 2007).

The researcher admits that “breathwork”, per se, is not a standard or traditional SingEd descriptor, however, the trans-disciplinary investigation revealed this concept recently gaining international acceptance as an umbrella term (Dibb 2022; Manga & Murray 2022b; Morningstar 2018). Consequently, I introduced and used this concept within the context of SingEd in this thesis.

1.6.2 CAPS

The acronym CAPS denotes the Curriculum and Assessment Policy Statement, the label given to the “single, comprehensive, and concise policy document” (Department of Basic Education 2021) of the various phases and subjects within the South African schooling system. The different phases are: Foundation Phase – Grades R (preschool) to 3 (age 9) (Department of Basic Education 2011a), Intermediate Phase – Grades 4 (age 10) to 6 (age 12) (Department of Basic Education 2011b), Senior Phase – Grades 7 (age 13) to 9 (age 15) (Department of Basic Education 2011c) and Further Education and Training (FET) Phase – Grades 10 (age 16) to 12 (age 18) (Department of Basic Education 2011d).

1.6.3 Life Skills

Life Skills is a compulsory subject in the school system of South Africa. In the Life Skills CAPS document, we read that the aim is to nurture learners holistically throughout childhood (Department of Basic Education 2011b:8):

“The subject encourages learners to acquire and practise life skills that will assist them to become independent and effective in responding to life’s challenges and to play an active and responsible role in society. The subject aims to develop learners through three different, but interrelated study areas, that is, Personal and Social Well-being, Physical Education and Creative Arts.”

Pertinent to this study is that SingEd is a subcomponent of 1. Life Skills in the Foundation and Intermediate Phases, 2. Creative Arts in the Senior Phase, and 3. Music as an elected subject in the FET Phase.

1.6.4 Singing education

The concept of Singing Education (SingEd) consists of two primary ideas: singing and education. Summers *et al.* (2004:1799), defines ‘singing’ as “the activity of producing musical sounds with your voice” and ‘education’ as “the process of teaching and learning, usually at school, college, or university” (Summers *et al.* 2004:587).

SingEd, i.e., teaching and learning how to produce musical vocal sounds, manifests in various practices within South African schools. In contrast with choir singing or taking individual singing lessons as a co-curricular elective, all learners from Grades 0 to 9 take part in the singing component of the Life Skills subject (Department of Basic Education 2011a; 2011b; 2011c). From Grades 10 to 12, singing is an elective (Department of Basic Education 2011d).

1.6.5 Trans-disciplinarity

Summers *et al.* (2004:2062) explains ‘trans’ as “between two things or groups”. Also, both this dictionary and The Oxford English Dictionary convey the Latin translation as

“across”. (Summers *et al.* 2004:2062; Soanes *et al.* 2006:808). Thus, the concept of ‘trans-disciplinarity’ denotes operating between or across disciplines. To augment research outputs, a transdisciplinary research approach is prevalent amongst scholars (Edrisi & Abhilash 2021). Transdisciplinary research is understood to promote the exploration of novel dimensions, to be a platform for co-creativity across various disciplines and offering impactful solutions to global and grassroots challenges (Lawrence *et al.* 2021). In this study project, breathwork within the domain of SingEd is the major focus. However, to substantiate breathwork delineators, a cross-disciplinary literary review and fieldwork research were undertaken. First of all, a non-SingEd breathwork theoretical framework (see 1.7) has underscored the entire study of breathwork within SingEd. This is due to the fact that no such framework exists within the domain of SingEd. Furthermore, breathwork specialists outside of SingEd (see 1.4) were consulted to evaluate breathwork concepts within the incongruent SingEd literature (see 1.2).

1.6.6 Well-being

In well-being as a concept, two terms are merged, ‘well’ and ‘being’. The MacMillan Dictionary of English Spelling defines ‘well’ as “in a good way; favourably; in good health” (Manser 1997:493), and ‘being’ as “existence” (Manser 1997:40).

Thus, well-being denotes existing in a good or healthy way. The World Health Organization describes good health as a balance between physical, mental and social aspects of being (Hashimoto *et al.* 2015:1). Accordingly, The National Wellness Institute defines well-being as “an active process through which people become aware of, and make choices toward, a more successful existence” (National Wellness Institute 2020:1).

1.7 LITERATURE REVIEW

The Russian Systema Method Seven Principles of Breathing (RSMSPB) theoretical framework shaped the literary review on breathwork delineators. The seven breathing principles, rooted in ancient orthodox Christianity, is presently promoted by the Russian Systema Method (RSM) martial arts modality which was officially founded in

1993 (Vasiliev & Meredith 2006). The framework encompasses inhalation preferences, intake sufficiency, breath management, breathing rhythms, breath continuity, relaxation, and breath independence. Furthermore, I have endeavoured to broaden the breathwork conversation to include and highlight well-being as an output. The domains of psychological, physiological and spiritual well-being were reviewed. A comprehensive account of the breathwork literature can be found in Chapters 2 and 3. What follows is only a condensed version of these two chapters setting the tone for the comprehensive breathwork exploration.

1.7.1 Russian Systema Method breathwork principles

- **The principle of nose inhalation and mouth exhalation**

Many reasons could be found in the breathwork literature for why nasal in-breathing is favoured above mouth in-breathing. Hair at the entrance of the nose filters out harmful elements that may enter the body (Nestor 2020; Cafasso 2019; Lee & Campbell 2013; Felcar *et al.* 2010; Vasiliev & Meredith 2006; Edwards 2005; Yesudian & Haich 1959). The mucous membranes in the nose regulate and adjust the incoming air temperature suitably (Nestor 2020; Cafasso 2019; McKeown 2015; Felcar *et al.* 2010; Edwards 2005; Yesudian & Haich 1959). The nose moisturises possible dry air before it reaches the lungs (Cafasso 2019; Manga 2018; Ballentine 1996). Nitric oxide produced inside the nasal cavity and in the lining of blood vessels paves the way for optimal oxygen uptake by the bloodstream. It is an assistant to the immune system being antifungal, antiparasitic, antibacterial and antiviral (Nestor 2020; Cafasso 2019; McKeown 2015; Lee & Campbell 2013; Felcar *et al.* 2010; Ricciardolo *et al.* 2004; Al-Ali & Howarth 1998). Nasal inhalation regulates the volume of air taken into the lungs. The latter increases vital oxygen uptake (Pearl 2021; Cafasso 2019; McKeown 2015). The sense of smell connects us to our surroundings (Nestor 2020; Yesudian & Haich 1959). Nasal breathing is more regular and therefore it is calming and balancing (Westmacott-Brown 2019; McKeown 2015; Vasiliev & Meredith 2006). At the moment of birth, a baby draws her/his first life-breath through the nose with the support of the diaphragm. It is therefore considered the most natural way of breathing (Pearl 2021; Vranich & Sabin 2020; Acar 2016; McKeown 2015; Lee & Campbell 2013). This list of benefits mentioned here is by no means exhaustive.

In contrast, a substantial amount of literature expounds on the disadvantages of mouth inhalation. The latter is an underlying cause of halitosis, periodontal diseases, throat infections, negative child growth rate, sleeplessness and the worsening of symptoms related to other ailments like hay fever, asthma and chronic stress and anxiety (Nestor 2020; Cafasso 2019; McKeown 2015; Felcar *et al.* 2010; Di Francesco *et al.* 2004). Nestor explored the development of the human skull and learned that the human jaw had been shrinking progressively over time because of an ever-changing diet. As a result, the chin of humans are recessing behind their foreheads, the larynx is lowering, and the sinuses are shrinking. The shrinking of the nasal capacity creates a blockage and inhibits airflow (Nestor 2020). This offers a plausible explanation for the pathological phenomenon of mouth breathing.

Notably, most breathwork dialogue outside of SingEd advocates nose inhalation, drawing attention to its health and well-being benefits. Within SingEd literature itself, nose inhalation is either mostly ignored or contradictory signals are given (Acar 2016; Barrier 2009; Emmons & Chase 2006; Emmons 1988). It can be argued that singing a song often dictates taking quick inhalations in order to execute a musical phrase. Many singers therefore take the in-breath through their mouths while singing in order to draw the most air into their lungs in the quickest possible way. There is an argument for distinguishing between normal, everyday, correct, healthy breathing and modality-specific breathing (Pearl 2021; Vranich & Sabin 2020; Emmons 1988).

- **The principle of breath leading**

This principle highlights the dependency of every action on breathing. Therefore, the quality of the preceding breath influences the quality of the action that follows (Vranich & Sabin 2020; Lee & Campbell 2013; Vasiliev & Meredith 2006). Being able to voluntarily regulate our breathing (Hof 2020; Balasubramanian 2019; Brulé 2017; Strom 2015; Novotny & Kravitz 2013; Guinness *et al.* 1986) makes it possible to 'lead' our actions with breathing. Although 'action' is distinctive and befitting of each individual modality, what they do have in common is breathing. As such, the principle of breath leading is also valid for singing because "[s]ingers use air to activate their vocal cords", thus activating sound (Barrier 2009:1). The sound, therefore, the singing, is preceded or "led" by the act of breathing.

Sundberg (1992:53) writes that “demands placed on the respiratory system in singing are high”. More than merely breathing in before singing begins, i.e., the singing activity led by the breath, the singer also has to steer or lead the breath continuously through various musical elements of dynamics (loud or soft), pitch (high or low), and tone colour (light or heavy). Most SingEd literature denotes the terms “breath management” or “breath control” to this requirement (Davids & LaTour 2021; Croad 2020; Fountain 2019; Gul 2018; Acar 2016; Salomoni *et al.* 2016; Davis 2009; Sundberg 1992; Emmons 1988). Within SingEd, being conscious of breathing is thus of the utmost importance to singing and performing well. This highlights that the SingEd classroom is inherently well situated to address breath literacy within the broader school curriculum.

- **The principle of intake sufficiency**

The average person moves approximately 500 ml of air in and out of their lungs with each breath and takes 10 to 15 breaths each minute (Nestor 2020; Vranich & Sabin 2020; Balasubramanian 2019; Del Negro *et al.* 2018; McKeown 2015; Widmaier *et al.* 2008). These are, of course, approximate measurements because the physiology and resultant lung capacity of each human is unique.

Both over-breathing and under-breathing cause many modern human ailments and are often the result of breathing without real awareness (Pearl 2021; Nestor 2020; McKeown 2015; Thomas & Bruton 2014; Lee & Campbell 2013; Bonilha *et al.* 2009; Eley & Gorman 2008; Vasiliev & Meredith 2006). In this matter, the principle of intake sufficiency is also entangled with well-being. According to the demands of singing a song, a singer has to take in a sufficient amount of energy, i.e., adequate air, consciously, to initiate and maintain the sound. As such, control of breathing pressure and breathing patterns in singing are essential (Davids & LaTour 2021; Acar 2016; Salomoni *et al.* 2016; Barrier 2009; Frederick 2007; David 1995; Alt 1990; Doscher 1987; Decker 1977). Over-inhalation will cause body tension and will result in laboured singing. Under-inhalation will make it challenging to sustain a musical phrase.

Extensive knowledge about the respiratory system and other bodily systems supporting the respiratory mechanics are discussed meticulously in both non-

SingEd (Hof 2020; Strom 2015; Lee & Campbell 2013; Novotny & Kravitz 2013; Widmaier *et al.* 2008; Naifeh 1994; Guinness *et al.* 1986), and in SingEd literature (Fountain 2019; Acar 2016; Salomoni *et al.* 2016; Sell 2005; David 1995; Alt 1990), although the labels and terminology between the disciplines is not uniform. It is generally accepted, though, that breathing lower and deeper down into the body is more valuable and proves more efficient than upper and shallow breathing (Nestor 2020; Vranich & Sabin 2020; Acar 2016; Barrier 2009). Whereas most non-SingEd literature only creates awareness about breathing lower down into the body, SingEd literature concerns itself much more seriously with what is termed “breath support” (Salomoni *et al.* 2016; David 1995; Doscher 1987). Arguments differ about how exactly breath support is to be executed (Callaghan 2014; Cottrell 2010; Davis 2009; Douglas & Patenaude-Yarnell 2005; David 1995). Knowledge or education on the basic biological workings therefore is key to gaining insight into the principle of intake sufficiency, and this requirement is engrained in SingEd.

- **The principle of breath continuity**

Vasiliev and Meredith (2006:47-8) are of the opinion that “we often hold and obstruct our breath without noticing”. Pearl (2021) says about breath continuity that it should be fluent, unfragmented, soft and complete. Breath disruption may be physiological or psychological. Physiological breath disruption occurs because of restrictions in the physical body, such as bad posture, tension, disease, pain, injury, or fatigue that block the natural flow of the breath, while psychological breath disruption may occur as a stress response to a sudden unexpected happening or to long-term subconscious psychological habits of fear and anxiety. This emphasises the link between effective breathing principles and well-being.

David (1995:27) believes: “Singing requires a prolonged and steady flow of breath.” Without breath that keeps feeding the production of sound, singing is not possible. Continuous breath supply is critical. The term *legato* is used in music to denote the continuous, smooth connection of sound (Sneed 2000; Alt 1990; Scholes 1972). Emmons and Chase (2006:30-31) make this statement about legato singing: “The achievement of beauty and line are dependent upon legato ... In the history of the art of teaching singing, there has literally never been a knowledgeable vocal musician who disagreed with this principle.” During singing, obstruction of breath

can occur because of bad posture and/or tension created by high frequencies and is thus interrelated to the principle of non-tension. “Whether the air is flowing to support life or create sound, it should be stress-free.” (Barrier 2009:31) Another aspect of breath continuity addressed in SingEd literature is the concept of staggered breathing (Davids & LaTour 2021; Sneed 2000). This requires all members of a vocal group, ensemble or choir to take turns in creating a non-stop vocal line. Breath continuity is therefore achieved through teamwork. The primary requirement of legato singing and the phenomenon of staggered breathing highlights the SingEd capacity to address the principle of breath continuity.

- **The principle of the pendulum**

Vasiliev and Meredith (2006:60) explain that the Principle of the Pendulum within the RSM “teaches that breathing should be smooth and steady. Do not ... exhale before you complete your inhalation, and vice versa... The position of the pendulum at its extreme is like the natural breath pause (not forced stoppage) that lies between inhalation and exhalation.”

Breath holding, that is, when you pause for a while at the end of the exhalation or inhalation, is part of various modalities and is, amongst others, labelled “post inspiration” (Del Negro *et al.* 2018:356), “breath retention” (Edwards 2005:33; Reid 1998:133) and “micro-pause” (Moraveji 2014:11m:32s). This holding of the breath at the end of the respiration is said to have the benefit of discovering the depth of breathing, expanding and increasing breathing capacity, removing stale air or the reserve volume from the lungs, and calming the body and mind profoundly (Pearl 2021). While it is evident that the principle of the pendulum is used and understood within the RSM and other modalities, this principle is not regularly situated within SingEd.

Each individual song dictates the tempo of the breathing rhythm, that is, the continuous pattern of breathing in and out. Mostly, the in-breath is quick, and the out-breath is slow (Decker 1977). Salomoni *et al.* (2016:17) write: “In addition to time constraints related to musical rhythm, singing tasks require more rapid inspiration and longer expiration for sustained utterances than quiet breathing”. The singing breathing rhythm is, therefore, not necessarily smooth and regular, like the natural

swing of a pendulum, but is inherently irregular. On the other hand, the fact that singers sustain long phrases, thus having a continuously sustained out-breath, could possibly be viewed as a type of breath holding. Davids and LaTour (2021:24), on the other hand, think that a “very short suspension prior to exhalation allows a transition from using muscles for inhalation to using muscles for exhalation. In regular, everyday breathing, there is often no real suspension but rather an immediate shift from inspiration to exhalation. However, this brief pause is necessary for singing to set the stage for excellent breath support.”

The irregular breathing requirement of singing is modality specific but not considered normal. Herein lies the SingEd potential to create awareness of modality-specific requirements versus natural breathing requirements.

- **The principle of breath independence**

In the RSM teachings, there are no pre-programmed breath-linked reactions to an opponent's actions because the opponent's strategies are frequently unpredictable. Consequently, breathing exercises with frequent changes in physical routines are performed within this modality. For example, if you practised lowering the body on the out-breath for some time, it is important also to practise it consciously the other way around, thus practising raising the body on the out-breath (Vasiliev & Meredith 2006). “The point is to achieve conscious mastery and have the power to choose and adapt your breathing and motion to any situation” (Vasiliev & Meredith 2006:133). Each response is, therefore, appropriate for the challenge at hand. Breath independence keeps the body flexible and alert. Although this principle makes perfect sense, as explained within this RSM context, contextualising it within SingEd is challenging. In singing, it is possible in extraordinary and rare cases to reverse the breathing action but this is mostly not done. Singing while breathing in is not natural. Sound and, therefore, singing depend on breathing out. SingEd literature highlighting this concept was underrepresented.

- **The principle of non-tension**

Vasiliev and Meredith (2006:89), from the RSM school of thought, write that “your body should be relaxed at all times. Remember that breath is our power source, and only a body free of excess tension allows for sufficiently deep breath”. Various

authors make a distinction between a natural (non-tension) and an unnatural (tension) breathing mechanism (Adhana *et al.* 2016; DiStefano 2016; Vranich 2016; Bhikkhu 2015; McKeown 2015; Novotny & Kravitz 2013; Veltheim & Muiznieks 2013; Briffa 2002; Yesudian & Haich 1959). These authors all agree that healthy breathing becomes possible when the anatomy is sound, perfectly balanced, and relaxed.

While different breathwork modalities allow for all kinds of postures as long as the body is relaxed and allows for optimum breath flow, singers favour an upright standing position. In SingEd, Barrier (2009), David (1995), and Alt (1990) all agree that the singing respiratory process either profits or suffers directly from a singer's posture. The demands for singing could result potentially in tension within the vocal tract if not managed and if a healthy vocal technique is not established. Davids and LaTour (2021) list all kinds of challenges associated with constricting the muscles surrounding the vocal tract: strained sound, tired voice, difficulty developing a resonant tone, difficulty singing high pitches, singing loudly, and sustaining long notes. Sell (2005:71) is of the opinion that "It is rare to see someone with proper physical poise. Young children, adolescents, and adults, for that matter, ... acquiesce into the slouching habits of the general population. Singing teachers have to point out these bad habits and encourage their correction."

Since posture is crucial in singing, the principle of non-tension can be integrated and taught seamlessly within the SingEd classroom.

1.7.2 Breathwork and well-being

- **Psychological well-being**

The literature exploration revealed varied conversations that expound on and explore the use of breathwork in aiding balancing emotions, managing stress and attaining mental focus (Pearl 2021; HeartMath 2020; Nestor 2020; Vranich & Sabin 2020; Balasubramanian 2019; Ma *et al.* 2017; Strom 2015; Moraveji 2014; Sakano *et al.* 2014; Schuerman 2014; De la Huerta 2013; Lee & Campbell 2013; Veltheim & Muiznieks 2013; Homma & Masaoka 2008; Vasiliev & Meredith 2006; Briffa 2002; Grossman *et al.* 2001; Ehrmann 1999; Manné 1999; Boadella 1994; Naifeh 1994; Taylor 1994; Janov 1990; Rosenberg 1985; Yesudian & Haich 1959).

Breathing is connected intimately to the nervous system (Del Negro *et al.* 2018; Lee & Campbell 2013; Homma & Masaoka 2008; Vasiliev & Meredith 2006; Naifeh 1994; Guinness *et al.* 1986). By breathing slower and deeper into the body, considered the natural way of breathing, the parasympathetic nervous system is activated, bringing on a 'rest and digest' response. This has a calming effect and increases mental consciousness (Fountain 2019; Del Negro *et al.* 2018; Schuerman 2014; De la Huerta 2013; Edwards 2005; Carter & Weber 1994). On the other hand, when breathing is faster and shallower, it is considered an unnatural way of breathing. The sympathetic nervous system is triggered, enlivening a 'fight or flight' response. This plays a vital role in mental alertness geared towards self-protection (Nestor 2020; Vranich & Sabin 2020; McKeown 2015; Lee & Campbell 2013). The interdependency between emotions, stress, mental alertness and breathing is at the heart of many modalities that incorporate breathing as part of their disciplines. However, this conversation is lacking in SingEd literature. I believe that because singing necessitates breath awareness, SingEd is ideally situated to teaching students how to use breathing "upregulating to be alert and focused, and downregulating in order to keep calm" (Vranich & Sabin 2020:192).

Breathing is connected closely to the diaphragm muscle. Veltheim and Muiznieks (2013) offer unique insight into the role of the diaphragm in managing our emotions. Emotions are said to arrive at the diaphragm from various sources, such as immediate personal responses to life stressors, old pathological memories that resurface, reactions to other people's emotional states, and imagined adverse outcomes about something that may or may not happen. The diaphragm processes emotions and directs them to various locations in the body. The role of the diaphragm muscle in managing our emotions, as explained by various authors (Putt 2020; Singh 2000; Wallden 2017; Gauci 2015; Cruikshank 2014; Veltheim & Muiznieks 2013; Stone 1999), offers new and unique insights to diaphragmatic breathing in singing. In the process of 'squeezing' or putting pressure on this muscle while singing to control the outflow of air, are we releasing energy or emotions trapped in the muscle, thus aiding the individual's well-being? I did not encounter any SingEd literature that alludes to or that understands the role of the diaphragm as a manager of emotions.

If emotions and breathing are bidirectional (Vranich & Sabin 2020; Del Negro *et al.*

2018; Moraveji 2014; Homma & Masaoka 2008; Edwards 2005; Fried 2000; Manné 1999; Boadella 1994; Naifeh 1994; Timmons & Ley 1994), SingEd within the Life Skills component of the South African Schools CAPS is an underestimated player in contributing towards emotional well-being. Several studies have been conducted in schools where breathwork has been employed as a self-regulating intervention strategy. The results proved overwhelmingly positive (Browne 2020; Contreras 2020; Kurth *et al.* 2020; Simoneau *et al.* 2020; Cornell 2019; McCoy 2019; Mitchell 2019; Montgomery *et al.* 2019; Higgins & Eden 2018; Rowley 2018; Bannirchelvam *et al.* 2017; Haines *et al.* 2017; Idler *et al.* 2017; Keller *et al.* 2017; Piotrowski *et al.* 2017; Dietrich 2016; Wan & Savina, 2016; Terai *et al.* 2014; Thomas 2014; Brown 2013; Buchler 2013; Taroor 2013; Jensen *et al.* 2012; Morgado 2011). These studies have provided sufficient evidence that breathing can contribute to managing emotions, reducing anxiety and sharpening mental focus. Of significance is that several research participants reported carrying over these learned skills into other areas of their life.

- **Physiological well-being**

The literary exploration revealed many areas where breath awareness is employed intentionally to improve, support, intervene, or remedy aspects related to breathing and physical wellness. Intentional breathwork is engaged in the fields of physical strength and endurance in sports (Hof 2020; Nestor 2020; Vranich & Sabin 2020; Falsone 2019; Scharping 2017; McKeown 2015; Lee & Campbell 2013; Vasiliev & Meredith 2006; Tsatsoulina 2003;); diet and managing body weight (Nestor 2020; Vranich & Sabin 2020; Meerman 2016; McKeown 2015; Lee & Campbell 2013; Yesudian & Haich 1959); respiratory health (Nestor 2020; Fountain 2019; Brulé 2017; Bhikkhu 2015; Gilchrist 2014; Novotny & Kravitz 2013; Veltheim & Muiznieks 2013; Briffa 2002); and addressing medical problems: sleep disturbances, asthma, chronic obstructive pulmonary disease, cancer, and dementia (Nestor 2020; Rockwood 2018; Tamplin *et al.* 2018; Osman *et al.* 2016; Clements-Cortés 2015; McKeown 2015; Guillemineault & Sullivan 2014; Lord *et al.* 2010; Bonilha *et al.* 2009; Eley & Gorman 2008; Widmaier *et al.* 2008; Vasiliev & Meredith 2006). Similar to good quality food and water intake, the nature and quality of respiration are vital contributors to optimum physiological well-being.

Kulkarni *et al.* (2013) give the results of their study on the autonomic and pulmonary functions of 20 learners aged 9 to 12 in Belagavi, India. Autonomic and pulmonary functions of learners receiving 45-minute singing lessons were measured before and after their lessons, using, amongst others, instruments measuring blood pressure, expiratory volume and expiratory flow. A control group of the same age, not receiving singing lessons, underwent the same tests. Results showed a significant difference between the two groups. The singing group had a superior expiratory flow rate to the non-singers. Owing to these results, the authors suggest that singing should be used as an intervention strategy for children with asthma.

Addressing breath literacy in schools could contribute significantly to supporting the health of learners. The idea is not to substitute sound medical advice for learners with acute or chronic conditions. Teachers are not medical practitioners. However, in teaching and conveying optimal breathing mechanics, as demanded by singing, SingEd holds the innate potential to support learners struggling with current COVID symptoms, asthma (the main cause of school absences in the USA) (Simoneau *et al.* 2020), tuberculosis (the leading cause of death in South Africa) (Statistics South Africa 2021), and other respiratory conditions.

- **Spiritual well-being**

Whereas the discourse about breathing in Western literature mainly revolves around air intake vital to the oxygenation of the blood, i.e., survival, the Eastern mystics teach that, besides oxygen, we are also taking in life-force energy, called ‘prana’ in India and ‘chi’ in China. This vital life-force energy is said to promote and activate innate healing and spiritual growth. This knowledge is made practical in modalities like yoga, tai chi and qi gong to promote well-being and spirituality (Nestor 2020; Westmacott-Brown 2019; Manga 2018; Young *et al.* 2010; Vasiliev & Meredith 2006; Bottomley 2004a; Taylor 2004; Douglas-Klotz 1997; Clarke 1996; Hymes 1996; Yesudian & Haich 1959). In African divination, the sangoma becomes the intermediary through which the breath of the ancestors flows. The spirit or breath of the ancestors is the carrier of messages or healing for visitors to the sangoma (Manga 2022b; Edwards 2008; Nzima *et al.* 2006).

The literary conversation on the relationship between breathing and spirituality is rich

and expounds on the oneness with the Divine, oneness with all creation and oneness with self (Nestor 2020; Rockwood 2018; Brulé 2017; Gilchrist 2014; De la Huerta 2013; Lee & Campbell 2013; Edwards 2008; Vasiliev & Meredith 2006; Sharamon & Baginski 2003; Manné 1999; Pickthall 1997; Bible 1986; Alder 1983; Leboyer 1975; Yesudian & Haich 1959). Increased states of spiritual well-being are achieved through making use of breath to reach higher states of consciousness.

Research in neuroscience at the University of Gothenburg found that breathing patterns regulate the heartbeat when singing in a choir. “When choir members sing together, their heartbeats become synchronised growing faster and slower at the same time as they breathe in and out in unison” (Collins 2013:5). Within the SingEd classroom, breathing embedded within singing could contribute to a sense of oneness and harmony within the classroom. The concept of breath is deeply seated within the spiritual domain. Songs with spiritual themes have elevated the human spirit since time immemorial. What is pertinent to this study is that the singer’s breath holds the potential to contribute to spiritual elevation.

1.8 RESEARCH METHODOLOGY

1.8.1 Ontological assumption

Ontology relates to reality, that which is or which can be known, and its form or characteristics (Nieuwenhuis 2012a; Creswell 2007). It can therefore be explained as a philosophy concerned with being (Soanes *et al.* 2006). Burrell and Morgan (1979) add that the social world, perceived as external to individual cognition, is shaped by names, concepts and labels that are informed socially and historically. Consequently, social reality is driven by individual consciousness (Maree & Van der Westhuizen 2012; Cohen *et al.* 2008; Creswell 2007; Giddens 1976). Therefore, this research was informed by subjective and multi-layered conversations in alignment with the conscious or unconscious truth of each individual research participant (Creswell 2007; Ehrmann 1999). How BWTL concepts found practical application was studied within the practices of six SASingEdL and three breathwork experts. Therefore, the ontological assumption of this research is nominalist owing to its acceptance that the experience of each individual research participant is shaped and driven by their own

unique consciousness.

1.8.2 Epistemological assumption

The concept of 'epistemology' originates from the Greek word *episteme* and can be described as the philosophy of knowledge or of how humans know what we know (Nieuwenhuis 2012; Cohen *et al.* 2008:5; Soanes *et al.* 2006; Henning *et al.* 2004; Braud & Anderson 1998). For Creswell (2007), what characterises an epistemological assumption is that the researcher attempts to lessen the distance between himself and that which is being researched. In an interpretive, anti-positivist, subjectivist assumption, knowledge is viewed as personal, subjective and unique (Maree & Van der Westhuizen 2012; Cohen *et al.* 2008). The way we can know reality is, therefore, to explore the consciousness of research participants regarding a specific phenomenon (Nieuwenhuis 2012). In this study, breathwork knowledge and skills were investigated through semi-structured interviews with research participants, relying on their unique experiences and background to illumine the research topic. Therefore, the epistemological assumption in this research is interpretive in that the voices of nine individual research participants are the vehicle through which the phenomenon of BWTL was explored.

1.8.3 Human nature assumption

In contrast with a positivist mechanistic view of nature, which measures reality in quantifiable units, an interpretative approach considers the inner experience of the human and are sensitive to individual freedom, intention and accountability (Cohen *et al.* 2008). A nominalist and interpretative approach should therefore draw attention to the preferential choices of research participants. Burrell and Morgan (1979) ascribe the term 'voluntarism' to the interpretative assumptions of human nature. In this research, human beings are viewed, not as responding deterministically and mechanically to their environment but, in the words of Cohen *et al.* (2008:8), as "initiators of their own actions with free will and creativity, producing their own environments". This research endeavoured to capture the unique choices of research participants in applying their distinctive BWTL strategies.

1.8.4 Methodological assumption

Methodology refers to the practice of obtaining knowledge (Bertram & Christiansen, 2020:25; Henning *et al.*, 2004:15). It is a connection point between our philosophical standpoint on ontology, epistemology, human nature and the method we choose for our research project (Hesse-Biber & Levy 2010; Cohen *et al.* 2008). The nominalist ontological assumption, interpretative epistemological assumption and voluntarist human assumption dictate an idiographic research approach (Cohen *et al.* 2008). The goal is to understand how individuals create, change, and interpret the world in which they find themselves (Cohen *et al.* 2008; Braud & Anderson 1998). Hence, research methods are to be used that will best reflect the rich and unique worlds of research participants. The methodological assumption, therefore, also underpins data collection. In this research, data collection was concerned with interviewing and document analysis. In this study, I accepted that the data gained through the qualitative methods of interviewing and document collection yielded subjective truths.

1.8.5 Data collection strategies

The use of multiple data collection methods is characteristic of qualitative research. Consequently, I collected data online by interviewing and collecting applicable documents. This online data collection strategy took place via the internet owing to the safety concerns imposed by COVID restrictions.

Bryman (2016) states that the interview is the most widely employed qualitative research method. An interview is a semi-structured and focused conversation between the researcher and research participants to ascertain their ideas, views, opinions and behaviours (Bertram & Christiansen 2020; Nieuwenhuis 2012). To understand how the phenomena of BWTL play out in social reality, I therefore not only relied on reasoning and scientific literature but also drew on the experience of research participants through focused discourse (Cohen *et al.* 2008:19; Mouly 1978.).

Documents are collected as entities of data (Henning *et al.* 2004) and help to render more visible phenomena under study (Creswell 2009). To enrich the data gained from interviewing and observation, documents were collected that the research participants employ in BWTL.

1.8.6 Data analysis

The qualitative researcher examines the body of data in search of patterns within multiple realities (Maree & Van der Westhuizen 2012; Leedy & Ormrod 2010). To address the research question, the body of data collected through interviewing and document analysis was reflected upon. Bryman (2016:451) writes: “Coding is the starting point for most forms of qualitative data analysis”. Therefore, coding was also the primary means of data analysis in this research study. How the data support or depart from the existing a priori codes determined by the literary exploration (Nieuwenhuis, 2012:107), and focused on the semi-structured interviews was documented. Cohen *et al.* (2008:6) postulate that we interpret the world by employing either deductive, inductive, or combined inductive–deductive reasoning. As opposed to an inductive approach (Bryman, 2016:545), where theory is generated from the research, I followed a deductive approach (Bryman, 2016:544) since this research was conducted regarding concepts inferred from the literary exploration and theoretical framework. The data obtained from this coding were crucial in testing and expanding the existing RSM theoretical framework. As a result, the codes transformed into an emergent SingEdBWTL framework.

1.8.7 Role of the researcher

The qualitative researcher collects the data personally (Creswell 2009; Creswell 2007). According to Cohen *et al.* (2008:7), an anti-positivist, interpretative research paradigm “imposes on researchers an involvement with their subjects”. Within this interpretative research study, the role of the researcher presupposes being an active participant as a listener and observer, which makes the researcher, in a way, part of the data. Creswell (2003) remarks about the researcher’s involvement in the study that it is necessary to be vigilant of bias, values and personal interests regarding the research topic and process.

Belief systems are described by Veltheim and Muiznieks (2013:29) as “thoughts, attitudes, biases acquired from experiences, society, cultures, and families”. I was naturally biased, as I am the sum of my personal history, a history that determines

the way I view the world. Being involved directly in the field research, the element of bias was managed by remaining true to the aims and values of scientific enquiry (Bertram & Christiansen 2020). An open mind was kept about what did and not transpire from the data collected (Leedy & Ormrod 2010). Every attempt was made to “examine situations through the eye of the participant” and to “retain ... integrity of the phenomena being investigated” (Cohen *et al.* 2008:19).

The functional role of the researcher was to design and develop interview questions as well as to organise and conduct the interviews. In addition, various documents were collected relevant to teaching breathwork. The role of the researcher was also to transcribe, analyse, and fuse data derived from all these data collection strategies. Interpretations and recommendations were the final processes of this research investigation.

1.9 TRUSTWORTHINESS

According to Bryman (2016), and Pickard (2013), trustworthiness in qualitative research has four distinct components: credibility, transferability, dependability and confirmability.

1.9.1 Credibility

According to Bryman (2016:203), credibility in qualitative research parallels internal validity in quantitative research. Cohen *et al.* (2008:135) postulate that credibility “seeks to demonstrate that the explanation of a particular event, issue or set of data which a piece of research provides can actually be sustained by the data”. Leedy and Ormrod (2010:197) add that credibility “is the extent to which its design and the data it yields allow the researcher to draw accurate conclusions about cause-and-effect and other relationships within the data”. In this regard, I undertook to give an authentic, honest, and balanced reflection of the phenomenon and its context under investigation and to interpret it in a way that reflects the contextual reality of the participants, whether positive or negative. The process of cross-referencing literature, interviews, and document analysis strengthened the credibility of this study.

1.9.2 Transferability

Transferability, also termed ‘applicability’ by Nieuwenhuis (2012), is regarded as how the reader can transfer the findings to other contexts (Bertram & Christiansen 2020; Leedy & Ormrod 2010; Cohen *et al.* 2008; Durrheim & Van der Riet 2012). Driving this BWTL investigation with the RSM theoretical framework, a high measure of transferability emerged that could guide the broader education community in similar contexts. Rich and thick descriptions of all the data are reflected in this research document that reflect the true resonance of the ontology, knowledge, skills and experience of the participants (see Addendum D) (Bertram & Christiansen 2020; Bryman 2016; Creswell 2007). Therefore, a global audience (Jansen 2012) could derive meaning from this research.

1.9.3 Dependability

Bryman (2016), and Pickard (2013) emphasise that the research process should apply to the research investigation and that this process should be auditable. Durrheim and Van der Riet (2012) reiterate that dependability refers to the reader being convinced that the findings occurred genuinely, as the researcher indicated. Thus, an audit trail must be kept. Complete records of all phases of the research process are kept. I stored and kept a record of all interviews and transcripts, as well as documents analysed during the research process.

1.9.4 Confirmability

Pickard (2013:22) writes: “Confirmability is vital to limit investigator bias ... The goal is to ensure that the results, accepted as the subjective knowledge of the researcher, can be traced back to the raw data of the research”. Breathwork concepts elucidated within the data analysis were communicated with participants and discussed, ensuring confirmability (Bertram & Christiansen 2020; Leedy & Ormrod 2010; Creswell 2003). In an iterative process, maximum effort was expended to double-check transcripts of interviews with participants to verify the correctness thereof (see Addendum C), whether it is a true reflection of their personal voices, and that the personal bias of the researcher did not reflect on the data.

1.10 ETHICS

According to Cohen *et al.* (2008), the research community and those that might use the findings have every right to expect research that it is conducted thoroughly, conscientiously and ethically. Therefore, the researcher is responsible for not jeopardising the reputation of the research establishment and further research. Constant participation from “conscience ... stakeholders and ... the research community” (Stake 2000:372) is essential to avoid ethical concerns from arising. In this study, it was endeavoured always to abide by accepted ethical principles.

1.10.1 Informed consent

The concept of ‘informed consent’ results from a participant’s right to make choices and act autonomously (Cohen *et al.* 2008). Diener and Crandell (1978) distinguish four crucial elements: competence, voluntarism, full information and comprehension:

- *Competence*: choosing responsible, mature individuals who will make good or correct decisions if given relevant information.
- *Voluntarism*: ensuring that individuals participate freely or do not participate in foreseeable risks, adverse outcomes, possible discomfort, and that other consequences are well understood, preserving the dignity of participants. Participants thus have the right to refuse participation and to withdraw at any time.
- *Full information*: an adequate explanation of the purpose, content and possible benefits of the study, offering to answer any questions concerning procedures. Acknowledgement and disclosure of a participant’s right to 1. withdraw consent, 2. discontinue participation and 3. confidentiality.
- *Comprehension*: participants fully understand the nature of the research project.

These elements are echoed by various authors (Leedy & Ormrod 2010; Cohen *et al.* 2008; Creswell 2007).

Informed consent was obtained in writing from all interviewees before engaging in

the actual interviews (See Addendum B). A brief explanation was provided regarding the nature of the study, with information regarding the intended purpose, procedures and possible benefits of the research. Participants were made aware that their participation was voluntary and anonymous and that they had the right to withdraw or refuse interviews and sharing of documents at any time.

1.10.2 Protection from harm

Non-maleficence (do not harm) is enshrined in the Hippocratic oath, in which the principle of *primum non nocere* (first, do no harm) is held as a guiding concept (Bertram & Christiansen 2020; Cohen *et al.* 2008). Thus, the researcher should ensure that participants are safeguarded from harm during the data collection process (Leedy & Ormrod 2010; Leedy & Ormrod 2001). Due to the COVID pandemic's presence amid the data collection period, I opted for only online interviews and document collection. With this method applied, both interviewees and the interviewer remained safe from cross-contamination. Furthermore, the researcher always strived to be honest, respectful and sympathetic to participants.

1.10.3 Confidentiality

According to Burns (2000), the study's results and findings should remain confidential. Therefore, all participant information and responses are to remain private (Leedy & Ormrod 2010). Also, the results must be presented anonymously, thereby protecting participants' identities. In this study, at no point will the identity of any participant be made known unless permission is granted. "The essence of anonymity is that information provided by participants should in no way reveal their identity" (Cohen *et al.* 2008:64).

In conclusion, the researcher endeavoured to abide by the Ethics and Research Statement of the Faculty of Education of the University of Pretoria.

1.11 OUTLINE OF THE STUDY

Analogous to the continual respiratory process that gives life to humans, the outline of

the study is a continual breathing in and breathing out of various factors, giving life to this research enterprise. In the context of this study, 'breathing in' is gaining information metaphorically and 'breathing out' is sharing information metaphorically.

In Chapter 1, the reader has the opportunity of *breathing in* the *raison d'être* for this study. Thus, this chapter orientates the reader towards cognition of the research initiative. First, the rationale of this study is motivated and situated within the relevant background and context. After that, the focus and purpose and research questions are stated clearly. Finally, curtailed information is also included about the key concepts, relevant literature, proposed research methodology and ethical premeditations.

In Chapter 2, I had the opportunity to benefit from what the RSMSPB theoretical framework is *breathing out*. This breathing out is a metaphor for sharing this ancient wisdom that befitted this research exploration. This chapter examines the seven breathing principles of the Russian Systema Method. These principles are contextualised within a transdisciplinary breathwork literary exploration with a particular focus on SingEd. The rationale is to cognise and substantiate the most relevant non-SingEd and SingEd breathwork concepts and practices. This chapter thus accords highly with the purpose of the research (see 1.4).

In Chapter 3, I am *breathing in* the wealth of information regarding the value of breathing for well-being. This breathing in of well-being-related breathwork issues is addressed minimally in SingEd literature. This contrasts with the breathing out of Chapter 2, where the emphasis is on mechanistic respiration aspects, which is a significant focus of SingEd. Chapter 3 reviews the literature related to the role of breathwork in human well-being. The value of breathing for well-being in education is highlighted by citing scientific studies that were conducted in various schools around the globe.

In Chapter 4, I am *breathing out* and sharing with the reader the philosophy (including ontological, epistemological, human nature, and methodological assumptions) underscoring the research. The research methodology is further outlined with thoughts on the interpretative multi-case study design, data collection strategies and data analysis. Finally, aspects of trustworthiness (including credibility, dependability,

conformability, transferability and authenticity), and ethical considerations (including informed consent, voluntary participation, protection from harm, privacy and confidentiality) are focused on.

In Chapter 5, I am *breathing in* the information shared by nine research participants. The chapter presents the collected data and provides detailed descriptions and several citations in order to the reader to gain an authentic picture of the research landscape. The breathwork concept perspectives and practices of the research participants are revealed in the process. The data analysis followed a deductive approach, drawing conclusions from the various voices that entered the dialogue on breathwork. From this deductive approach, significant themes and subthemes emerged after the process of data disassembling and reassembling.

In Chapter 6, I am *breathing out* my reflections on the research data. This chapter is a summary of the entire research journey. It contains a summary of literature and fieldwork findings, draws research conclusions, and reflects on the initial research questions.

CHAPTER 2:

BREATHWORK PRINCIPLES – *BREATHING OUT*

2.1 INTRODUCTION

Chapter 1 set the tone for this study, sharing the rationale and motivation, justifying the research rationale, stating the focus, purpose and research questions, clarifying concepts, reviewing relevant literature and reflecting on the research methodology, trustworthiness and ethics. In Chapter 2, an extensive and critical engagement is undertaken with the seven principles of breathing (RSMSPB) theoretical framework of the Russian Systema Method to address the research questions. In this literary review chapter, various authors are ***breathing out*** their perspectives regarding the role and value of breathwork concepts and practices.

Several authors point out that many people breathe incongruently and inharmoniously. Terminologies describing this pathological way of breathing include ‘unnatural’, ‘abnormal’, ‘wrong’, ‘incorrectly’, ‘inconsistent’, ‘challenging’, and ‘not functioning well’ (Nestor 2020; Vranich & Sabin 2020; Brulé 2017; Bhikkhu 2015; McKeown 2015; Lee & Campbell 2013; Novotny & Kravitz 2013). In this context, Ramacharaka (2008:11) writes that “not only is Man dependant on Breath for life, but he is largely dependent upon correct habits of breathing”. Therefore, advancing breathwork consciousness is imperative (Gilman 2015) and can be considered an educational duty.

Dr Belisa Vranich collected data from 400 research participants over two years. She found that imparting step-by-step information which combines intellectual and kinaesthetic understanding reversed patterns of diaphragmatic dysfunction significantly (Vranich & Sabin 2020). Davids and LaTour (2021) agree that good breathing is not difficult to learn. Edwards (2005) also emphasises that, with practice, therefore with a conscious and deliberate application, involuntary breathing mechanisms can become increasingly more open to voluntary, conscious control. Thus, it is possible to teach correct breathing. On teaching breathwork, Fried (2000:2) remarks:

“Doesn’t it seem paradoxical, and indeed the height of pretension to those of you out there who teach breathing, that you are teaching one of God’s creatures how to breathe ‘naturally?’ Don’t we all already know how to do that? We are provided with natural breath at birth. Look at most newborn babies: They breathe naturally without instructions.”

According to Vranich and Sabin (2020:47), there exists “an enormous gap in understanding the components of the mechanics of breathing, although we all agree enthusiastically that it’s very important”. However, “Breathing is an autonomic function we can consciously control.” (Nestor 2020:150). Thus, through meaningful, directed education, incorrect breathing mechanics can be corrected.

2.2 SINGING EDUCATION IN THE SOUTH AFRICAN SCHOOLS’ CONTEXT

Singing education is ideally suited to address breathwork literacy. Breathing is a fundamental tool in creating vocal sounds. Moreover, the sound of the singing voice is wholly dependent on breath supply. Various authors comment on this requirement: “airflow is the generator” (Smith 2007:2); “good breathing is fundamental to good singing” (Collyer *et al.* 2008:626); “breath is the foundation of singing” (Taylor 2014:24) and “[b]reath is the power source for the voice” (Fitzmaurice 2015:61). Therefore, singers and SingEd practitioners need to be well versed in the underlying principles of the mechanism of breathing and, more particularly, in how to apply breathwork principles to their particular art or modality (LeBorgne & Rosenberg 2019). Cottrell (2010), Trimble (2010), and Mendes *et al.* (2006) agree that it is vital to grasp the breathing mechanism fundamentals and add that, because this mechanism is highly responsive, it can improve with vocal training. BWTL, nestled within SingEd, is a desired outcome of the Life Skills (see 1.6.3) Curriculum and Assessment Policy Statement (CAPS) (see 1.6.2) of South Africa (Department of Basic Education 2011a; 2011b; 2011c; 2011d).

The purpose of this study (see 1.4) is to ascertain key breathwork delineators that can assist Life Skills educators in South African schools in engaging with breathwork concepts and practices in a meaningful way. Life Skills (see 1.6.3) CAPS (see 1.6.2) aims to address the individual and communal nurturing of learners in an integrated

way (Department of Basic Education 2011b). Prinsloo (2007:155) writes that this subject “forms an excellent basis for equipping learners to respond positively to social demands, assume responsibilities, and optimise their life chances.” The aim is thus to equip learners with valuable life management skills. The school subject Life Skills constitutes three diverse components: Creative Arts, Physical Education, and Personal and Social Well-being.

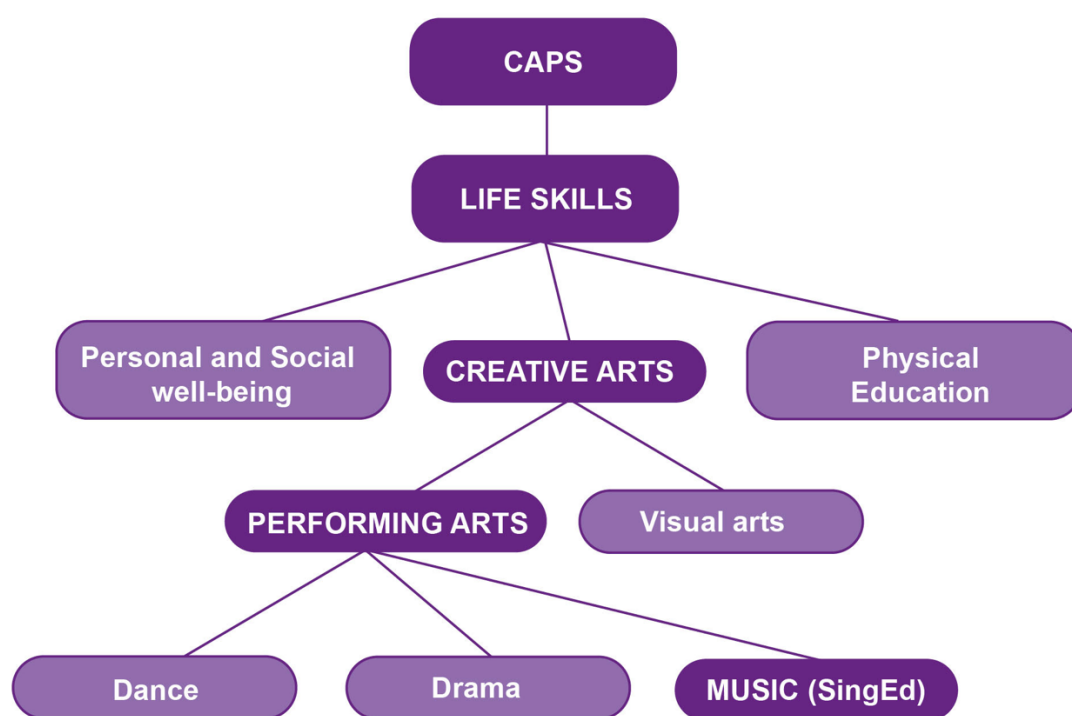


Figure 2.1: Life Skills CAPS components (Department of Basic Education 2011b).

Figure representation (Potgieter 2023).

Hence, Life Skills is an umbrella term that combines various components. One of these components is Creative Arts. The Creative Arts component is subdivided into two main streams, Visual Arts and Performing Arts (Department of Basic Education 2011b). SingEd is situated within the Performing Arts. In my experience, the obligation to incorporate such a wide array of modalities within one subject is a challenge for Life Skills educators who cannot possibly be specialists in all of these fields. One of the consequences is that not all concepts are addressed efficiently or even conveyed correctly by Life Skills educators. Specifically, in the Performing Arts section of this CAPS document, the concepts ‘breathing awareness’, ‘breath control’, and ‘breathing

exercises' are mentioned fleetingly; however, with not much explication of their significance (Department of Basic Education 2011a; 2011b; 2011c; 2011d). Also, it is not articulated clearly why these concepts are essential or how to bring them to life within the classroom. I comprehend why breathwork is incorporated within the Creative Arts; however, I do not comprehend why breathwork is not considered in the Personal and Social Well-being component of the Life Skills programme.

Here is a brief verbatim extract from the CAPS BWTL expectations for Performing Arts per grade and term in the Intermediate Phase. The Intermediate Phase in a South African school context includes 10- to 12-year-old learners, i.e., covering three years of primary school education. The breathwork requirements explained here are also repeated to varying degrees in the CAPS requirements of the Foundation Phase (ages 6 to 9 years), Senior Phase (ages 13 to 15 years) and FET phase (ages 16 to 18 years). In the Foundation, Intermediate and Senior phases, SingEd, a subcomponent of music education, is combined with the other Life Skills components of Personal and Social Well-being, Physical Education, Visual Arts and other Performing Arts. However, in the FET phase, SingEd (and also music, dance, drama and visual arts) is an elective for more specialised studies in only one chosen field.

Table 2.1: Intermediate phase Life Skills CAPS breathwork requirements (Potgieter 2023).

Grade	Term	CAPS breathwork requirement
4	1	None
	2	Awareness of breathing in relaxation and movement (e.g., simple sequences where each movement is on an 'in' or 'out' breath, to music or a drumbeat). Imaginative breathing exercises (such as 'painting' imaginary pictures, inspired by music, with the breath). (Department of Basic Education 2011b:34)
	3,4	None
5	1	Vocal warm-up (including breathing awareness exercises with coordinated arm swings, into sighs, into hums at different pitches, etc.) (Department of Basic Education 2011b:37)
	2	Vocal warm-up (including breathing awareness exercises, sliding sighs, rolled consonants, using wide range of notes sliding from high to low) (Department of Basic Education 2011b:38)

Grade	Term	CAPS breathwork requirement
	3	Vocal warm-up (including breathing awareness exercises, harmonizing of vowels on different notes) (Department of Basic Education 2011b:39)
	4	None
6	1	Vocal warm-ups (including breath control exercises, resonance, tonal qualities in speech/song) (Department of Basic Education 2011b:41)
	2	Vocal warm-ups (including breath control exercises, articulation in tongue twisters, proverbs, etc.) (Department of Basic Education 2011b:42)
	3	None
	4	Vocal warm-ups (including breathing, with chanting) (Department of Basic Education 2011b:44)

To summarise the CAPS content shown above, it can be seen that breath awareness is mostly included as part of vocal warm-ups. Though it cannot be denied that vocal warm-ups are a necessary and vital tool for singers (Shear 2008; Rosabal-Coto 2006; Sneed 2000), and because singing in itself requires regulated breathing, much awareness can and is probably being created about optimal breathing by SingEd teachers while teaching and singing songs. Not only Croad (2020), but also Fountain (2019), and Acar (2016) highlight the importance of breathing exercises for singers. That said, many generalist teachers tasked with teaching breathwork within the Life Skills programme are not trained singers and therefore, not necessarily well versed in the breathing requirements for singers.

According to several authors, the matter of breathwork within SingEd studies and practices is addressed inadequately. This inadequacy is due to a lack of familiarity with breathwork concepts and techniques, a narrow understanding of the overall breathing system, and a conceptualising of breathing as simply air supply for phonation, neglecting other considerations (Collyer 2009; Davis 2009; Emmons & Chase 2006; Sell 2005; Freed 1991; Alt 1990; Doscher 1987). Consequently, the matter of BWTL concepts within the SingEd setting of the Life Skills CAPS mandates investigation. I believe it is necessary not just to look within, trying to create some order out of the conflicting signals regarding SingEd breathwork literature, but also to look without, relying on non-SingEd literary sources to illumine a clearer understanding of the study phenomenon. By means of this transdisciplinary method, a valuable

contribution can be made towards ‘quality education’, the SG4 of the United Nations (see 1.1).

CAPS forms the blueprint from which various Life Skills learning books arise. I examined the Grade 4, 5 and 6 learner books of three different publishers (Table 2.2). These publications are *Day-By-Day* (Brennan *et al.* 2019a; 2019b; 2019c), *Platinum* (Amato *et al.* 2020a; 2020b; 2020c) and *Spot On* (Carstens *et al.* 2020a; 2020b; 2020c).

Table 2.2 Intermediate phase Life Skills textbooks’ breathwork assignments (Potgieter 2023).

GRADE 4	Term	Assignment
DAY-BY-DAY (Brennan et al. 2019a)	1	(p26) Stand with your feet straight and slightly apart. Keep your arms at your sides. Hold your chin up. Breathe in slowly. Lift your arms straight above your head. Then breathe out and drop your arms back to your sides.
	2	(p68) Do this warm-up to relax your body and your mind. 1.Lie on the ground with your hands resting on your tummy. 2.Breathe in deeply. Feel how your tummy rises. 3.Breathe out. Feel how your tummy gets smaller. 4.Breathe in like this 10 times. AND (p68) 1. Lie on the ground with your hands resting on your tummy. 2.Breathe in deeply. 3.When you breathe out, imagine that your breath is a paint brush. Draw an outline of an animal with your breath. Do not stop breathing out until you have drawn the whole outline. 4.Now breathe in again, deeply. 5.Next, when you breathe out, colour in your animal.
	3	None
	4	None
PLATINUM (Amato et al. 2020a)	1	(p34) Your teacher will show you how to breathe...
	2	(p80) Do some breathing exercises with your teacher. (p82) You will learn to breathe in time to the beat of a drum. (p83) You will do breathing exercises with music.
	3	(p122) 1. Find a personal space and lie on your back with your legs together and your arms beside your body. 2.Take a deep breath in and then raise your arms and sit up, keeping your back straight. 3.Breathe out as you slowly lower your body until you are lying down again. 4.Repeat.
	4	None
SPOT ON (Carstens et al. 2020a)	1234	None

GRADE 5	Term	Assignment
DAY-BY-DAY (Brennan et al. 2019b)	1	(p40) 1. Put your hands on your diaphragm. 2.Use your diaphragm muscles to breathe in as deeply as you can. 3.Breathe out loudly, as if you are sighing. 4.Now swing your arms up above your head as you breathe in. 5. When you breathe out, swing your arms down. Remember to use your diaphragm muscles.
	2	(p99) Breathe in through your nose. Fill your lungs with air. Hold your breath for four counts. Breathe out through your nose. Do this exercise 10 times. Now breathe out, making a loud sigh. Breathe out as slowly as possible.
	3	-
	4	(p194) Breathe in deeply, while your teacher counts to five. Imagine that your lungs are balloons. Fill them with as much air as possible. Then breathe out slowly, to a count of five. Do this five times.
PLATINUM (Amato et al. 2020b)	1	(p30) If you stand up straight and tall you can breathe better. This is because your lungs have space to get nice and big when you breathe in. Have you noticed that singers always stand up to sing? This is so they can have good breath control. (p30) Breathing is very important in singing. You use your lungs naturally to move air in and out of the body. If you focus on the way you breathe, you can improve your breathing. Better breathing means better singing. (p30) [Photo of Beyoncé standing with neck twisted to left] This is Beyoncé. She is standing with good posture so she can sing well. (p30) 1. Stand with your legs slightly apart and your arms at your sides. Look straight ahead. Make sure your back is straight and that you don't push out your stomach. This is a good posture. 2.Pretend that you are going to ski down a mountain. Swing your arms and bend your legs slowly and rhythmically. Breathe in and out deeply as you swing your arms.
	2	(p120) Your teacher will do some breathing exercises with you. Once you have focused and are breathing well, do a few singing exercises. (p127) 1. Begin with some breathing exercise: in through your nose and out through your mouth. Repeat three times. 2.Breathe in and, as you breathe out, say the vowel sounds. Really stretch them out so you can say the last one just before your breath runs out.
	3	None
	4	None
SPOT ON (Carstens et al. 2020b)	1234	None

GRADE 6	Term	Assignment
DAY-BY-DAY (Brennan et al. 2019c)	1	(p34) 1. Put your hands on your diaphragm. Use your diaphragm muscles to breathe in deeply as you can. 2. Breathe out loudly. Imagine that you are blowing out a candle.
	2	(p85) Breathe in deeply, while your teacher counts to five. Imagine that your lungs are balloons. Try to fill them with as much air as possible. Then breathe out slowly, to a count of five. Do this five times.
	3	None
	4	None
PLATINUM (Amato et al. 2020c)	1	(p42) 1. Breathe in for four counts, hold, and then breathe out for four counts. Repeat three times. 2. Close one nostril and breathe in and out three times. Repeat on the other side. 3. Take a deep breath in and breathe out making a 's' or 'z' or 'm' sound. 4. Take a deep breath in and as you breathe out say: 'p-p-p' or 't-t-t' or 'k-k-k' four times.
	2	(p94) Breathing: Breathing is the way you move air in and out of your body. We all breathe every day without thinking about it but if we can improve our breathing, we can improve the way we feel, act and perform. When you breathe you should not move your shoulders up and down. Your shoulders should always be relaxed, and your tummy should do the breathing work. (p95) Place both hands on your tummy. Feel your tummy fill up when you breathe in and empty when you breathe out. Keep your shoulders still. Breathe in deeply through your nose and breathe out slowly through your nose to a count of 10. Repeat 5 times.
	3	None
	4	None
SPOT ON (Carstens et al. 2020c)	1234	None

Of these three publications, the *Spot On* series did not address BWTL at all. On the other hand, the *Day-By-Day* and *Platinum* books reflected some of the CAPS BWTL demands. For example, “Your teacher will show you how to breath” (Amato *et al.* 2020a:34) and “Do some breathing exercises with your teacher” (Amato *et al.* 2020a:80). However, the latter assignments presume that teachers already have a working knowledge and experience of breathwork. Also, in *Day-By-Day*, contradictory and questionable information is given regarding good posture: What exactly does “hold your chin up” (Brennan *et al.* 2019a:26) contribute to a sound way of breathing?

If the chin is held up or high, it creates, according to many authors, restricted airflow in the throat (Croad 2020; Chapman & Morris 2016; Barrier 2009; Frederick 2007; Lloyd 2003; David 1995).

Both the *Day-By-Day* (Brennan *et al.* 2019b) and *Platinum* (Amato *et al.* 2020a) books promote an exercise, featured several times across these books, where learners lift their arms above their heads while breathing in. Inhaling while stretching the arms above the head is contrary to what is considered healthy or natural respiratory mechanics. Lifting the arms above the head allows for minimal and constricted inspiration (Fountain 2019; Acar 2016; Vasiliev & Meredith 2006; David 1995). However, despite this disputable instruction to learners, there are some cryptic, positive BWTL indicators that align with the breathing principles discussed in this chapter. These are the principles (see 1.7.1) of non-tension, sufficiency, nose inhalation, breath leading and pendulum. In the two Life Skills learner books, *Day-By-Day* and *Platinum*, BWTL is briefly touched upon only once per term and for only two or three out of the four annual South African school terms. These rare BWTL instances demonstrate the poor state and the minimal value attributed to breath literacy in the context of SingEd.

2.3 THE RUSSIAN SYSTEMA METHOD THEORETICAL FRAMEWORK

In their book *Let Every Breath ... Secrets of the Russian Breath Masters* (Vasiliev & Meredith 2020), Vladimir Vasiliev, a founder member of the Russian Systema Method (RSM) martial arts modality, expounds on seven breathing principles: nose inhalation and mouth exhalation, breath leading, intake sufficiency, breath continuity, pendulum, breath independence and non-tension. The breathing principle theoretical framework has been developed over many centuries and is believed to have its origins in the Greek Orthodox Church monasteries. The RSM officially adopted these principles since its formal inception in 1993 (Vasiliev & Meredith 2020).

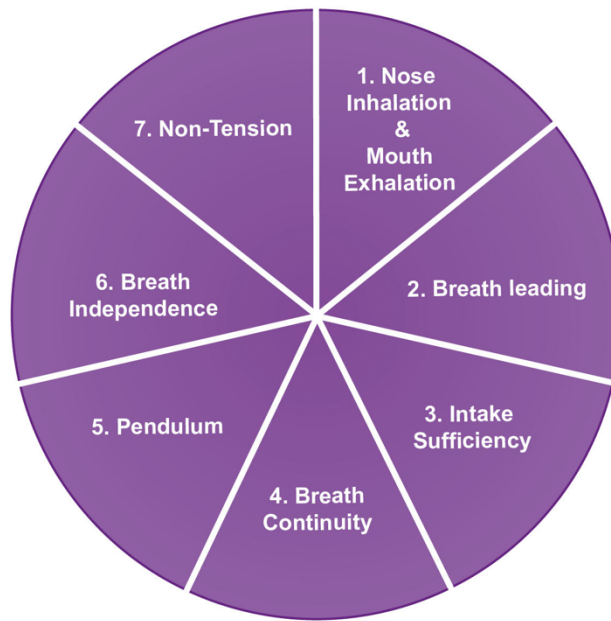


Figure 2.2: Russian Systema Method seven principles of breathing (Vasiliev & Meredith 2020). Figure representation (Potgieter 2023).

In the remainder of this literary review chapter, each of the seven breathing principles in Figure 2.2 is explored separately by first presenting each principle, as perceived by the RSM, followed by a transdisciplinary discourse (see 1.6.5) contextualising each principle; thereafter expounding on SingEd perspectives and practices of this principle, and situating said principle within the framework of the research questions, purpose and context of the BWTL exploration.

2.4 THE PRINCIPLE OF NOSE INHALATION AND MOUTH EXHALATION

The first principle of the RSM theoretical framework is the principle of nose inhalation and mouth exhalation. Sharamon and Baginski (2003:157) believe, “Although people all over the world basically inhale the same gaseous mixture, the way it is breathed in is the deciding factor.” Therefore, inhalation and exhalation methods and preferences are contemplated in the literary conversation that follows.



Figure 2.3: RSMSPB: The principle of nose inhalation and mouth exhalation (Potgieter 2023).

In its very formulation and wording, the principle of ‘nose inhalation and mouth exhalation’ gives the impression that it favours respiration in a specific way, i.e., breathing in through the nose and breathing out through the mouth. All exercises within the RSM require breathing in through the nose and exhaling through the mouth (Vasiliev & Meredith 2006).

The rationale offered by these authors is that inhaling through the nose empowers the body to have a better command over the volume and the speed of air intake. This optimum volume and speed demand are due to nose inhalation, as opposed to mouth inhalation, which relaxes the muscles associated with lung functioning. Vasiliev and Meredith (2006:55) list briefly other advantages of nose inhalation: calming the mind, mental focus, temperature regulation, and filtration of inhaled air. In order to demonstrate the difference in comfort levels between nose and mouth inhalation, the authors (Vasiliev & Meredith 2006:53) suggest the following exercise:

“Perform a few cycles of long, deep breathing. At first use only your mouth, and then switch to using only your nose. You will likely begin to feel anxiety building in the chest when inhaling through your mouth, especially around the heart. In contrast, you may

notice a sense of relaxation spreading through your body when you inhale through the nose.”

The latter exercise is also recommended to experience the different comfort levels when exhaling through the nose and the mouth. Exhaling through the mouth allows for comfortable and relaxed expulsion of air (Vasiliev & Meredith 2006). Thus, the RSM rationale for formulating this principle is based on anatomical breathing efficacy, physical and mental well-being as well as comfort.

2.4.1 Inhalation and exhalation: transdisciplinary dialogue

Is this nose inhalation and mouth exhalation principle equally valued within a larger breathwork environment, or is it unique to the RSM? The transdisciplinary literary exploration, i.e., literature consulted outside the RSM martial art spectrum, confirmed significantly the role and value of the ‘nose inhalation’ part of this principle; however, the ‘mouth exhalation’ part was notably less deliberated. Various authors expressed perspicuous remarks on the matter of nose inhalation. Manga (2018:76) states, “The nose has the perfect architecture to facilitate the delivery of prepared air to the delicate tissues of the lungs.” Both McKeown (2015), and Ruth (2015), agree that the nose is designed specifically for breathing and smelling, whereas the mouth was created for phonating and ingesting. To this, Nugent (2009:107) adds, “People may maintain a greater sense of well-being if they breathe through their nose and not their mouth.” Furthermore, several breathwork teachers affirm that they endorse nose inhalation intentionally (Balasubramanian 2019; Lee & Campbell 2013; Ramacharaka 2008).

Several authors argue that babies draw their first life-breath through the nose at the moment of birth. Therefore, it could be considered the natural way of breathing (Pearl 2021; Vranich & Sabin 2020; McKeown 2015; Lee & Campbell 2013). Hair at the nose entrance filters out harmful elements like bacteria, dust particles, tiny insects, impurities, or poisonous gases that may enter the body. The nose thus acts as a filtration station that ensures the purification of air before it enters the body (Nestor 2020; Cafasso 2019; Lee & Campbell 2013; Felcar *et al.* 2010; Ramacharaka 2008; Vasiliev & Meredith 2006; Edwards 2005; Yesudian & Haich 1959). Also, the mucous membranes in the nose adjust the temperature of incoming air suitably. Air entering

the nose at 6 degrees Celsius warms to 30 degrees Celsius by the time it reaches the back of the throat and 37 degrees Celsius, thus body temperature, upon reaching the lungs. Therefore, the nose plays the role of a temperature regulator (Nestor 2020; Cafasso 2019; McKeown 2015; Ruth 2015; Felcar *et al.* 2010; Ramacharaka 2008; Edwards 2005; Yesudian & Haich 1959).

The nose moisturises possible dry air before it reaches the lungs and bronchial tubes (Cafasso 2019; Manga 2018; Ballentine 1996). Furthermore, erectile tissue, a spongy tissue layer just under the mucous membranes in the nose and filled with large quantities of blood, regulates the natural biological rhythm of alternate nostril breathing (Nestor 2020; Ballentine 1996; Rama 1996). Also, nitric oxide, a colourless gas produced inside the nasal cavity and in the lining of the nasal blood vessels, paves the way for optimal oxygen uptake by the bloodstream. Nitric oxide, being antifungal, antiparasitic, antibacterial, and antiviral, is an assistant to the immune system, the defence mechanism of the body (Nestor 2020; Cafasso 2019; McKeown 2015; Ruth 2015; Lee & Campbell 2013; Felcar *et al.* 2010; Ricciardolo *et al.* 2004; Al-Ali & Howarth 1998). It can thus be said to be a kind of sanitiser.

Turbines within the nose regulate the volume of air taken into the lungs, not only enhancing oxygenation (Pearl 2021; Cafasso 2019; McKeown 2015) but also having a calming and balancing effect (Westmacott-Brown 2019; McKeown 2015; Vasiliev & Meredith 2006). The sense of smell also connects us to our surroundings, a pivotal factor in environmental orientation and survival (Nestor 2020; Ruth 2015; Yesudian & Haich 1959). Thus, the nose is the gate between the inner and outer environment, fulfilling the role of a protector as it has a purifying, regulating, moisturising, sanitising and orienting function. Considering the numerous and essential functions of the nose, it is no wonder that Ruth (2015) remarks that the nose is an essential but much-undervalued organ.

What then are the arguments against mouth breathing? Manga (2018:76) writes, "Habitual and unconscious mouth breathing at rest is a dysfunctional pattern as this whole mechanism of nasal breathing is bypassed". Ramacharaka (2008) adds that bypassing nasal breathing results in clogged up and unclean nasal passages which are then prone to attracting disease. Several authors agree that mouth breathing is an underlying cause of inefficient respiratory mechanics, halitosis, periodontal diseases,

throat infections, nocturnal enuresis, negative child growth rate, sleeplessness, snoring, daytime sleepiness, low appetite, adynamia and worsening of symptoms related to other ailments like hay fever, asthma and chronic stress and anxiety (Nestor 2020; Cafasso 2019; Saitoh *et al.* 2018; McKeown 2015; Pacheco *et al.* 2015; Ruth 2015; Uhlig *et al.* 2015; Felcar *et al.* 2010; Ramacharaka 2008; Di Francesco *et al.* 2004). Mouth breathing, from these perspectives, is considered pathological.

In a cross-sectional study, Felcar *et al.* (2010) processed 420 questionnaires completed by parents of 6- to 9-year-olds in Londrina, Brazil, to assess the prevalence of mouth breathing. The frequency of mouth breathing in this populace was 56,8%. Within the context of mouth breathing being considered pathological, this is an alarming result. In another cross-sectional cohort investigation, Di Francesco *et al.* (2004) tasked parents of 142 children aged between 2 and 16 to answer a questionnaire about their children's sleeping habits and resultant behaviours. They identified a link between oral breathing-induced sleep fragmentation and school performance, especially among boys. Saitoh *et al.* (2018) surveyed 380 children between the ages of 6 and 12 to study factors related to mouth breathing. They identified seven pathological mouth-breathing characteristics in their 44-point questionnaire: inept lip seal, dry lips, maladies of nose and throat, bad breath, problems with swallowing and chewing, peculiar eating and drinking habits, and teeth and gum conditions. Ruth (2015) emphasises that the mouth becomes dry from mouth breathing. This argument is supported by the research study of Sivasankar *et al.* (2008:1496), where 16 female participants were divided into two groups: those with a history of vocal fatigue and a control group with no such clinical finding. Over three days, all participants were exposed to varying levels of humidity and phonation threshold pressure tests. Their findings suggest that a dry mouth might be detrimental to voice production. It is evident from these studies that inhaling through the mouth can result in undesirable consequences. According to McKeown (2015:57):

“It was only when our ancient ancestors were in dangerous situations that they reverted to mouth breathing to take in greater volumes of air in preparation for intense activity. It is, for this reason, that mouth breathing is synonymous with emergency activating the ... fight-or-flight response.”

Mouth breathing is necessary under specific conditions. but as mentioned, is not considered 'normal' (Manga 2018; McKeown 2015; Ruth 2015; Ramacharaka 2008). Peyton (2019:3) states, "we aim to breathe ... in and out through the nose (or if blocked, the mouth)".

Several voices entered the dialogue regarding the advantages and disadvantages of nose or mouth inhalation. However, data about the advantages or disadvantages of nose or mouth exhalation are noticeably absent. A gap exists in the literature about studying the possible advantages or disadvantages of nose versus mouth exhalation.

2.4.2 Inhalation preferences in singing education

Most SingEd literature explains the necessity of mouth inhalation. In order to execute a musical phrase, optimum lung volume must be achieved in a relatively short period, and nasal in-breathing does not necessarily answer this call (Rosabal-Coto 2006; Stewart 2000; Miller 1997a; Spillane 1987). Therefore, the nature and pace of a song sometimes, if not most of the time, dictates taking quick, sufficient in-breaths. Smith (2007:31) agrees that singing "requires a bigger breath response, so we need to take a bigger breath than we normally would for speech". Also, Hoch (2019:29) writes, "singers often need to replenish their breath quickly, and the lungs can be filled far faster when one breathes through the mouth". Thus, Merrill (2002:52) states, "Learning to have an open mouth is critical to good singing." Barrier (2009), writing at length about breathing for musicians (singers, woodwind and brass players alike), not once insists on nose inhalation. The exercise he proposes for teachers teaching inhalation suggests that the lips should be in an O shape, meaning breathing through the mouth. Similarly, Emmons and Chase (2006:21) advocate a sense of "sucking through a straw" while taking in air. Thus, mouth in-breathing can afford the singer sufficient air to execute a musical phrase successfully.

Famous opera singer Dame Joan Sutherland explains, "you haven't got time to close your mouth, breathe through the nose and then sing. You *have* to take a breath through the mouth" (Keller 1998:20). Miller (1997a:1) agrees with Dame Sutherland in stating, "Taking a breath through the nose normally takes more time than it does by way of the mouth" and "When time permits, breath renewal through the nose is advisable, yet given the timing of most phrase structure of the song and aria literature,

no such time is available to the performer”. It can be said that singing necessitates oral breathing (King 2011). Although Michael (2010:548) views oral breathing for singers as ‘normal’, LeBorgne and Rosenberg (2019:35) merely state that that “air comes through the mouth and/or nose”. From the literature reviewed, only Acar (2016:750), a proponent of voice training in traditional Turkish classical music, suggests that to breathe correctly, a singer should take the air in through their nose. However, he does not offer any specific reason. Also, choral specialist Rosabal-Coto (2006:58) believes that “the careful practice of breathing only through the nose may help the choristers learn to take in more air and develop the sensation of deep abdominal breathing”.

Perhaps a distinction should be made between regular normal breathing and modality-specific breathing. In this regard, Emmons (1988:30,31) makes a distinction between “breathing for living” and “breathing for singing”. Reflecting on the data collected about the natural design of the body to breathe through the nose (see 2.4.1), and the SingEd requisite to breathe through the mouth, Emmons’ distinction and description are deemed highly appropriate. Exploring the first principle within the RSMSPB theoretical framework revealed that the majority of authors agree that nose inhalation is normal and natural. However, within the SingEd context, mouth inhalation is mainly utilised for the specific purpose of creating and sustaining sound.

Generating vocal sound depends on the outflow of the breath: hence, the latter part of the RSM principle of nose inhalation and mouth exhalation is undisputed. Indik (2009:135) says singing breath “goes out predominantly through the mouth”. Producing sound while exhaling through the nose is possible, like humming (Shear 2008). The Humming Chorus of Giacomo Puccini from his opera *Madama Butterfly* is an example. However, the majority of exhaling while singing is through the mouth. Humming can also occur while partly breathing out through the mouth. Chapman and Morris (2016:44) write, “for singers the out-breath is of more importance”. Considering the importance of the out-breath for singers, this concept is best reserved for a different principle: the second RSM breathing principle of breath leading.

2.5 THE PRINCIPLE OF BREATH LEADING

The second concept within the RSM framework is the principle of breath leading. Pearl (2021) states that breathing is the king and movement is the servant. Perspectives of various authors on why and how the ‘king’ leads the ‘servant’ are clarified below:

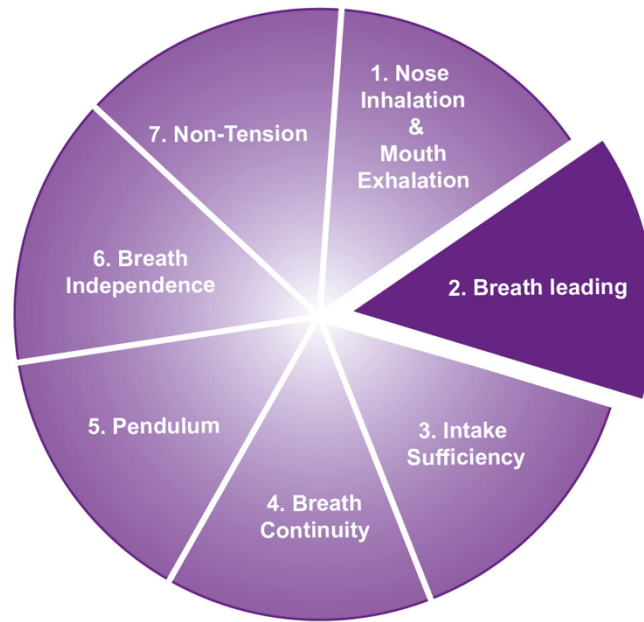


Figure 2.4: RSMSPB: The principle of breath leading (Potgieter 2023).

Within this physical combat RSM modality, breathing is considered the primary component and physical activity is the secondary component. The understanding is that only when the breath action has been initialised should the physical movement follow. Hence, the breath has the power to “pull or push all physical motions” (Vasiliev & Meredith 2006:56). From this viewpoint, the breath action ‘leads’ the physical activity. The authors explicate (Vasiliev & Meredith 2006:56):

“Think of how the engine of a train works. Most locomotive engines pull with a ‘sliding coupler’. This is a special linking device between train cars that allows the engine to begin its own movement, and then to gradually begin to pull the next wagon, which follows along naturally. Eventually, every wagon in the train begins to move, each with a slight lag-time relative to its predecessor. Finally, thousands of tons of steel (the entire train) stream smoothly along. In the same way, breathing is the engine that has to exert a leading pull on your body’s physical work.”

Thus, the principle of breath leading highlights respiration as the driving force of physical activity. Vasiliev and Meredith (2006:57) explain, “The Principle of Breath Leading reminds us that breathing has priority in all physical work and in all exercises of the Systema Breathing”.

2.5.1 Transdisciplinary perspectives: breath leading

Is this second breathing principle unique to the modality of RSM, or does it also play a role outside of this modality? Vranich and Sabin (2020), in discussing how athletes, first responders and law enforcement agents can harness breathwork for peak performance, state that both supple and stable movements depend on harnessing the breath. According to these two authors, when breathing is sound, all subsequent actions are integrous. In parallel with the RSM label of the principle of ‘breath leading’, Vranich and Sabin (2020:2) coin this concept the principle of ‘movement integrity’. In this regard, Lee and Campbell (2013:28) write, “our breath is the energy source for every activity we undertake”. This principle is also central to the ancient Chinese modality of qi gong. In this modality too, movement and breathing are synchronised intentionally. Bottomley (2004b:273) explains:

“[T]he mind concentrates on the breath and at the same time imagines guiding energy to a specific area. With concentration on the movement, the control of Qi is more efficient and the muscles can exert maximal power... Movement patterns also lend well to facilitating breathing techniques and directing the flow of energy. When the movement opens up an area, such as in the arm movement away from the chest, inspiration accompanies the motion.”

Hence, Vasiliev and Meredith’s (2006) expounding of breath leading within the context of the RSM seems to be deliberated equally within other dimensions. The dominant common factor is a conscious awareness of how the breath guides physical movement.

2.5.2 Singing education breath-management perspectives

Singing cannot commence before taking a breath because it requires air to activate the vocal cords (Barrier 2009). Therefore, Rautenbach (2012), and Mendes *et al.*

(2006), consider breath control as the dynamic relationship between the breath and vocal fold vibration. In this regard, Indik (2009:131) writes, “Without breath there can be no sung tone”. Also, Dame Joan Sutherland, a well-respected opera singer, states that breathing is “the whole basis of singing” (Keller 1998:19). The principle of breath leading is therefore also applicable to the SingEd study field because the sound of the singing voice is ‘led’ by the breath. However, in singing, the breath does not only ‘lead’ the sound of singing, but the singer also has to learn how to lead or employ the breath consciously. In this regard, Sneed (2000:51), and Keenze and Bell (2005:373) emphasise breath management as “an integral part of the singing instrument” and “the most essential component in producing good tone”. Both the terms ‘breath management’ and ‘breath control’ are common descriptors for this requirement (Callaghan 2014; Winnie 2014; Weinel 2009; Emmons & Chase 2006). Hence, good singing requires not only for the breath to lead in initiating sound but also to lead airflow consciously for optimum vocal tone.

When we sing, we create sound. Sound is energy. In managing or controlling the sound, we manage or control energy; we manage or control the breath (Miller 1996). The RSM concept of breath leading, understood as breath management or breath control within SingEd, affects many areas of singing (Callaghan 2014; Winnie 2014; Weinel 2009). Breath management or breath control can be achieved by employing respiratory muscles successfully that provide sufficient air supply and pressure to fulfil the various singing requirements. The way of breathing not only determines vocal fold structure but also influences pitch, volume and tone colour (Hoch 2019; LeBorgne & Rosenberg 2019; Hansen *et al.* 2014; LeGault 2014; Kulkarni *et al.* 2013; Kochman *et al.* 2011; Davis 2009; Indik 2009; Douglas & Patenaude-Yarnell 2005; Keenze & Bell 2005; Kiesgen 2005). A SingEd literary discussion of pitch, volume and tone colour are explored further in the following section.

The nature and range of frequencies and vibrations within a sounding body determine the pitch of sounds (Kamien 1998; Scholes 1972). In the case of the singer, the ‘sounding body’ is the actual physical body. Miller (2011:25) explains, “During singing, whose very foundation rests on the breath cycle (inspiration, phonation, and breath renewal), breath is turned into tone.” Not just creating tone but creating controlled and specific frequencies is a particular requirement in singing. In this regard, Croad (2020)

believes sufficient air intake to be the precursor of leading the breath through pitch variances within a song. The singer's challenge is to be 'in tone'. The word 'intonation' is used for the rise and fall of the pitch. A singer not achieving pitch accuracy, i.e., obtaining the correct frequency in alignment with a particular mode or scale, is said to be 'off-pitch', or the intonation is called 'bad'. In this regard, Decker (1977) believes that breath management is the key to good intonation. Sneed (2000:53,54) writes, "maintaining accurate intonation throughout a musical line is a most difficult task that cannot be performed well without understanding and applying the mechanics of good breathing". Breath control is, therefore, a vital aspect of creating various pitched sounds, i.e., singing.

Frequency density or pressure intensifies consistently with the rise of pitch and, as a result, it potentially exerts more pressure on the vocal folds. Smith (2007:37) writes: "When we sing low notes, the folds relax to become thicker and shorter, and the full length of the folds vibrates; for higher notes, the folds stretch longer and thinner, and a smaller portion of the folds vibrates." Therefore, LeGault (2014) states that the vocal cords vibrate according to their mass, length and vocal fold tension. Thus, the singer has to adapt constantly to the pressure created by each varying pitch. Given that pitch and, therefore, frequency pressure within a song changes all the time, singers need to learn how to navigate their way through the varying frequency range (Davids & LaTour 2021; Croad 2020). This breath navigation requires conscious breath management or breath control. Both Indik (2009) and Sundberg (1992) agree that higher pitches create higher subglottal pressures than lower pitches. The mere fact that the frequencies of higher notes vibrate at a faster rate potentially could strain the vocal cords if not consciously managed (Miller 1996). The singer's task is to relieve the vocal cords consciously from the created stress by, amongst other things, focusing on accelerated airflow (Davids & LaTour 2021; Fountain 2019; Indik 2009). Accelerated airflow requires conscious management or control to lead the breath through the high-pitch tensioned area. Consequently, breath management is crucial in relieving tension caused by high pitches. The singer can lead pitch tension out of the body through conscious and purposeful directed breath.

'Dynamics' in music is the "part of musical expression concerned with the varying degrees of intensity of the sound produced" (Scholes 1972:310) and, according to the

Paperback Oxford English Dictionary, refers to “the varying levels of volume of sound in a musical performance” (Soanes *et al.* 2006:232). Standard music terminologies, mainly originating from Italy, relating to dynamics, are, for example, *piano* (soft), *forte* (loud), *crescendo* (gradually louder) and *diminuendo* (gradually softer) (Kamien 1998). For singers, the challenge is to lead the breath through the various dynamic descriptors, as indicated by composers on the sheet music. Therefore, dynamics within singing can be described as the “art of raising and lowering the volume of your voice to add texture and expression to the sound” (LeGault 2014:32). Thus, the management, control or leading of the breath can affect dynamics.

Louder singing requires higher levels of breath pressure, and this requirement is referred to as subglottal (i.e., below the glottis) pressure. Sundberg (1992:53) states: “subglottal pressure is the main physiological parameter for variation of vocal loudness”. Davids and LaTour (2021:29) agree: “Doubling breath pressure generally doubles the sound level.” Applying differing breath pressures in order to affect dynamics is thus the challenge for the singer. These breath pressures need to be managed consciously.

‘Timbre’, a word with French origins, refers to the tone quality or character of a musical sound or voice (Soanes *et al.* 2006; Kamien 1998). For example, “coarse or smooth, ringing or more subtly penetrating, ‘scarlet’ like that of the trumpet, ‘rich brown’ like that of the cello, or ‘silver’ like that of the flute” (Scholes 1972:1024). In this regard, the voices of singers are often described as lyrical, light or dramatic, heavy. Although the physical constitution of a particular individual plays a role in determining this quality, different tone colours could be employed in artistry to interpret, create and execute the inherent atmosphere of a composition (Emmons & Chase 2006). Variations in timbre for dramatic effect require not only imagination and acting skills but are also breath dependent.

According to several authors, breath management impacts voice timbre, i.e., tone quality (Davids & LaTour 2021; Croad 2020; Fountain 2019; Gul 2018; Acar 2016; Davis 2009; Skoog 2004; Miller 1996; Emmons 1988). McMurtrie (2006) states that, when tightened, the built-in skeletal muscles of the larynx change the length, position and pressure of the vocal cords. The latter contributes to a change in tone or voice colour. Also, the trachea exerts a pulling force on the larynx called the ‘trachea pull’.

This pull increases as the diaphragm descends owing to diaphragmatic breathing (Indik 2009; Sundberg 1992). When a singer employs the diaphragm to sustain long musical phrases efficiently, the trachea pull can be affected. Thus, changes in tone colour occur owing to vocal cord pressure influenced by diaphragmatic breathing. Managing diaphragmatic breathing (see 2.6.3) is a key requirement for singing.

The RSM principle of breath leading implies conscious breath management or breath control by the singer. The SingEd literary review revealed that the concept of breath leading entails not only taking a breath to initiate sound but also utilising the breath for executing pitch accuracy and dynamic variation, and for affecting tone colour. The saying *energy follows thought* is an imperative consideration in this regard. Not only does the breath lead or initiate the singing, but the singer also has to ‘lead’ the breath consciously in shaping musical sound. The breath leads the singing, but the singer also leads the breath consciously.

The concept of ‘breath control’ is one of the three concepts mentioned in the Life Skills CAPS of South Africa (see 2.2), required to be animated by Life Skills educators (Department of Basic Education 2011a; 2011b; 2011c; 2011d). According to Emmons and Chase (2006:17), breath control “must be learned” because, as Mendes *et al.* (2006) and Sundberg (1992) point out, demands placed on the respiratory mechanism while singing are high. Graham (2014: Abstract) writes, “Poor breath management is problematic for singing.” Therefore, it is vital for Life Skills educators also to engage with the concept of breath control in an informed and conscious manner.

2.6 THE PRINCIPLE OF INTAKE SUFFICIENCY

The third RSM breathwork concept is the principle of intake sufficiency. McKeown (2015:4) informs, “Just as we have an optimal quantity of water and food to consume each day, we also have an optimal quantity of air to breathe”.

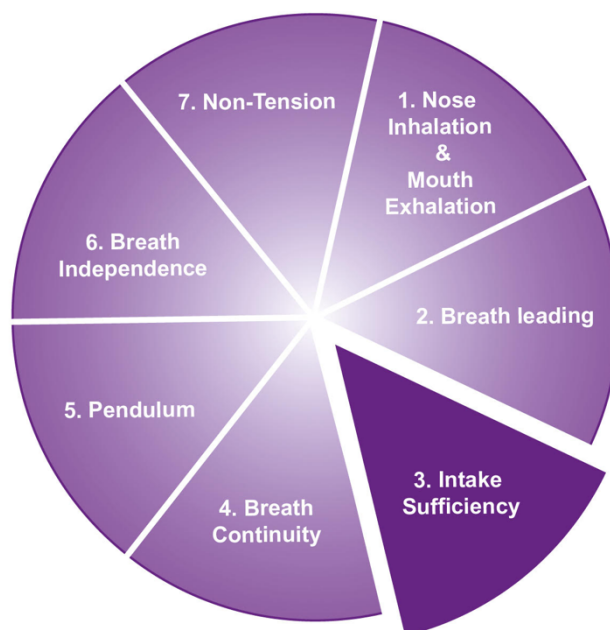


Figure 2.5: RSMSBP: The principle of intake sufficiency (Potgieter 2023).

The RSM, guided by the principle of intake sufficiency, advocates only inhaling as much air as necessary for a particular task. Vasiliev and Meredith (2006:57) write:

“A person attempting to breathe fully and deeply usually inhales as much air as possible. That’s natural, but it’s a mistake! Forceful over-inhalation causes instant tension in the neck and collarbone area. That pressure, in turn, cramps the breathing. Your body can become completely locked-up and obstructed by this practice. Over time, you end up with inadequate oxygen, inefficiently utilised ... Try to be sensitive to what your body is really asking for.”

Not only is over-inhalation cited by these authors as a concept demanding contemplation but also cutting short the inhalation and exhalation phase, i.e., under-inhalation. Under-inhalation, like over-inhalation, creates tension in the respiratory mechanism (Vasiliev & Meredith 2006). Also, by superficial inhalation not enough energy is gained to perform a physical task. “A full, deep breath will involve no strain or excessive fullness – rather it will feel ‘just right’ and as though the air has thoroughly permeated your entire body” (Vasiliev & Meredith 2006:69). It seems then that ‘sufficiency’ in this regard requires a delicate balance between the extremities of over-inhalation, i.e., breathing too much, and under-inhalation, i.e., breathing too little.

Lee and Campbell (2013:28) consider: “Breath awareness means exactly what it says – being aware of or observing the qualities of your breath, whether it is shallow or deep, long or short, easy or laboured, smooth or uneven.” To this, we can add being aware of whether it is too much or too little. McKeown (2015:1) asks, in this regard, “We ... recognise the importance of breathing good quality air, but what about the *quantity*?” Hardy (2019:1) explains: “While the act of breathing is an involuntary response our body does on its own, we can choose to hold our breath or adjust the volume of air we intake and the rate at which we breathe”. The literary exploration revealed sufficient support for the latter statement regarding breathing rate and volume. The rate or number of breaths we take in one minute is further explicated.

On average, a human takes 10 to 15 breaths per minute (Nestor 2020; Vranich & Sabin 2020; Balasubramanian 2019; Del Negro *et al.* 2018; Manga 2018; Morningstar 2018; McKeown 2015; Widmaier *et al.* 2008). Various authors believe that most of humanity is over-breathing. That is, the breathing rate is too high and, consequently, they advocate fewer inhaled and exhaled breaths per minute (Nestor 2020; McKeown 2015; Lee & Campbell 2013). Nestor’s investigations into this matter led him to conclude that 5.5 breaths per minute would be ideal. Nestor (2020:82-83) writes, “The perfect breath is this: Breathe in for about 5.5 seconds, then exhale for 5.5 seconds. That’s 5.5 breaths a minute for a total of about 5.5 liters of air.” Nestor (2020:212) expounds further, “when breathing at a normal rate, our lungs will absorb only about a quarter of the available oxygen in the air. The majority of that oxygen is exhaled back out. By taking longer breaths, we allow our lungs to soak up more in fewer breaths”. Sufficiency of breath is, therefore, dependent on a balanced breathing rate.

A second consideration of sufficient breathing is the volume or quantity of air drawn into our lungs with every single breath. The average person moves approximately 500ml of air in and out of the lungs with each breath. Hence, during rest periods, the breathing volume can be approximately 5 to 7 litres of air per minute. After expiring, the lungs still contain about 2400 ml of air, thus the 500 ml of air inspired with each resting breath adds to and mixes with the much larger volume of air already in the lungs, and then 500ml of this total is expired. Therefore, the lungs are never wholly emptied of air, even after maximal active respiration. The latter, of course, is an approximate measurement because the physiology and resultant lung capacity of

each human being are unique. However, Fountain (2019:1) exclaims, “Few of us breathe as fully and deeply as we should”. Moreover, breathing patterns are also subject to natural growth and maturation, pregnancy, aging, disease and injury (Nestor 2020; Vranich & Sabin 2020; Balasubramanian 2019; Del Negro *et al.* 2018; McKeown 2015; Indik 2009; Widmaier *et al.* 2008; Hymes 1996). Hence, sufficiency of breath requires balanced volumes of breathing.

Singing also requires sufficient air intake to allow for adequate lung volume in sustaining long musical passages (LeBorgne & Rosenberg 2019; Keenze & Bell 2005). Like the RSM and non-SingEd breathwork literature, Davids and LaTour (2021:24) warn against causing unnecessary tension while inhaling: “It is essential ... to avoid the temptation to take as deep a breath as possible.” Doscher (1987) argues that a relatively small air intake volume is sufficient for singing long musical phrases. Overfilling the lungs increases the exhalation rate, and for singers, this can contribute to an unfocused tone and unwanted tension in the chest, neck and larynx, causing laboured singing (Barrier 2009; David 1995; Alt 1990; Decker 1977). On the other hand, Frederick (2007:32) advises singers not to exhale too much air too soon: “When you exhale try to maintain a small steady stream of air.” Therefore, both the in-breath and the out-breath fulfil a significant function regarding the singer’s breath sufficiency.

Whereas everyday breathing mostly requires no conscious human effort, maintaining singing requires voluntary regulated breathing (Novotny & Kravitz 2013). According to the demands of singing a song, each singer must gather consciously a sufficient amount of energy, i.e., take in an adequate breath, to initiate and maintain sound (Kelman 2013). “Active control of breathing pattern affects the efficiency of the respiratory system and is considered essential in ... singing training for the development of optimal voice performance” (Salomoni *et al.* 2016:1). Punctuation, explicit breath marks and the melodic line often dictate breathing opportunities within the modality of singing (Davids & LaTour 2021). Here, Barrier (2009:11) remarks, “The amount of air a student breathes in and out should always be dictated by the music he/she is trying to produce.” Intake sufficiency is something that can be planned prior to a performance by score preparation. This can be achieved by adding ‘breath marks’ to the score (King 2011). In this regard, Sneed (2000:53) comments, “It is the responsibility of the choral director to articulate precisely what is desired and physically

demonstrate how it can be accomplished.” Thus, a musical phrase can be executed successfully when the singer tries consciously to pre-plan where to breathe in a particular song. Also, only the sufficient volume must be inhaled that is to be expended during a particular phrase.

Underlying the respiratory rate and volume is how we breathe (Clarke 1996; Rama *et al.* 1996). According to Vranich and Sabin (2020), and Hymes (1996), how we breathe plays an essential role in exchanging air for any given purpose. They explain that horizontal or diaphragmatic breathing is more efficient than vertical or apical breathing because it enables more air to pass in and out of the body within a respiratory cycle. Advantages, disadvantages, preferences and dislikes of the different ways of breathing are plentiful in the breathwork literature. Most literature centres around clavicular, thoracic and diaphragmatic breathing, and these different ways of breathing are now further explained.

2.6.1 Clavicular breathing

The word ‘clavicle’ refers to the collar bone situated at the upper part of the chest just below the neck (Soanes *et al.* 2006). The meaning of clavicular breathing then refers to air that is drawn into the upper part of the lungs nearest to the collarbone area. Drawing the air into the upper parts of the lungs results in an elevated rib cage, collar bones and shoulders (Peyton 2019; Davis 2009; Nugent 2009; Ramacharaka 2008; Gregg 1998). Clavicular breathing goes by many other names: high breathing, high-chest breathing, upper breathing, upper-chest breathing, collarbone breathing and shallow breathing. To cognise the terminology ‘high’, ‘upper’, and ‘shallow’ in this context, it is necessary to have a clear understanding of the anatomy of the lungs.

THE LUNGS – A SYNOPSIS

The lungs are situated in the thorax, the body area that lies between the neck and abdomen. The thorax is a closed compartment bounded at the neck by muscles and connective tissue and separated from the abdomen by the diaphragm muscle. The walls of the thorax consist of the spinal column, the ribs, the breastbone and intercostal muscles (Widmaier *et al.* 2008; Abrahams 2006).

We have two independent lungs: one lung on the right side and one on the left side within the thoracic cavity. Each of these two lungs is further divided into lobes arranged from top to bottom. The right lung has three lobes, while the left lung only has two lobes (Ramacharaka 2008; Abrahams 2006; McMurtrie 2006; Hymes 1996; Naifeh 1994; Guinness *et al.* 1986); therefore, the left lung is smaller than the right lung (Vranich & Sabin 2020). Instead of a third lobe on the left side, the physical heart is situated in this

space underneath the second lobe (McMurtrie 2006). The primary function of the lungs is to reoxygenate blood that the body has used and to remove accumulated waste carbon dioxide (Novotny & Kravitz 2013; Abrahams 2006; McMurtrie 2006).

Microscopic, thin-walled, basic structures for gas exchange are attached to the walls of the respiratory bronchioles within the lungs (McKeown 2015; Widmaier *et al.* 2008; Abrahams 2006; McMurtrie 2006; Briffa 2002; Hymes 1996; Guinness *et al.* 1986). These tiny air-containing sacs, called alveoli (singular *alveolus*), number approximately 300 million in an adult human (Nestor 2020; McKeown 2015; Widmaier *et al.* 2008; Hymes 1996). Surrounding these alveoli in each lung is a network of tiny blood vessels known as capillaries. Oxygen and carbon dioxide pass back and forth between the alveoli and blood in the capillaries; thus, the lungs perform their designed function of gas exchange (McKeown 2015; Lee & Campbell 2013; Briffa 2002; Indik 2009; Naifeh 1994; Guinness *et al.* 1986).

From the above synopsis we learn that the lungs have various compartments. Clavicular breathing is said mostly to fill the upper lung compartments with air (Peyton 2019). According to Edwards (2005), and Hymes (1996), blood flow is more significant in the lower part of the lungs owing to gravity. Therefore, exchanging oxygen and carbon dioxide between the lungs and heart is best possible at the lower end of the lungs. The deeper we inhale, the more successful the ratio of helpful air exchange will be. Edwards (2005) further indicates that only approximately 0.07 litres of air per minute are exchanged with clavicular breathing, while 0.66 and 1.29 litres per minute are exchanged with thoracic and diaphragmatic breathing, respectively. In this regard, Widmaier *et al.* (2008:456) remark, “increased *depth* of breathing is far more effective in elevating alveolar ventilation than an equivalent increase in breathing *rate*”. Clavicular breathing ‘high’ in the lungs uses only the ‘upper’ part of the lungs. Therefore, it is ‘shallow’ because it only uses the smallest capacity of the lungs. High or shallow breathing is possible, but on its own, is not adequate to fulfil the body’s respiratory needs. However, a large portion of the human populace breathes in this way.

Vranich (Vranich & Sabin 2020:55) writes:

“When I first started looking at my patients’ breathing, I found that when I told them to take a ‘deep breath’, or ‘big breath’, they would inevitably breathe upward, vertically. Their auxiliary muscles would kick in, rather than the primary breathing muscles around the middle. Often, their midsection would even narrow, which is the complete opposite of what you want to happen when you fill your lungs... This was true even for folks with specialisations in anatomy, fitness, and health.”

Smith (2007:29) expounds on the remarks by Vranich:

“It is important to think about inhalation as an expansion of the abdomen, not the chest. Often when people are asked to take a big breath, they stick their chests up and out. Although it is true that the lungs are inside the chest cavity, and expanding that cavity in this way expands the lungs, it is not the best way to breathe.”

Ramacharaka (2008:44) remarks that clavicular breathing “is probably the worst form of breathing known to man and requires the greatest expenditure of energy with the smallest amount of benefit”. Briffa (2002) also considers shallow breathing as inefficient and incomplete. Davids and LaTour (2021:23) further ascribe this phenomenon (in their view, an incorrect way of breathing) to the habit of pulling in the abdominal muscles, a human ego trait of attempting to portray a ‘good’ physical image. Pulling in the middle of the body that results in collar breathing could also be a carry-over from other modalities, like dancing, that prioritise using core muscles. In contrast, Davis (2009), Gregg (1998), and Hymes (1996), agree that clavicular breathing is a natural response of our bodies swiftly to move air in and out of the body, especially in strenuous physical activity. It is, therefore, significant only when the taxed body–mind requires a maximum volume of air.

What does the SingEd literature reflect on the matter of clavicular breathing? Many singing pedagogues express their dismay at clavicular breathing as it allows for minimal space during air intake and also hijacks breath support (see 2.6.5) (Davids & LaTour 2021; Hoch 2019; Winnie 2014; Lyle 2011; Michael 2010; Barrier 2009; Fett 1993; Spillane 1987). Raised shoulders, which often accompany upper-chest breathing, cause neck tension resulting in unwanted strain on the vocal cords that affect tone quality (King 2011; Davis 2009; Rosabal-Coto 2006; Douglas & Patenaude-Yarnell 2005). This ‘unproductive tension’ (Davids & LaTour 2021:24) has consequences for the singer’s breath leading (see 2.5.2), i.e., pitch, dynamics, and timbre.

Cowgill (2004:147) believes:

“The prominence of vertical chest movement ... shows that young singers ... tend to use vertical chest movement when inhaling for singing. This tendency ... points to a lack of understanding of proper breath function; it further suggests that understanding

and facilitating a healthy breathing technique for singing is a learned experience and requires training.”

Both the non-SingEd and SingEd literature portray clavicular breathing as insignificant regarding breathing sufficiency. The breathing rate and volume acquired through high breathing are unsatisfactory. However, in particular instances, the body breathes shallowly and rapidly for specific needs.

2.6.2 Thoracic breathing

For Widmaier *et al.* (2008), the thorax and chest are synonymous. Soanes *et al.* (2006:791) merely describe the thorax as “the part of the body between the neck and the abdomen”. Thoracic breathing also carries other labels: rib breathing, ribcage breathing, lateral breathing, chest breathing, middle chest breathing, costal breathing and intercostal breathing. The intercostal muscles are those muscles joining the ribs. The external intercostal muscles widen the rib cage by lifting the ribs, providing an inspiratory muscle force. On the other hand, the internal intercostal muscles decrease the rib cage volume and, in this way, provide an expiratory muscle force (LeBorgne & Rosenberg 2019; Novotny & Kravitz 2013; Lyle 2011; Nugent 2009; Widmaier *et al.* 2008; McMurtrie 2006; Briffa 2002; Gregg 1998; Hymes 1996; Naifeh 1994).

Ramacharaka (2008), and Hymes (1996), explain that thoracic breathing fills the middle and upper parts of the lungs with air but not the lower parts. Both authors consider this way of breathing inferior to diaphragmatic breathing. Hymes (1996:30) expounds:

“Chest breathing ... requires more work to accomplish the same blood/gas mixing than does slow, deep, diaphragmatic breathing. Since more work is required, more oxygen is needed, resulting in one's taking more frequent breaths. Finally, more blood needs to circulate through the lungs, requiring more work from the heart. How much work the cardiovascular system must do, then, is directly related to how efficiently one breathes.”

Rama (1996:86,87) adds:

“Though chest breathing has now become natural and involuntary for most of us, it is ... aroused when the organism is challenged by some external stress or danger.

Because of the reciprocity between breath and mind, chest breathing, in turn, gives rise to tension and anxiety... With chest breathing, the breath is shallow, jerky, and unsteady, resulting in similar unsteadiness of mind.”

Gregg (1998:2) writes that thoracic breathing, necessary for achieving downward pressures, is demanded by “lifting, parturition, evacuation, or micturition”; however, she is also of the opinion that this type of breathing is not appropriate for efficient speaking and singing.

Some voices in the SingEd literature consider thoracic breathing the ideal way to breathe, though not all vocal pedagogues agree on this. The so-called *appoggio* technique aims to keep the sternum high while expanding the ribs and keeping the shoulders low and relaxed (Winnie 2014; Boshkoff 2008). The term *appoggio* is derived from the Italian *appoggiare* meaning ‘to lean upon’ (Hoch 2019; Weinel 2009; Kiesgen 2005) because “singers have the feeling of leaning the air against the sternum from the inside, brought about by expanding the ribs outward” (Boshkoff 2008:23). Emmons and Chase (2006) advocate *appoggio* breathing as the only successful way of breathing for singers. In contrast, Chapman and Morris (2016:45) state that “under no circumstances should the ribs be consciously expanded and held during singing”. They rationalise that the required ribcage and sternum position will be in place when the posture is adequately aligned. Gregg (1998:2) agrees with the latter, saying that when breathing with the ribs, “the abdominal muscles which are our main muscles of expiration are flattened and so are not of use in maintaining a column of air directed at the vocal folds”. Davis (2009) merely states that thoracic breathing is an option for singers, without advocating or advising against it. However, he also warns against the possibility of compromising the use of the diaphragm as a result. Hoch (2019:28) believes that, although widely practised, *appoggio* “remains a technique that often eludes or confuses the novice student of singing”.

In the SingEd literature, to create awareness of the expansion of the ribs, the student’s focus is often also taken to the back expansion of the body (Lyle 2011; Trimble 2010; Miller 1997b). It is said that the ribs cannot only open up to the sides of the body but can also slightly move towards the back to make room for the lungs to expand (Davids & LaTour 2021). Gregg (1998) questions this capability for the reason that the ribs are firmly joined to the spine. In fact, Davis (2009) warns against back breathing being

emphasised as it limits the downward movement of the diaphragm. It seems that consciously directed thoracic breathing is in use and can be taught. Within a SingEd milieu, this kind of breathing can possibly aid the breath sufficiency necessary for singing. However, the literary exploration demonstrates that not all vocal pedagogues agree about the efficacy of this practice.

2.6.3 Diaphragmatic breathing

Diaphragmatic breathing, also called abdominal breathing, deep breathing or belly breathing (Aideyan *et al.* 2020; Jewell 2018; King 2011; Lyle 2011; Nugent 2009; Ramacharaka 2008; Kiesgen 2005; Laukkanen 2003) seems to be the way of breathing favoured by most authors. Sneed (2000:52) uses the term ‘low breath’ because, when breathing diaphragmatically, the location of the breath impulse is lower down in the physical body. Hymes (1996:30) states explicitly that between clavicular, thoracic and diaphragmatic breathing, the latter is “physiologically the most efficient”.

It is considered ‘deep’ as it enables the body to draw air right to the bottom of the lungs (Chapman & Morris 2016:54). It is called ‘abdominal’ because the abdomen expands and contracts visibly when the diaphragm muscle is involved actively in the respiratory cycle (Davis 2009:9). Gauci (2015:1) writes that the diaphragm is “our primary muscle of respiration and the one skeletal muscle that works 24/7 to sustain our life”. But what is the diaphragm muscle?

THE DIAPHRAGM – A SYNOPSIS

The diaphragm is a muscle that separates the upper thoracic and lower abdominal cavities of the torso. It is thus situated beneath the lungs/chest region and above the organs of the abdomen. The diaphragm muscle resembles the shape of an arch, inverted bowl, dome, parachute or umbrella pointing into the ribcage when it is in a resting position owing to exhalation. However, flattening this dome causes the floor in the ribcage to lower, and in this way increases the rib cage volume, i.e., inhalation takes place. When the diaphragm contracts, it presses the abdominal content downward which, in turn, presses the abdominal wall outward. The diaphragm is considered the primary muscle involved in respiration (Davids & LaTour 2021; Croad 2020; Nestor 2020; Putt 2020; Del Negro *et al.* 2018; Kocjan *et al.* 2017; Acar 2016; Cottrell 2015; Gilman 2015; McKeown 2015; Bordoni & Zanier 2013; Gates *et al.* 2013; Lee & Campbell 2013; Novotny & Kravitz 2013; Veltheim & Muiznieks 2013; Green 2012; Michael 2010). The use of the diaphragm muscle is key to the optimal functioning of the respiratory mechanism and is considered most natural. At the moment of birth, a baby draws her/his first life-breath through the nose with the support of the diaphragm (Acar 2016; McKeown 2015; Lee & Campbell 2013; Hymes 1996).

For McKeown (2015), true deep breathing is abdominal. Lee and Campbell (2013:17) agree with McKeown:

“[P]roper breathing is done from the belly, or diaphragm. When you breathe deeply, your diaphragm drops down, and your belly swells outwards. Breathing this way expands your ribs and the muscles in the lower back, opening up more space. That gets more oxygen to the body, slows down your heart, and triggers the parasympathetic nervous system, which is where feelings of relaxation and calm originate.”

Hymes (1996), and Rama (1996), agree with the abovementioned authors that diaphragmatic breathing improves oxygen uptake capacity. Thus, an optimised breath rate and volume can be achieved by giving preference to diaphragmatic breathing.

Observations were made in the grey area between non-SingEd and SingEd in Minnesota, USA. Michael (2010:549) treats patients with voice and airway disorders and specialises in treating singers, actors, music teachers and other professional voice users. She also insists that abdominal relaxation should precede inhalation and further expounds:

“Here’s an easy way to describe inhalation: The abdominal muscles relax, which allows the abdominal viscera to be displaced, which allows for the contraction of the diaphragm, which creates an air pressure differential between the lungs and the outside air, and the air is sucked into the lungs. The lungs fill down into the rib cage.”

SingEd literature specifically also sings the praises of diaphragmatic breathing. The diaphragm is probably the most discussed muscle in SingEd literature and, together with the external intercostals or outer rib muscles, it assists in supporting the breath during singing (Davids & LaTour 2021; Croad 2020; Fountain 2019; Del Negro *et al.* 2018; Acar 2016; Chapman & Morris 2016; Gilman 2015; Kiesgen 2005; Doscher 1987; Watson & Hixon 1985). In addition, these muscles serve “to release the laryngeal workload, reducing fatigue and enhancing performance” for singers (Douglas & Patenaude-Yarnell 2005:487; Laukkanen 2003:260). When one is breathing normally, the diaphragm descends approximately 1.5 centimetres. However, according to Doscher (1987), it descends between 6 and 7 centimetres when employed consciously and deliberately during breathing while singing.

Silver (2007), and Decker (1977), agree that the initial goal of a singing lesson should be to assist singing students in locating the diaphragm and acquiring control over its movement. Gregg (1998:3) echoes the latter by saying, “I would suggest that all voice teachers give particular attention to seeing that the abdominal muscles move first on inspiration in their students.” Vocal pedagogue Sundberg (1992:51) writes, “expansion of the abdominal wall during inhalation is a safe sign that the diaphragm was activated.” A lowered diaphragm accompanied by abdominal expansion during inhalation allows for greater air intake that aids tone production (Fett 1993; Christl 1983). However, not lowering the diaphragm, i.e., not inhaling sufficient air, can create all kinds of challenges for the singer like discomfort (Acar 2016), respiration restrictions (Fountain 2019; Frederick 2007), poor posture (Croad 2020) and a breathy tone (Alt 1990).

While Lloyd (2003:51) thinks: “It is common to begin warm-ups with fairly vigorous breathing exercises to help singers locate the muscles needed for diaphragmatic breathing”, LeBorgne and Rosenberg (2019:35) remind us that “At no point does air ever enter the diaphragm. Therefore, the term ‘diaphragmatic breathing’ can be quite confusing for many inexperienced singers.” In this regard, Michael (2010:548) states, “[W]e do not have any kinesthetic sensation of the diaphragm contracting ...We do, however, have proprioceptive sensation of the rib cage expanding, and the displacement of the abdominal contents.” It seems that, even though we cannot see what is happening inside the body, creating awareness of diaphragmatic breathing mechanics is vital to respiratory sufficiency.

Practical examples of exercises that are utilised to emphasise diaphragmatic awareness are bountiful and similar in both non-SingEd (Hof 2020; Westmacott-Brown 2019; Jewell 2018; Tweed 2018; Brulé 2017; Vranich 2016; McKeown 2015; Gilchrist 2014; Novotny & Kravitz 2013; Rama 1996; Carter & Weber 1994) and SingEd literature (Davids & LaTour 2021; Croad 2020; Fountain 2019; Acar 2016; Lana & Westgate 2008; Sneed 2000). For example (Briffa 2002:5):

“Put your left hand in the middle of your chest with your right hand over your navel. Breathe normally. Look at your hands and take a note of which hand moves more when you breathe. If your left hand is moving more than your right hand, it is a sign

that you are a chest breather. If your right hand is moving more than your left hand it is likely that your breathing is essentially diaphragmatic in nature.”

This exercise creates awareness of a person’s everyday breathing habits. Only by being aware of dysfunctional clavicular or chest breathing, can functional diaphragmatic breathing be enlisted.

2.6.4 Combination breathing

The RSM principle of intake sufficiency appears to require an adequate grasp of the three different ways of inhalation, i.e., clavicular, thoracic, and diaphragmatic. Although there are advocates for using either thoracic or diaphragmatic breathing, there are also those advocating that these three ways of breathing can be incorporated. Hymes (1996:30) writes that the three phases of diaphragmatic, thoracic and clavicular breathing “occur in sequence when one breathes to maximum capacity”. Vranich and Sabin (2020:27) explain further:

“A complex interplay exists during inhalation: The diaphragm flattens and the increased intra-abdominal pressure causes an outward expansion of the abdomen. As the diaphragm continues to move, its attachment to lower the ribs causes the lower ribs to expand horizontally. In other words, the rib cage opens.”

This explanation indicates that perhaps abdominal and costal breathing do not happen in isolation, and the abdominal breathing, in a sense, paves the way for costal breathing. In some instances, the types of breathing are combined consciously. Morningstar (2018:14) expounds:

“The healthy breath starts with an inhale that is actually a two-cycle event. The first part is a contraction of the diaphragm which descends in the abdominal cavity causing the belly to inflate and the lungs to expand and draw in air. In a smooth wave like fashion the costal muscles initiate an expansion of the rib cage increasing the lungs’ capacity to fill its middle and upper regions.”

In the modality of yoga, the ‘yogi complete breath’ includes all three phases of clavicular, thoracic, and diaphragmatic breathing (Hymes 1996; Nugent 2009; Ramacharaka 2008). Ramacharaka (2008:47) calls the yogi complete breath a “superior method of breathing” and writes further:

“It brings into play the entire respiratory apparatus, every part of the lungs, every air-cell, every respiratory muscle. The entire respiratory organism responds to this method of breathing, and the maximum amount of benefit is derived from the minimum expenditure of energy.”

There are voices within the SingEd literature echoing the same sentiment that breathing cannot be compartmentalised. Barrier (2009:10), writing about the breathing mechanics of playing brass and woodwind instruments, suggests that a combination of thoracic and abdominal breathing could best aid performers. A diaphragmatic–costal breathing strategy causes the diaphragm to lower and the ribs to expand (Decker 1977). From a voice-training perspective, several authors agree that a combination of the best features of both thoracic and abdominal breathing for singers is an efficient breath-management strategy (Davids & LaTour 2021; Daniels 2020; Hoch 2019; Cottrell 2010; Davis 2009; Sielska-Badurek & Domeracka-Kołodziej 2009; Douglas & Patenaude-Yarnell 2005; Sonninen *et al.* 2005). Decker (1977:16) goes so far as to say, “The vast majority of vocal experts regard diaphragmatic–costal breathing as the most efficient breathing for singing”. As an example, Morrison (2006:12) states that, during inspiration, “the diaphragm contracts, the lower ribs expand outward and the air is drawn into the lungs.”

Miller (1910:34,39) teaches diaphragmatic and intercostal breathing and includes clavicular breathing. He writes:

“For only one method is correct and that really is a combination of all three. These three are called, respectively, clavicular, abdominal or diaphragmatic, and costal ... the correct method combines the three – adds to the inflation of the central and upper parts of the lungs accomplished by costal breathing, the inflation of the lower part accomplished in diaphragmatic breathing and of the extreme upper part accomplished in clavicular breathing.”

Voices in support of the notion of combining the various breathing modes entered this dialogue from both a non-SingEd and SingEd perspective. It is easy to comprehend and visualise an empty bucket under a running tap, filling from the bottom to the top, without any effort from the human involved other than opening the tap. Similarly, if we start with air being drawn in from the bottom of the lungs, will it not naturally push up

to the middle and then the top, according to natural law? Although the three breathing modes, clavicular, thoracic and diaphragmatic breathing, are separated for ease of discussion, is it all that easy to separate them?

2.6.5 Breath support

The Paperback Oxford English Dictionary (Soanes *et al.* 2006:762) and the Longman Dictionary of Contemporary English (Summers *et al.* 2004:1847) respectively define 'support' as "bear all or part of the weight" and "to hold the weight of something". The following passages explain the use of the diaphragm muscle to support diverse functions.

'Bracing' is a concept used in various sports like weightlifting. A commonly used brace method is known as the Valsalva manoeuvre. In this method, the abdominal and diaphragm muscles are contracted powerfully while exhaling against a closed glottis, generating the high intra-abdominal pressure necessary for stabilising the abdominal and thoracic cavities during heavy weightlifting (Vranich & Sabin 2020; Del Negro *et al.* 2018; Skow *et al.* 2015; Lee & Campbell 2013). In this regard, Vranich and Sabin (2020:71) make a distinction between 'anatomical' and 'mechanical' breathing. The former is considered natural because it allows for continuous respiration, and the latter is considered irregular as it involves holding the breath.

Similar concepts to bracing were found in the breathwork literature. For example, Hymes (1996) uses the term 'paradoxical breathing' for in-breathing that contracts the abdominal muscles, heaving the diaphragm into the chest cavity. He comments (Hymes 1996:41):

"Although the chest wall expands, increasing lung volume, the diaphragm simultaneously rises and diminishes these gains. It is immediately obvious that this cannot be an efficient way to breathe, fighting against oneself for air. Then why would anyone breathe this way?"

The use of bandhas, translated as 'drawing together' or 'locking', in which specific areas of the body are gripped, contracted or controlled, is typically employed in yoga, together with asanas (body postures) and pranayama (breathing focus) (Indik 2009; Rama 1996; Yesudian & Haich 1959). There are three kinds of locks or bandhas:

- Jalandhara bandha (neck and sternum focus): Sitting or standing up erect, the chin is lowered, thus retaining breath by creating a lock in the neck area.
- Uddiyana bandha (abdominal focus): While exhaling slowly, the abdomen is drawn in tightly by lifting the diaphragm as high as possible, thus locking in the air.
- Mula bandha (perineum focus): This bandha is known as the ‘anal lock’ because the anal sphincter muscles are contracted and then held while retaining the breath.

Of the latter three bandhas, the uddiyana bandha seems to parallel the bracing and paradoxical breathing concepts mentioned above. These three concepts require the diaphragm muscle to be contracted in service of mixed causes.

How do these concepts translate to SingEd? Whether singers utilise, correctly or incorrectly, clavicular, thoracic, diaphragmatic breathing or a combination of these, all these modes rely on the intentional use of the diaphragmatic muscle to regulate the outflow of air. In SingEd, this requirement is labelled ‘breath support’. Like the bracing concept employed during sport, so the singing breathing process also employs the action and counteraction of the intercostal, abdominal and diaphragmatic muscles (Kelman 2013; Rautenbach 2012; Júnior *et al.* 2010; Barrier 2009; Sell 2005; Fett 1993; Alt 1990; Christl 1983). It is difficult, if not impossible, to disassociate the use of these muscles with the singing process, since the contraction of musculature assists in keeping lung volumes stable by slowing down the outflow of air. Muscular contraction is vital for singers to prolong the expiratory phase while executing a musical phrase. The contracted musculature thus acts as a brake (Croad 2020; Fountain 2019; Acar 2016; Chapman & Morris 2016; Cottrell 2010; Barrier 2009; Kiesgen 2005; Sell 2005). David (1995:30) writes, “Because of the natural recoil forces of the lungs and thoracic wall, some kind of muscular force must be exerted to prevent the air from going out just as fast as it comes in”. Like their sports counterparts, singers also ‘brace’, but with a different goal in mind. The singer attempts to override the body’s natural automatic reaction to let go of the air, by bracing the musculature. Thus, the term ‘breath support’ is mainly used for this requirement of bracing or contracting the musculature (Salomoni *et al.* 2016; Indik 2009; Thorpe *et al.* 2001; Keller 1998;

David 1995; Doscher 1987). The lung capacity is taxed to the utmost when the singer starts with lungs filled with air but ends with lungs nearly devoid of any air (Croad 2020; Acar 2016; Emmons & Chase 2006; Watson & Hixon 1985). Therefore not “running out of breath before the end of phrases” (Fountain 2019:1) is dependent on “slow controlled emission of breath during singing” (Davis 2009:9). A simple way to illustrate breath support is by using the image of a balloon. As a child, many of us filled balloons with air. If, just after filling the balloon with air, we let go of it, air outflow is very rapid. If we want to control the outflow of the air, we use our fingers to pinch the outlet of the balloon and slowly let go of the air. This serves as a metaphor for how singers control the outflow of air with contracted muscles enabling them to sustain a singing phrase.

Davids and LaTour (2021) use the term ‘breath metering’ to denote the air conservation during singing necessary to complete a musical phrase with sufficient breath energy. “Efficient metering of air requires exhaling no more and no less than what is necessary to produce the desired tone” (Davids & LaTour 2021:29). The topic of ‘breath support’ is interpreted and implemented differently amongst singers. Vennard (1967), for example, suggests a cough reflex to foster diaphragmatic initialisation (LeBorgne & Rosenberg 2019:33). For Barrier (2009:3): “The breath taken on a day-to-day basis is usually very shallow and unsupported”, therefore, Rosabal-Coto (2006:59) argues:

“The singers must be led to understand what breath support is and why it is important. They must be guided to develop a steady, constant, and controlled supply of air under pressure. An unsupported tone must never be allowed ... The first step towards this understanding is to enhance the awareness on the action of the diaphragm.”

The literary exploration revealed two main breath support approaches that can be labelled the ‘up-and-in’ and ‘down-and-out’ methods (Gilman 2015; Callaghan 2014; Lyle 2011; Cottrell 2010; Davis 2009; Indik 2009; Smith 2007; Douglas & Patenaude-Yarnell 2005; Gregg 1998; Keller 1998; David 1995). Davis (2009:4) states that, over the past 200 years, two dominant and incongruent schools of thought regarding breath support have become apparent. In the up-and-in approach, the singer, after inhalation, pulls or tucks the lower abdominal wall inward. Gregg (1998) likens the latter to the Heimlich manoeuvre. It is also called the ‘belly in’, ‘hold in’, ‘abdominal tuck’, or ‘pear shape up’ method. In the down-and-out approach, the singer, after inhalation, pulls or

tucks the lower abdominal wall outward. It is also labelled the 'belly out', 'push out', 'abdomen out', or 'pear shape down' method. In an online survey focusing on techniques for posture and breathing amongst 2306 collegiate voice teachers in the USA, 48% of respondents supported the requirement for the 'tucked in' approach, whereas 52% dismissed this necessity (Naseth 2012). Davis (2009:11) expands on this:

"For both the "down-and-out" and the "up-and-in" methods, the breath is being managed using the same basic principles. There is a collapse and a resistance either with the top resisting the bottom (up and in) or the bottom resisting the top (down and out). The "down-and-out" approach functions by means of the abdominals resisting the thorax whereas the "up-and-in" functions by means of the thorax resisting the abdominals. During exhalation, the one collapses while the other resists or expands to create support, whereas during inhalation, the one expands while the other relaxes to allow for the intake of breath."

Smith (2007:34) objects to the term 'breath support' because, according to him, actions that arise from using this concept "almost always cause increased air pressure. For singers to have freedom in their vocal production, they need greater airflow, not air pressure." This objection, together with Kiesgen (2005:2) defining breath support as "the act of supplying a constant breath flow", are prime examples of the contradictory terminology and breath management ideas that exist in SingEd literature.

Extensive non-SingEd and SingEd literature was found regarding the RSM principle of intake sufficiency. The matter of breathing rate and breathing volume, i.e., breath sufficiency, seems to be not just a concern in non-SingEd literature but also a significant consideration in SingEd literature. The third RSM breathing principle of intake sufficiency is essential for singers. However, the way that singers control the out-breath to maintain intake sufficiency is not inherent in the wording of the RSM principle. The modality-specific requirement of employing the diaphragm in controlling air outflow is perhaps not a priority within the RSM but is non-negotiable for singers.

Most SingEd literature points to diaphragmatic breathing as the preferred breath-sufficiency mechanism. Therefore, Life Skills educators should also be well versed in diaphragmatic breathing mechanics to convey the concepts to learners. However,

neither the Life Skills CAPS nor the three Life Skills textbooks discussed in 2.2 address this matter of respiratory sufficiency significantly. Only two of the learner textbooks referred briefly to diaphragmatic breathing: “Put your hands on your diaphragm. Use your diaphragm muscle to breathe in as deeply as you can” (Brennan *et al.* 2019c:34) and “Place both hands on your tummy. Feel your tummy fill up when you breathe in and empty when you breathe out” (Amato *et al.* 2020c:95). How will this significant concept be entrenched with such minimalistic attention given to it?

Through SingEd embedded within the Life Skills programme, awareness can be created regarding the difference between the natural respiratory needs of the physical body and the respiratory requirements of specific modalities. In this way, ‘breath awareness’, a concept alluded to in the Life Skills CAPS (Department of Basic Education 2011a; 2011b; 2011c; 2011d), can be created in terms of the advantages and disadvantages of the different breathing modes, i.e., intake sufficiency.

2.7 THE PRINCIPLE OF BREATH CONTINUITY

The fourth principle alluded to in the RSMSPB is the principle of breath continuity. Pearl (2021) explains that breathing continuously in a harmonious way is fluent, unfragmented, soft and complete.



Figure 2.6: RSMSPB: The principle of breath continuity (Potgieter 2023).

Adhering to this RSM breath continuity principle, the natural flow of breathing should be continuous and preferably not interrupted, stopped or suppressed. “Don’t hold your breath or stop it, unless you have a specific purpose”, write Vasiliev and Meredith (2006:59). Also, “Learning to push your breathing through any area where it is blocked or interrupted is a key skill in Systema Breathing.” (Vasiliev & Meredith 2006:60). Hence, the rationale is to minimise breath stoppages. These authors believe that we frequently impede our breath cycle without being aware of it. Breath disruption may be psychological or physical. Psychological breath disruption may be a stress response to a sudden unexpected experience or to long-term subconscious habits of fear and anxiety. Physical breath disruption occurs owing to restrictions in the physical body such as bad posture, tension, disease, pain, injury or fatigue that block the natural flow of the breath (Vasiliev & Meredith 2006:60). From these perspectives, breath stoppages, i.e., breath discontinuity is considered unnatural and undesirable.

The Paperback Oxford English Dictionary (Soanes *et al.* 2006:157) defines ‘continuity’ as both “the uninterrupted and unchanged existence or operation of something” and “an unbroken connection or line of development”. The mentioned terminology, ‘uninterrupted’, ‘unchanged’, and ‘unbroken’, is echoed in different ways by various breathwork authors. Manga (2018:75) reiterates the necessity for breathing to be “open and flowing”. Young *et al.* (2010:117) and Hymes (1996:41) respectively state that breathing should be “smooth and continuous” and “one continuous cycle”. In this regard, Lee and Campbell (2013:65) write: “Perfect breathing is the powerful marriage of breath awareness and conscious breathing.” By being breath conscious, it is thus possible to notice when breathing is not continuous and to remedy the situation. BWTL, contributing to breathing consciousness, is a vital life skills tool to attend to undue breath stoppages.

One of the functions of continuous breathing, or the moving breath, within the human body is to form sound, also called phonation (Widmaier *et al.*, 2008:443). The term ‘phonation’ stems from the Greek word *phōnē*, which relates to ‘sound’ or ‘voice’ (Soanes *et al.* 2006:560) and is therefore applicable to singing (Croad 2020; Salomoni *et al.* 2016). Hence, continuous breathing makes continuous singing possible. Kulkarni *et al.* (2013:2) write: “Singing requires exquisite coordination between the respiratory and phonatory system to efficiently control glottal airflow.” Continuous airflow makes

human sound, in general, and singing specifically possible. Owing to singers being required to sustain long musical phrases, a continuous air supply is required to uphold the sound of the singing voice. Successive musical pitches ‘float’ on the breath. Hence, singing is dependent on continuous breathing.

The music concept ‘articulation’ describes how each musical sound is to be executed in relation to the sound that preceded or follows it. Within the music educational context, the concept of articulation applies to singing, but other music instruments can also mimic this attribute. The main two types of articulation are ‘legato’ and ‘staccato’. The Italian term *legato* indicates that a group of notes should be sung or performed with a smooth continuous connection between all the notes of a phrase (Alt 1990; Scholes 1972). Emmons and Chase (2006) define legato in the context of singing as a constant forward movement of air and tone. They further view it as a fundamental principle of beautiful and healthy singing. David (1995:27) agrees by saying, “Singing requires a prolonged and steady flow of breath”. Smith (2007), and Sneed (2000), agree that legato singing is only possible when the breath is not stopped or held back. In this regard, Miller (2011:19) calls an insecure breath process the “primary destroyer of legato”. Therefore, there should be no breaks between the successive musical sounds: legato singing requires breathing that is ‘consistent’ (Hoch 2019:29) i.e., that is continuous. Legato singing is, therefore, in harmony with the RSM principle of breath continuity.

Emmons and Chase (2006:30-31) make this statement about legato singing:

“The achievement of beauty and line are dependent upon legato ... In the history of the art of teaching singing, there has literally never been a knowledgeable vocal musician who disagreed with this principle. In vocal pedagogy every effort is made to instil the habit of legato connections from the first lesson. Basically, one cannot sing well or effectively without legato.”

Choir leaders deal with breath continuity in a particular way. Often, because they do not work with highly trained musicians who have mastered the art of breath support, they share and shape long musical phrases through the team effort of all members of a voice group. All the tenors sing the same phrase, but each member breathes at different times to create the illusion or impression of one continuous musical line. This

continuous sound is called 'staggered breathing'. "In choral singing the concept of staggered breathing is frequently employed" (Sneed 2000:52). Unlike breathing for solo singing, staggered breathing is employed in sound artistry to create the impression that no breath was taken or needed during an entire performance. "Very long phrases are common in the choral literature. Choral singers may stagger breaths within sections to achieve long phrases" (Davids & LaTour 2021:31). Staggered breathing is a particular manifestation of legato singing and is well situated within the RSM breath continuity principle. However, while legato singing is upheld as the ideal way of singing, it is possible to sing with disrupted breath continuity.

In the musical arena, not only can music be performed 'legato', but also 'staccato'. The latter term implies that each successive musical tone is separated from the other (Scholes 1972). While staccato singing is possible, its use is minimal and mainly employed in sound artistry to contribute to the character of a specific piece of music or highlight a particular text. Singing in a non-legato style inevitably causes fatigue, and when it supplants legato singing as the primary mode of singing, vocal health problems may follow (Emmons & Chase 2006). When requiring staccato singing for special or dramatic effect, the vocal folds must open the glottis during the silent segments separating the notes (David 1995; Sundberg 1992). To avoid wasting air during staccato singing, subglottal or lung pressure must be reduced to the minimum during the silent intervals. Preserving air requires singers to switch skilfully from higher to lower or no lung pressure and vice versa, as required by the articulation demands of the music. "Rather than feeling that each pitch must be pounded with the breath, the singer should follow a full intake of breath with a slight bounce in the midriff area" (David 1995:32). Therefore, staccato singing, although disrupting the continuity of the air, still requires air supply. It is possible to achieve musical artistry through staccato singing or breath disruption, but it is not the norm. Breath continuity is the norm.

Besides staccato singing, glottal pressure caused by high frequencies can also hinder breath continuity. Sound is frequency. The lower the sound, the slower and less dense the sound waves are. The higher the sound, the faster and denser the sound waves are. Lower pitches or music notes put less strain on the vocal cords than high notes. High notes cause a feeling of constriction in the throat, and it becomes a challenge for the singer to learn how to manage this tension. In line with the RSM that teaches,

“Learning to push your breathing through any area where it is blocked or interrupted is a key skill in Systema Breathing.” (Vasiliev & Meredith, 2006:72), the skilled singer learns to ‘push’ the breath to overcome the high-pitched ‘obstruction’ and to produce a stress-free tone. Barrier (2009:31) writes, “Whether the air is flowing to support life or create sound, it should be stress-free.” Acar (2016:757) adds that the “most beautiful sound is the sound which comes out without obstruction”. According to Davids and LaTour (2021), breath intake should be noiseless. Noise results from throat constriction, influencing tone quality. Constriction could result from the soft palate that is too relaxed, the jaw not being lowered sufficiently, the tongue being too far back in the throat or tense muscles surrounding the vocal tract. For airflow to be optimum and continuous, Christl (1983) advises a loose, relaxed yaw (feeling of yawning) on lower notes and a sense of smiling; thus, using the facial muscles to lift the palette, for higher notes. “If the functional equilibrium of the inspiratory and the expiratory breathing muscles is achieved, a free and steady air stream results” (Doscher 1987:22). The principle of breath continuity corresponds with the principle of breath sufficiency and the principle of non-tension, which will be discussed later. Managing the breath in this way thus requires conscious breathing and being aware of how posture, frequency and other factors influence breath continuity.

Why and how should Life Skills educators engage with this RSM concept? The CAPS document does not mention the concept of breath continuity directly. However, exercises requiring numbers or counts of breathing in and out, alluded to in the learner textbooks (Amato *et al.* 2020c; Brennan *et al.* 2019a), could possibly aid breath continuity awareness. Perhaps the nominal literature discussing breath continuity indicates that this principle is entangled within the principles of breath leading (see 2.5) and sufficiency (see 2.6). For example, long legato lines in singing will only be achieved when sufficient air is provided. The singer steers the musical requirements consciously with the breath.

2.8 THE PRINCIPLE OF THE PENDULUM

The principle of the pendulum is the fifth caption in the RSM breathwork theoretical framework. The ‘pendulum’ is a metaphor for the respiratory rhythm of inspiration and expiration. Adhana *et al.* (2016:16) state, “Breathing process is the manner in which air is inspired or expired”.

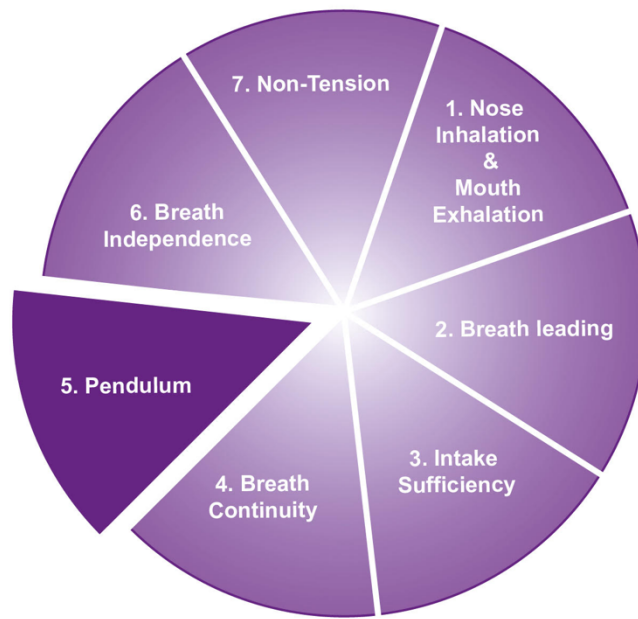


Figure 2.7: RSMSPB: The principle of the pendulum (Potgieter 2023).

The RSM perspective is that a pendulum extends and retracts, moving back and forth in a simple continuous cycle. Vasiliev and Meredith (2006) draw our attention to the outer reaches of the sway of this pendulum. For them, paying attention to the very end of each inhalation and exhalation is necessary. It follows that exhaling should not proceed without first reaching the ceiling of inhalation and, conversely, that inhalation does not advance without reaching the limit of exhalation. They liken the position of the pendulum at these outer extremes to a natural breath pause, i.e., no forced stoppage occurs. In order for the readers of their book to grasp this concept better, they suggest the following (Vasiliev & Meredith 2006:62):

“1. From any relaxed pose (sitting or standing normally), stay relaxed and inhale a comfortable amount of air. 2. When you feel that the inhalation reaches its natural completion, very gently prolong the inhalation just a bit, in a comfortable way, without noticeable pressure. 3. When you feel that prolongation would introduce tension, allow the cycle to reverse itself naturally by beginning the exhalation. 4. At the bottom of the exhale, sense the natural pause before continuing at a normal rhythm.”

‘Breath holding’, i.e., an extended stay over at the extremes of the pendulum’s sway, is practised within the RSM. According to Vasiliev and Meredith (2006:179), this practice of breath holding conditions the brain, heart and nervous system to prevent the ‘panic’ reaction that naturally accompanies prolonged holds, as this practice can assist in raising the threshold for instinctive panic in stressful situations. Mikhail Ryabko, considered the master teacher of the RSM, says (Vasiliev & Meredith 2006:85-86):

“When we experience something that we perceive to be stressful and hold our breath, on a physiological level our blood vessels constrict, circulation is impaired and our cells are deprived of nourishment – oxygen and food. When this stress reaction takes place at a high intensity or when it happens consistently it leads to gradual destruction of the body, to aging, injuries and disease. When we hold our breath as part of the breath training, we do it willingly, so there is no psychological stress. Thus, there is no blood vessel constriction, and quite the opposite, the blood vessels dilate in a normal response to a healthy exercise. Therefore, the effect of such training is beneficial in every way physically and psychologically.”

Hence, the pendulum principle is utilised with the RSM for physiological and psychological endurance training.

Soanes *et al.* (2006:551) view a pendulum as “a weight hung from a fixed point so that it can swing freely, used to regulate the mechanism of a clock”. The RSM principle of the Pendulum is particularly concerned with the outer reaches of the pendulum and extends the natural breath pauses of the respiratory cycle consciously towards endurance training. The breath pause attracted some attention in the literary review and was labelled, amongst other things, as breath holding (Skow *et al.* 2015; Vasiliev & Meredith 2006), post inspiration (Del Negro *et al.* 2018), breath retention (Edwards 2005; Reid 1998), micropause (Moraveji 2014), and expiratory pause (Green 2012). Del Negro *et al.* (2018:356) state:

“During post inspiration, shortening contraction of laryngeal adductor muscles (which increases airway resistance) and lengthening contraction of the diaphragm act to retard lung deflation. Post inspiration benefits alveolar gas exchange, by increasing the amount of time that air stays in the lungs, and promotes laminar expiratory airflow that diminishes the likelihood of airway collapse.”

Edwards (2005:33) further expands:

“Brief breath retention has many particular benefits. It slows and deepens the pulse, balances blood pressure, produces a compression which extends throughout the circulatory system, enhances the exchange of gases, enriches the blood with more supplies of oxygen and elimination of carbon dioxide, triggers the innate response of cellular respiration, breaking down blood sugar to release oxygen and produce body heat and keeping the autonomous nervous system in parasympathetic healing mode.”

The reasons mentioned by Del Negro (2018:356), and Edwards (2005:33), motivate McKeown (2015) to be an advocate of breath-holding techniques. In his book he explains how he trains athletes to slow down their breathing rate while being active to optimise oxygen release at a cellular level. These authors are thus in agreement with the RSM voices of Vasiliev and Meredith (2006), who teach that the most significant flow of oxygen and energy permeates the bodily tissues at this extreme point of inhaling air. Various authors shared practical exercises that speaks to the different breath phases of the pendulum (Peyton 2019; Jewell 2018; Manga 2018; Rockwood 2018; Brulé 2017; Vranich 2016; Strom 2015; Gilchrist 2014; Moraveji 2014; Ramacharaka 2008; Briffa 2002; Rama 1996). For example (Stewart 2000:248):

“Close your eyes. Inhale four counts. Hold 4 counts. Exhale four counts. Hold 4 counts.”

In this exercise, it seems that equal weight is given to all four phases of the breathing cycle to create awareness of breath retention, both after inhalation and exhalation.

Breath holding is a thought-provoking concept, but does it hold any significance for SingEd? Davids and LaTour (2021) describe four primary phases of the breathing cycle in singing: inhalation, a brief airflow suspension, exhalation, and recovery (quick release of tension in breathing muscles). In the singing context, this brief airflow suspension allows for engaging expiratory muscles to aid breath support (see 2.6.5). Here Davids and LaTour (2021:24) are of the following opinion:

“A very short suspension prior to exhalation allows a transition from using muscles for inhalation to using muscles for exhalation. In everyday breathing there is often no real

suspension, but rather an immediate shift from inspiration to exhalation. But this brief pause is necessary for singing in order to set the stage for excellent breath support.”

Breath support in this context seems to be a kind of breath holding. However, the breath is only stopped initially to engage the exhalatory musculature, but after that, these muscles act as a brake to control the outflow of the air. Thus, breath holding only assists in a rapid engagement of the respiratory muscles prior to singing and does not imply extended breath holding. Decker (1977) writes of the need for the singer to slow down the exhalation phase within the breath cycle to provide a continual stream of air, as demanded by singing a musical phrase. Without breath, there can be no singing. The role of breath holding in singing is thus to initiate breath support in order to aid breath continuity, not to stop or hold the breath.

Each song dictates a particular breathing rhythm, determining the pendulum’s sway. Salomoni *et al.* (2016:18) write, “In addition to time constraints related to musical rhythm, singing tasks require more rapid inspiration and longer expiration for sustained utterances than quiet breathing”. Indik (2009) agrees by saying that the duration of the exhalation is prolonged in singing. Mostly, the in-breath is quick, and the out-breath is slow. After singing a long phrase, the lungs run out of breath and immediately take the next in-breath to attempt the activation of the following musical phrase. There is no time to focus on the extreme inhalation and exhalation phases within the context of the respiratory demands of singing. In fact, owing to the sound requiring constant air, these outer limits of the pendulum’s sway are cut short. Therefore, the singing breathing rhythm is not smooth and regular like the natural swing of a pendulum but somewhat more irregular. Gilman (2015:31) writes that, in singing, “we do not have time for these long inhalations. It is the long, free exhalation in combination with the constantly changing demands of voice, articulation, vocal intensity, and vocal colour that need to be trained”. To hold the breath is of no use to sound that requires continuous breath supply.

Whereas the RSM harnesses the extremities of the pendulum for endurance training, the concept of breath holding is foreign to SingEd literature. However, breath holding in singing is briefly engaged to initiate breath control. Whether the micropause or prolonged breath exhalation made possible by breath control have the same

advantage of optimal oxygen saturation as explained by non-SingEd authors is unclear.

2.9 THE PRINCIPLE OF BREATH INDEPENDENCE

The sixth item of the RSMSPB theoretical framework is the principle of breath independence. Vasiliev and Meredith (2006:63) believe that “you should perform breathing exercises with frequent changes of breathing phase”. The following literary dialogue further explores the notion of not being fixated on one respiratory method.

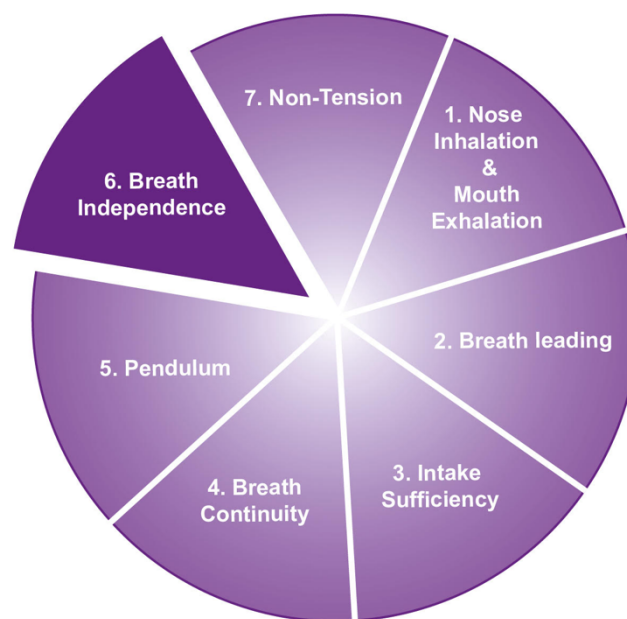


Figure 2.8: RSMSPB: The principle of breath independence (Potgieter 2023).

The RSM believes that physical actions linked strictly to any single breathing phase should not become a habit. Consequently, breathing exercises with frequent changes in physical routines are performed within this martial art system. For example, if the body is lowered on the out-breath for some time, it is crucial also to practice it consciously the other way around, thus practising raising the body on the out-breath (Vasiliev & Meredith 2006). Physical actions in this context should thus be independent of the breathing phases. These actions exist to train the body to be responsive optimally to any action from an opponent. Hence, there are no pre-programmed breath-linked reactions to an opponent's actions because the opponent's strategies

are primarily unpredictable. Consequently, breath choices should meet the requirements of the immediate situation. “The point is to achieve conscious mastery and have the power to choose and adapt your breathing and motion to any situation” (Vasiliev & Meredith 2006:133). Each response is, therefore, appropriate for the challenge at hand. Within the framework of the RSM, it is thus understood that variable breathwork strategies keep the body flexible and alert.

The Paperback Oxford English Dictionary (Soanes *et al.* 2006:384) describes ‘independence’ as “the state of being independent” and further explicates the term ‘independent’ as “free from outside control or influence”. Is this principle of breath independence applicable to SingEd? In singing, it is impossible to reverse the breathing action. Breathing in and trying to sing is just not possible. Sound, and therefore singing, is dependent on breathing out. No SingEd literature aligns with this principle, although it can be understood and accepted easily within the RSM context.

The RSM principle of breath independence seems to be a modality-specific principle suited to the unique demands of this Russian martial art. In a SingEd context, a principle of breath dependency would probably be more suitable. However, this is unnecessary as breath dependency is already embedded within the other main principles covered so far, for example, the principles of breath leading, breath sufficiency and breath continuity.

2.10 THE PRINCIPLE OF NON-TENSION

The seventh and last concept listed in the RSMSPB theoretical framework is the principle of non-tension. Vasiliev and Meredith (2006:135) insist that “Relaxation is a pre-condition of correct breathing”.

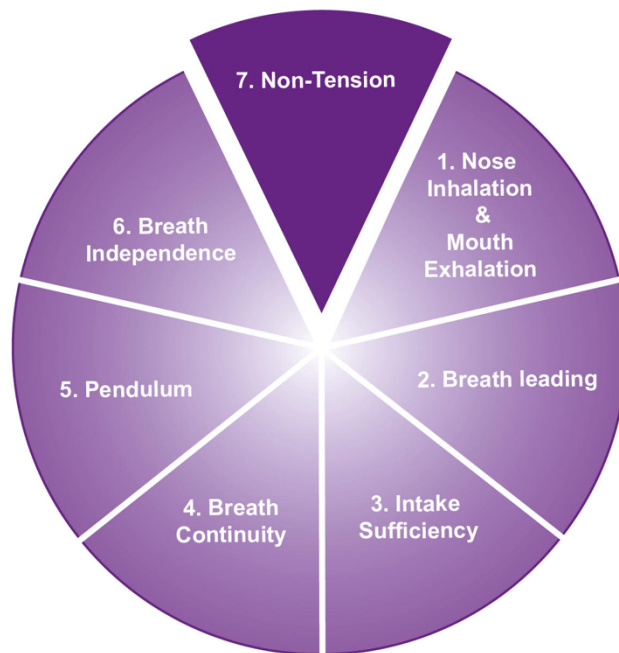


Figure 2.9: RSMSPB: The principle of non-tension (Potgieter 2023).

The RSM breathing principle of non-tension dictates that the physical body must relax at all times and that musculature should only be involved minimally “even while performing the hardest work” (Vasiliev & Meredith 2006:63). “If your muscles are over-involved, or if you are unconsciously tensing the muscles uninvolved in [a] particular exercise, you will tire very quickly.” (Vasiliev & Meredith 2006:64). From this perspective ‘non-tension’, within the labelling of this breathing principle, points to relaxation of muscles. However, not only the musculature but also the skeleton system, i.e., the spine, is addressed in contemplating this concept. Vasiliev and Meredith (2006:68-69) write about a “standing upright ... natural body position”:

“When you stand in this way, we can say that you are keeping proper form, but what it really means is that you are in your normal and natural body position. This upright posture is very strong, and provides the perfect anatomical configuration for balanced movement in any direction, for martial arts, sports, and function in daily life. The natural position has a very close connection to correct breathing.”

Vasiliev and Meredith (2006:89) further clarify, “Remember that breath is our power source, and only a body free of excess tension allows for sufficiently deep breath.” The principle of non-tension, therefore, highlights the role of a sound anatomy for optimal respiration: Optimal respiration occurs when the physical body is in perfect non-tension. The implication is that, to breathe well is to be conscious of the anatomy and alert to any tension that it might carry. In this regard Vasiliev and Meredith (2006:67-68) write, “You can’t eliminate something if you aren’t even aware of it.” In the ensuing literary discourse, various authors explain their opinions regarding non-tension.

2.10.1 Transdisciplinary discourse: non-tension

No specific entry could be found in the Paperback Oxford English Dictionary for ‘non-tension’. Consequently, the opposite term, ‘tension’, was viewed. It is described as “the state of being stretched tight”. Therefore, it can be deduced that non-tension is a state of not being stretched tight. Vranich and Sabin (2020:2) use the term ‘anatomical congruence’ to denote an optimal posture for optimal breathing. ‘Congruence’ is defined by the Paperback Oxford English Dictionary (Soanes *et al.* 2006:153) as “in agreement or harmony”. Similar to the RSM concept of non-tension, Vranich and Sabin’s (2020) explanation thus holds that optimal breathing becomes possible when all the parts of the physical anatomy are in congruence. Therefore, the concept of non-tension can be said to be the natural consequence of a harmonic anatomy.

Various authors make a distinction between natural, i.e., non-tensioned and unnatural, i.e., tensioned breathing, and discuss its relationship with the desired anatomy and mechanism. They all agree that healthy breathing follows when the anatomy is sound, perfectly balanced and relaxed (Adhana *et al.* 2016; DiStefano 2016; Vranich 2016; Bhikkhu 2015; McKeown 2015; Novotny & Kravitz 2013; Veltheim & Muiznieks 2013; Jong-Won 2009; Nugent 2009; Bottomley 2004b; Briffa 2002; Yesudian & Haich 1959). Therefore, Lee and Campbell (2013:37) state, “Breath awareness is body awareness.” According to Doscher (1987:17), muscles are “long and thin” in a relaxed state and become “shorter and fatter” when contracted; therefore, causing tension.

Similar to the RSM authors, besides a relaxed musculature, mention is made of the spine in contemplating non-tension. Yesudian and Haich (1959:51) state: “Good breathing starts with a good posture”. Therefore, breathing and posture are interrelated (Vranich & Sabin 2020). Westmacott-Brown (2019:15) writes: “Your breath exercises will be most effective when your body is comfortable and your respiratory system is open, with your spine straight but relaxed.” Manga (2018) agrees that tension and misalignment of the spine impact breathing. Hymes (1996:27) further expounds on the importance of the spine: “The bony spine, or vertebral column, which runs vertically through the back parallel to the long axis of the torso ‘cylinder’, provides structural support for the whole torso, acting as a framework around which other tissues and organs are grouped.” The principle of non-tension, as explicated by the RSM, was found to be equally significant in this transdisciplinary discourse. The various authors agree about a sound anatomy being a prerequisite for optimal breathwork.

2.10.2 Postural considerations in singing education

Is this RSM principle of non-tension of value to breathwork practices within SingEd? The SingEd literature is rich in expounding on the relationship between optimal posture, relaxed musculature and functional breathing (Croad 2020; Hoch 2019; LeBorgne & Rosenberg 2019; Pop & Filip 2019; Acar 2016; Chapman & Morris 2016; Rautenbach 2012; King 2010; Barrier 2009; Sielska-Badurek & Domeracka-Kołodziej 2009; Frederick 2007; Smith 2007; Morrison 2006; Rosabal-Coto 2006; Smith 2006; Douglas & Patenaude-Yarnell 2005; Keenze & Bell 2005; Skoog 2004; Sneed 2000; Sundberg 1992). Emmons and Chase (2006:25) expound:

“The bodies of ... singers are their instruments. For this reason, any position of their skeleton or any particular deployment of the musculature has a pronounced effect on the body’s ability to deliver the technical requirements of their ... singing. Posture, including head, neck, torso, and leg stance, is crucial. All physical controls function less well when the posture, standing or seated, is faulty.”

This statement is supported by various other singing pedagogues. Keenze and Bell (2005:373) write: “Posture is all-important because it balances the body, thereby allowing the head, neck, and torso to interact without tension”. The aim is for

physiological freedom that allows for unobstructed energy flow (Smith 2007; Alt 1990; Doscher 1987) which, in turn, supports a good beautiful singing tone (Acar 2016; King 2011; Frederick 2007). Both Barrier (2009:3) and David (1995:16) agree that a singer's breathing "benefits or suffers as a direct result of posture" and that, conversely, "the method employed for breathing affects posture".

The principle of non-tension and singing cannot be separated; therefore, Sell (2005:71) writes, "Singing teachers have to point out these bad habits and encourage their correction." To this, Alt (1990:33) adds, "Posture is easily taught but not easily maintained" and must be "made habitual ... be in the muscle memory of the student". Decker (1977:16) writes, "Posture is the real beginning of the pedagogy of breathing. If the body is properly aligned, the breathing muscles will be free to work." It is clear that an optimal posture is necessary for singers and can be taught. "Posture is fundamental and introductory to the teaching of breathing for singing." (Davis 2009:38). So, what can we teach about posture? The SingEd literature is generous in its explication of the various postural factors.

- **Feet**

The suggestion is that the feet should be placed squarely on the floor, slightly apart, approximately shoulder-width from each other (Smith 2006). Whereas Croad (2020), Taylor (2014), and David (1995), suggest that the weight should be on the balls of the feet, Chapman (2016) thinks that both the heel and the ball of the foot must be in equal contact with the ground. Frederick (2007) and Morrison (2006) merely allude to an even distribution of the weight on the feet.

- **Knees**

The knees should remain soft and flexible, thus not braced back, i.e., locked (Chapman 2016; Countryman & Sung Ha 2007; Frederick 2007; Morrison 2006; David 1995).

- **Spine**

According to Alt (1990:33), singers are to adopt a 'spine-conscious' posture. Standing up straight or in an upright position (Doyle 2001) will contribute to the maximum expansion of the lungs since slumping forward decreases the cavity within which the lungs can expand and therefore restricts airflow and lung capacity (Croad 2020;

Barrier 2009). On the other hand, Chapman (2016:28) warns of not overdoing it: “an alignment which is stable rather than static and fixed and is a prelude to easy flowing movement”. Trying to sit or stand up too straight in itself contributes to tension. Therefore, a comfortably aligned spine is advocated (Smith 2007; Smith 2006).

Sell (2005:72) is of the opinion that “Axial alignment of the body enables singers to coordinate muscular activity, particularly of the torso, to assist in managing the breath for singing”. In this regard, other authors recommend a feeling of elongation while singing (Chapman & Morris 2016; Sneed 2000). This bodily stance contributes to the relaxation of many other parts of the body.

- **Chest**

Smith (2007), and Morrison (2006), suggest that the chest should neither be over-lifted nor collapsed. Also, an upright posture will ensure that the chest, sternum and rib areas of the body remain high (Naseth 2012; Emmons & Chase 2006; Smith 2006; Skoog 2004; Sneed 2000; Decker 1977).

Keeping the chest up not only aids diaphragmatic function (Indik, 2009) but also lung expansion (Davids & LaTour 2021; Doscher 1987). It is also easier to expand and contract the ribs in costal breathing if the chest is kept high (Davis 2009). The position of the shoulders assists in keeping the chest in an optimal position.

- **Shoulders**

The shoulders are held slightly back, but not uncomfortably so; thus, held back with non-tension. Lowered shoulder blades also keep the vocal tract and neck free from tension (Croad 2020; Daniels 2020; Chapman & Morris 2016; Naseth 2012; Barrier 2009; Davis 2009; Lloyd 2003; David 1995). Both Sell (2005:72), and Chapman and Morris (2016:50), remark that the shoulders should remain stable during respiration; therefore, not rising and falling in sync with a breathing cycle. As mentioned in discussing the principle of intake sufficiency (see 2.6), vocal pedagogues do not favour clavicular or upper breathing; therefore, raising the shoulders is a clear sign to them that their students are not employing the best breathing strategy (Fountain 2019; Acar 2016; David 1995). In this regard, Vasiliev and Meredith (2006:6) from the RSM school of thought advise, “The requirement for relaxation applies particularly to your shoulder

area – try to be aware of any residual tension there (Which may cramp your breathing)”.

- **Neck**

The neck is to be held straight as a continuation of the line begun by the spine. Slouching the neck forward or jamming the chin into the neck will kink the windpipe and restrict airflow. It should also be able to move freely. Relaxation will keep the throat open and maximise respiration (Croad 2020; Chapman & Morris 2016; Barrier 2009; Frederick 2007; Lloyd 2003; David 1995). Sell (2005:71) writes, “when the head is correctly poised and balanced on top of the spine, the extrinsic and intrinsic muscles of the larynx are released and the breathing mechanism functions more freely”. Miller (1996:12) also emphasises: “Creative singing depends on freely produced energy”. The neck is, of course, also home to the vocal cords, a key component of phonation and singing.

Tensed-up neck muscles attached to the larynx will affect the vocal cords detrimentally (Davids & LaTour 2021; Chapman 2016). Sneed (2000:52) expounds:

“Constriction in the throat area brings up the issue of throat tension, also referred to as singing from the throat, which greatly affects tone and is a symptom of improper breathing technique. Instead of feeling a deep low breath impulse from the abdominal area as their support for the note, many singers try to overcompensate by using the throat muscles just as a weightlifter will tense his neck and throat muscles to lift heavy objects. By squeezing these muscles, a singer shuts off the resonance and eliminates the lower body (the support) from the breathing process. This type of throat tension is most noticeable during passages that go into the upper parts of a singer’s range.”

Throat constriction blocks airflow, which affects the singer: Tension creates a strained sound and thus affects tone and resonance. Harmful tension has consequences for the vocal health of the singer, especially when vocal cords are overextended. The lack of sufficient airflow makes sustaining long phrases challenging, and the resultant diminished air volume and pressure creates difficulty in singing higher pitches (Davids & LaTour 2021). Kelman (2013) therefore advocates singing with an open throat. Kiesgen (2005), furthermore, is of the opinion that inhalation in singing should be silent because noise from the throat during inhalation indicates tight throat muscles.

Breath support that employs the diaphragm muscle assists singers in keeping the vocal tract free of tension because the vertical space of the thorax increases when the diaphragm descends (Davids & LaTour 2021; Doscher 1987). Both the tongue and jaw/chin in a relaxed state also assist in lowering pressure on the vocal tract (Daniels 2020; Hoch 2019; Acar 2016; Chapman & Morris 2016; Kelman 2013; Naseth 2012; Trimble 2010; Dayme 2009; Smith 2007; Rosabal-Coto 2006; David 1995; Alt 1990). Douglas and Patenaude-Yarnell (2005:487-488) write: “Proper management allows breath to be taken and utilised in a way that does not stiffen the body and negatively affect performance.”

Finally, Moliterno (2008:46) expounds:

“Blockages manifest themselves as obstacles to the creative impulse. Excess tension (particularly in the shoulders, chest, hips, legs, tongue, jaw, or breath mechanism) is a common symptom that many singers face, often unconsciously.”

The SingEd literature demonstrated a kinship with non-SingEd literature regarding the necessity of a harmonious posture and relaxed musculature for optimum performance. The principle of non-tension is a necessary and non-negotiable concept in SingEd. Singing requires continuous air or energy. Blocking the energy at any stage causes tension and an interruption in the energy flow. In this regard, the principles of Non-Tension and of Breath Continuity are entangled.

To conclude the expounding on non-tension, Sell (2005:71) remarks, “It is rare to see someone with proper physical poise. Young children, adolescents, and adults for that matter, tend to acquiesce into the slouching habits of the general population”. Education on physical poise can be addressed in the SingEd classroom because the principle of non-tension is also non-negotiable for singers. Vasiliev and Meredith (2006:75,76) from the RSM, write about tension, “you can’t control what you can’t feel! If you don’t understand your tension thoroughly, and don’t feel it when it arises, you can’t control and develop a relaxation response.” It becomes the duty of the SingEd and Life Skills educator to create awareness of tension in the body, how to rectify the situation and how it affects breathing. As important as the principle of non-tension is for singers, the Life Skills CAPS does not make mention of posture. However, two different learner textbooks briefly allude to posture (Amato *et al.* 2020b; Brennan *et al.*

2019a). These two textbooks also, do not relay significant or even correct information in this regard. Therefore, Life Skills teachers must receive correct and valuable information on this principle during their vocational training at Higher Education Institutions.

2.11 CONCLUSION

In this chapter, the seven breathing concepts within the RSM theoretical framework were contemplated and compared to breathwork practices inside and outside the domain of SingEd. Although presented as individual concepts, the seven breathing principles rooted within the RSMSPB theoretical framework seem to function in an interwoven manner like the instruments of an orchestra: They are all significant individually, but harmony emerges when they function as a whole. For example, the principle of non-tension lends improved functioning to the principle of breath continuity: relaxed musculature ensures optimal flow of energy. Also, the principle of nose inhalation and mouth exhalation aids the principle of intake sufficiency: nasal inhalation naturally engages the diaphragm muscles necessary for optimal inhalation. Thus, the realisation of a particular principle relies on collaboration with other principles. BWTL on these distinct breathwork components is imperative for achieving a healthy and naturally functioning breathing mechanism.

The RSM and SingEd are two distinct modalities. The former trains people in physical combat, while the latter trains people how to sing. In this regard, Acar (2016:750) states: “Voice training is a requirement for the correct use of voice and the first target in the voice training should be the breathing training”. These two modalities have the prerequisite of breathwork in common; however, SingEd has no such framework as a guide. Exploring the transdisciplinary literature allowed me to ponder on each distinct RSM principle and to consider how it applies to singing. To address the current ‘breathless culture’ (Manné 1999:11) and to raise the consciousness regarding the value of BWTL, a framework for singing teachers can be of great value for them to engage meaningfully with the breathwork concepts of ‘breathing awareness’, ‘breath control’, and ‘breathing exercises’ alluded to in the Life Skills CAPS (Department of Basic Education 2011b:12,34).

In exploring the breathwork literature, it became evident that many modalities engage in breathwork for well-being. However, well-being is not made explicit as a separate principle within the RSMSPB theoretical framework. Therefore, the next chapter is devoted entirely to the concept of well-being in order to contemplate it as a distinct breathwork outcome.

CHAPTER 3:

BREATHWORK AND WELL-BEING – *BREATHING IN*

3.1 INTRODUCTION

In Chapter 2, the seven breathing principles of the Russian Systema Method (RSM) were contextualised by way of a transdisciplinary discourse and compared with breathwork practices within singing education (SingEd). In Chapter 3, justification for adding and making explicit an additional breathing principle is contemplated. Although well-being is an attribute of various breathwork modalities, the Russian Systema Method principles of breathing (RSMSPB), the core theoretical framework for this study, lacks an overt well-being focus. In this chapter, I am ***breathing in*** the comprehensive literary data regarding the role and value of breathwork for well-being. The concept of well-being is viewed through psychological, physiological and spiritual perspectives.

3.1.1 Well-being in the context of South African schools

Angie Motshekga, South African Minister of Basic Education, states that the South African National Curriculum is built on values that inspired the Constitution, Act 108 of 1996 (Department of Basic Education 2011b). Of relevance to this study is the constitutional aim to “improve the quality of life of all its citizens” (Department of Basic Education 2011b:Introduction). This aim is in alignment with the United Nations 3rd Sustainable Development Goal (SDG3) which endorses healthy living and well-being for all humans (Jha *et al.* 2016; United Nations 2015). Minister Motshekga further states, “Education and the curriculum have an important role to play in realising these aims.” (Department of Basic Education 2011b:Introduction). This aim is in alignment with the 4th Sustainable Development Goal (SDG 4), which endorses equitable quality education and lifelong learning opportunities for all (Jha *et al.* 2016; United Nations 2015). Addressing and improving breathwork literacy can contribute to both of these international goals.

The South African school subject of Life Skills, discussed in Chapter 2 (see 2.2), encompasses three main components: Physical Education, Creative Arts, and

Personal and Social Well-being (Department of Basic Education 2011b:8-9). However, surveying the Life Skills CAPS and various associated learner textbooks (Amato *et al.* 2020a; 2020b; 2020c; Carstens *et al.* 2020a; 2020b; 2020c; Brennan *et al.* 2019a; 2019b; 2019c) revealed that breathwork is not once mentioned or considered a life skill that could aid learner well-being. This situation does not indicate that learner well-being is not a priority but that breathwork is not included as a well-being management resource. This South African breathtaking breathwork silence within the Personal and Social Well-being component is in stark contrast with extensive international scientific studies that point to breathwork being a remarkable learner well-being management tool (Browne 2020; Contreras 2020; Kurth *et al.* 2020; Simoneau *et al.* 2020; Cornell 2019; Mitchell 2019; Higgins & Eden 2018; Rowley 2018; Bannirchelvam *et al.* 2017). These international studies are further explored in this chapter.

Some breathwork requirements, albeit minimal and inadequate, did find their way into the South African School's Life Skills Creative Arts component. More specifically, within the Creative Arts subcomponent of the Performing Arts, which includes SingEd, breathwork is required to aid in what is called the 'warm-up and play' phase of a Life Skills lesson (see 2.2).



Figure 3.1: The current positioning of breathwork within the South African Life Skills Curriculum and Policy Statement (Potgieter 2023).

In the 'warm-up and play' sub-component the Life Skills educator can impart valuable breathwork knowledge and skills to learners, i.e., it is not necessary to find a separate time slot within an already compact schooling curriculum. The allocated time can be used efficiently to create breathwork awareness. However, it is essential for Life Skills educators to be schooled adequately in breathwork concepts and practices to impart the well-being benefits thereof.

3.1.2 Well-being delineation

The Paperback Oxford English Dictionary (Soanes *et al.* 2006:871) and the Longman Dictionary of Contemporary English (Summers *et al.* 2004:2188) similarly define 'well-being' as the state or feeling of "being comfortable, healthy, or happy". The terms well-being and wellness are used interchangeably in much of the literature explored. As an illustration, Summers *et al.* (2004:2189) define wellness as "[t]he state of being healthy", which echoes the definition of well-being of the same authors, while the Paperback Oxford English Dictionary had no separate entry for wellness. The MacMillan Dictionary of English Spelling (Manser 1997:493) accentuates the 'well' part of these words and explains it as "in a good way; favourably; in good health". In this chapter, the word 'well-being' is mostly used. However where 'wellness' is used, it has the same meaning as well-being.

Hurst (2014) and Gick (2011) articulate the differences between hedonic and eudemonic well-being. Hedonic well-being encompasses subjective pleasurable experiences characterised by a positive mood, absence of negative moods, and general life satisfaction, whereas eudemonic well-being encompasses balanced psychological functioning, positive relations with others, self-realisation and life-mastery. The American National Wellness Institute (National Wellness Institute 2020:1) further defines wellness as "an active process through which people become aware of, and make choices toward, a more successful existence". Well-being can thus be said to be a state of health and happiness resulting from conscious awareness, choices and actions.

Manné (1999:11) states, "Our breath is the language through which is revealed whether our body is in rhythm with itself or out of it, in other words, its state of health, energy-flow and wellbeing." Breathwork as a tool to enhance eudemonic well-being is instrumental in many Eastern and Western world modalities. Eastern modalities that employ conscious breathwork include, amongst others, the Russian Systema Method (Russia), yoga (Tibet/India), chi gong/tai chi (China) and Sufism (Turkey) (Manga & Murray 2022b; Jong-Won 2009; Vasiliev & Meredith 2006; Bottomley 2004b; Taylor 2004; Douglas-Klotz 1997; Chen & Reekie 1995). Also, several Western modalities direct breathing towards human development and well-being: Reichian breathwork, Eutony, Holotropic breathwork, rebirthing breathwork, sensory awareness, Alexander

Technique, Wim Hof breathing and psychology (Manga & Murray 2022b; Hof 2020; Manga 2018; Puente 2014; Young *et al.* 2010; Douglas-Klotz 1997). In this regard, Ramacharaka (2008:12) emphasises “the connection between correct breathing and health” whether “looked at from the standpoint of the Oriental or Occidental”. In order to consider the role that breathwork plays in eudemonic well-being I consulted books and scientific articles on well-being from both the Western and Eastern world.

Several authors agree that breathing specifically affects multiple dimensions of our well-being (Clarke 2019; Fitzmaurice 2015; Lee & Campbell 2013; Azoulay & Loewy 2009). Brulé (2017) explains that breathwork is the conscious application of breathing to heal, grow, and transform the body, mind and spirit. Manga and Murray (2022b:9) agree that “[c]onscious breathing is a pathway inward, a bridge between the body, mind, and spirit.” Also, Westmacott-Brown (2019:6) states that conscious breathing “offers a chance to experience unbelievable physical, psychological and spiritual transformation”. Accordingly, this chapter surveys the literature regarding breathwork for well-being from a psychological, physiological, and spiritual perspective.

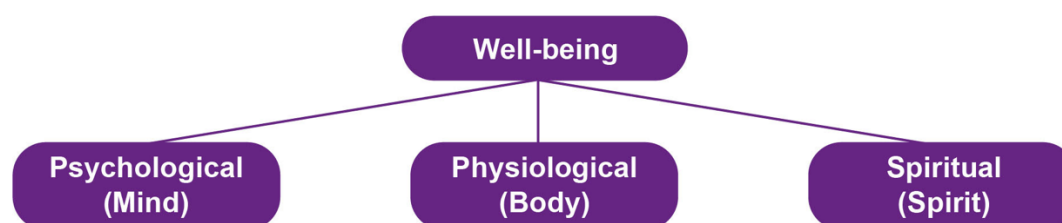


Figure 3.2: Well-being delineation (Potgieter 2023).

The human being is an atomic whole composed of several components, and our quest is to achieve a perfect balance of these components to keep this atomic whole healthy and functioning optimally (Çorak 2019; Brulé 2017; Vasiliev & Meredith 2006). Alder (1983:33) writes, “Human beings have been given amazing bodies, whose natural state is that of joyful health and energy”. In this chapter the ‘perfect balance’ between the psychological, physiological and spiritual well-being are further explored.

3.2 PSYCHOLOGICAL WELL-BEING

Several sources interpret psychology as the study of the human mind (Manser 1997; Soanes *et al.* 2006; Summers *et al.*, 2004). The Paperback Oxford English Dictionary (Soanes *et al.* 2006:603) also makes mention of the “attitude of a person”, and the Longman Dictionary of Contemporary English (Summers *et al.* 2004:1542) adds, “how ... the mind ... influences people’s behaviour”. In this segment of Chapter 3, the relationship between mental well-being and breathwork is considered. In this regard, Balasubramanian (2019:24) writes, “the respiratory system is an essential conduit between the environmental cues and the corresponding responses by the brain”. Thus, breathing is a bridge between our internal and external worlds. The transdisciplinary literary exploration of breathwork and psychological well-being highlights four topics: counteracting stress, managing emotions, self-integrity and mental focus. These topics are not mutually exclusive but are separated for ease of discussion.

3.2.1 Counteracting stress

Çorak (2019:112) states: “If a description of this Century should be made, it can be called the Century of Stress.” The Paperback Oxford English Dictionary (Soanes *et al.* 2006:750) defines stress as “a state of mental or emotional strain”. Lee and Campbell (2013) describe stress as the human body’s reaction to external environmental stimuli experienced and perceived as challenging, frightening, or inhibiting. Fitzmaurice (2015) and Manné (1999) agree that humans change the way they breathe, unconsciously, in response to external signals but they also add internal signals to this argument. Stress and its associated impact on breathing can be caused by outside pressures, like extreme work demands, or inner distress, like the fear of being ill-equipped to meet a particular life challenge (Manga & Murray 2022a). Clarke (1996), suggests that breath awareness is a powerful instrument for body and mind awareness. Balasubramanian (2019:12) describes breath as “a great barometer for relaxation and stress”.

How we breathe directly affects the sympathetic or parasympathetic nervous systems and vice versa (Vranich & Sabin 2020; Green 2012; Hymes 1996; Rama 1996). Manga and Murray (2022b:5) state: “The delicate balance of these branches of the autonomic

nervous system is what is necessary for the optimum functioning of the body–mind system.” As such, the nervous system is a key role player in the respiratory process alongside the respiratory, cardiovascular, and muscular systems. In synopsis, the nervous system sends messages to the muscular system that initialises the respiratory system, and consecutively assists the cardiovascular system in bringing oxygen to every tissue in the body (Del Negro *et al.* 2018; Lee & Campbell 2013; Homma & Masaoka 2008; Vasiliev & Meredith 2006; Naifeh 1994; Guinness *et al.* 1986). Furthermore, Vranich and Sabin (2020) explain that both the pace and depth of our breathing cycle signals the body’s autonomic nervous system, which results in responses playing out between the ‘fight or flight’, sympathetic and the ‘rest and digest’, parasympathetic existential modes.

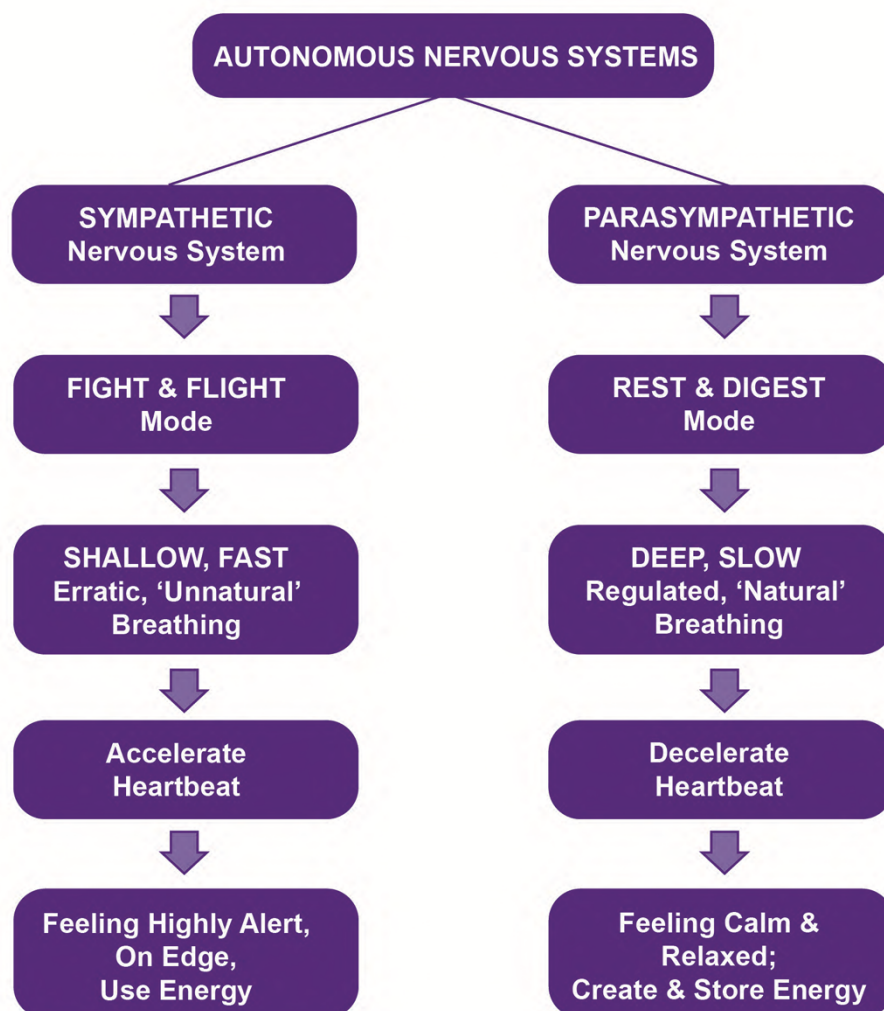


Figure 3.3: Attributes of the sympathetic and parasympathetic branches of the autonomic nervous system (Potgieter 2023).

Becoming conscious of the interplay between breathing and the sympathetic nervous system, associated with the 'fight and flight' mode, and the parasympathetic nervous system, associated with the 'rest and digest' mode, makes it possible to focus our attention purposefully on a particular kind of breathing to evoke a particular outcome. For both Manga (2018) and Edwards (2005), the ability to activate these modes consciously through breathing is the key to energy control. By changing our way of breathing intentionally, i.e., managing our breath, we can upregulate our breathing to be more active, alert or focused. In contrast, we can also downregulate our breathing intentionally to induce calm and relaxation (Vranich & Sabin 2020; Balasubramanian 2019; Edwards 2005; Rama *et al.* 1996). Figure 3.3 highlights the nature of the sympathetic and parasympathetic branches of the autonomic nervous system, which will now be further elucidated.

3.2.1.1 Sympathetic nervous system

Vranich and Sabin (2020) believe that prolonged anxiety, stress and depression, thus a prolonged activation sympathetic nervous system, result in compromised breathing mechanics and patterns and keep active the cycle of being stressed out, depressed and anxious. Vasiliev and Meredith (2006) agree that the breathing cycle is disturbed by responses to stress triggers and reacts to this stress either by stalling the breath, thus breathing too little, or by over-breathing, therefore breathing too fast. Morningstar (2018:19) adds that "[a]nxiety is characterised by a diffuse fear that somatically is measured by a generalised constriction in the musculature, especially around the breathing system."

High-stressed internal and external signals activate the sympathetic nervous system or so-called 'fight and flight' mode and impact the pace and depth of our breathing directly. As a result, breathing becomes fast, shallow and erratic, accompanied by a racing heart and an adrenaline rush (Nestor 2020; Vranich & Sabin 2020; Manga 2018; Morningstar 2018; McKeown 2015; Lee & Campbell 2013; Green 2012; Gick 2011; Nugent 2009; Fried 2000; Hymes 1996; Rama *et al.* 1996). Nestor (2020:144) explains: "A profusion of the nerves to this system are spread out at the top of the lungs"; therefore: "When we take short, hasty breaths, the molecules of air switch on the sympathetic nerves". As it is generally not considered normal to be in a state of

constant stress accompanied by the resultant compromised breathing, authors refer to this breathing as ‘unnatural, abnormal, or dysfunctional’ (Putt 2020; Edwards 2005; Fried 2000; Stone 1999).

Despite the negative sentiment expressed in the previous paragraph, the sympathetic nervous system plays a positive role in our self-protection. When in danger, the body has an inbuilt mechanism to protect itself. The sympathetic nervous system activates a ‘fight or flight’ response that ensures maximum exertion and alertness (Del Negro *et al.* 2018; Green 2012; Hymes 1996). Ebersöhn (2014:Abstract) further postulates that:

“when under threat of chronic stress in a poverty setting, a collective response is to flock together (rather than fight or flight). Flock entails a process of alone-standing individuals, experiencing shared and persistent burdens, connecting to access, share, mobilise and sustain the use of resources for positive adaptation.”

Although Ebersöhn contextualises ‘flocking’ within a poverty setting, what comes to mind is a small child running to his/her parents when feeling threatened or being afraid. To the list of ‘F’s’ that “kick in when energy is needed quickly”, Manga and Murray (2022b:45) also add, ‘fake it’, i.e., pretending or performing, ‘fumbling’, i.e., tripping or falling and ‘fun’, i.e., partying on a dance floor.

To ‘fight’ or take ‘flight’ is, therefore, a perfectly natural way for the bodily mechanism to keep itself from harm. Under sudden or highly stressful conditions, breathing becomes shallow and accelerated in an attempt of the body temporarily to increase the influx of oxygen to the brain and for the body to act as fast as possible in the face of perceived danger (Vranich & Sabin, 2020). With this hyperinflation of oxygen, the brain can prepare the body vigorously to ‘flock’, ‘fight’, or take ‘flight’. The increased lung volume also makes it possible to shout (Sundberg 1992), either to release stress from a taxed nervous system or to alert our environment that we need assistance or that they must also be on the lookout. For the body to protect itself is perfectly normal. However, several authors believe that in our society today, this bodily function is on permanent alert, therefore compromising our health and well-being. Although a short-term activation of the sympathetic mode is called for in emergencies, overly long-term

activation or this mode switched on permanently is considered pathological (Nestor 2020; Vranich & Sabin 2020; McKeown 2015).

When stressed, whether induced by perceived danger or just by the challenges of our modern lifestyle, we start to breathe shallowly, which activates the sympathetic nervous system. Green (2012:11) writes:

“Being human means that there is a wide range of stressors that can knock us out of homeostatic balance, and the stressors may go on for a long time. Any social demand, like a first date or performance on the job, is a stressor. Good things can be stressors: the promotion at work, the purchase of a new house, or the birth of a child. Humans don’t even need stressful things to happen in real time: we can stress ourselves by anticipating difficulties and dire events. We stress ourselves with our thoughts (which may be constant) of anticipated future problems and past frustrations.”

As a result of the sympathetic nervous system activation, the diaphragm often becomes locked (Nugent 2009). In this way, a stressful happening may cause us to hold our breath (Fried, 2000). Edwards (2005) explains that grief brings about short, slow, and shallow sighs, disrupting the natural rhythm of the breathing cycle. Also, fear causes a gulping, swallowing breath pattern, with extended periods of breath holding and timid, short exhalations. Breathlessness or breath holding, as a response to the flight-or-fight reaction, can also cause neck and chest muscles to tighten, which results in laboured breathing (Novotny & Kravitz 2013). Douglas-Klotz (1997) also adds that prolonged episodes of unconscious breath holding can prolong trauma. On the other hand, we may also over-breathe (Fried 2000). Edwards (2005) explains that anxiety can cause fast, rapid breathing like a dog’s panting, causing over-breathing.

In the previous paragraph, the concept of breath holding is measured as undesirable. However, some literature remarked on the advantages of conscious breath holding. McKeown (2015) is a promotor of breath-holding techniques to optimise oxygen release at a cellular level. The RSM also advocates the practice of breath holding (see 2.8). They deliberately induce a sympathetic nervous response under trained conditions for the body to become less sensitised to everyday stress, raising the threshold for instinctive panic in stressful situations (Vasiliev & Meredith 2006). Mikhail Ryabko, Master Teacher of the RSM, states (in Vasiliev & Meredith 2006:85,86):

“When we experience something that we perceive to be stressful and hold our breath, on a physiological level our blood vessels constrict, circulation is impaired and our cells are deprived of nourishment – oxygen and food. When this stress reaction takes place at a high intensity or when it happens consistently it leads to the gradual destruction of the body, to aging, injuries and disease. When we hold our breath as part of the breath training, we do it willingly, so there is no psychological stress. Thus, there is no blood vessel constriction, and quite the opposite, the blood vessels dilate in a normal response to a healthy exercise. Therefore, the effect of such training is beneficial in every way physically and psychologically.”

It is evident from the literature that breath holding as a practice can be beneficial in endurance training. Thus, voluntary impacting of the sympathetic nervous could be advantageous in particular circumstances. Whether viewed as positive or negative, the sympathetic nervous system is a part of human intelligent design. Creating breathwork awareness in the Life Skills programme through singing can aid learners in dealing with daily stressors.

3.2.1.2 Parasympathetic nervous system

A low-stressed internal and external environment activates the parasympathetic nervous system or so-called ‘rest and digest’ mode and, in turn, breathing becomes deep, slow, regular and relaxed. This, in turn, reduces feelings of stress and generates a feeling of relaxation and calm (Aideyan *et al.* 2020; Fountain 2019; Del Negro *et al.* 2018; Schuerman 2014; De la Huerta 2013; Green 2012; Gick 2011; Nugent 2009; Edwards 2005; Hymes 1996; Carter & Weber 1994). Manga (2018), and Green (2012) both emphasise that the parasympathetic nervous system stimulates our digestive system and allows the body to replenish its energy. This energy replenishment aids the body in its process of recovery and healing. The vagus nerve, considered the major nerve highway that connects the brain and the body, plays a supporting role in the parasympathetic ‘rest and digest’ bodily function (Manga & Murray 2022b; Peyton 2019; Manga 2018; Morningstar 2018; Kocjan *et al.* 2017; Rama 1996).

Manga (2018), Green (2012), and Rama (1996) all agree that the parasympathetic nervous system slows down the heart rate. Data from extensive research at the

HeartMath Institute prove that slow, self-regulated breathing shifts the body out of a stressed emotional state into a more regular heart rhythm (HeartMath 2020). Oneda *et al.* (2010) investigated the effects of slow breathing and listening to calm music on the blood pressure of 32 hypertensive patients coming to a hospital in Sao Paulo, Brazil. They found that, although both factors decreased blood pressure, only deep breathing reduced sympathetic nerve activity. It is evident that intentional, conscious, self-regulated breathing is a “most effective weapon ... to combat and counteract the harmful effects of stress” (Lee & Campbell 2013:46).

Singers, required to sustain long phrases, are trained to take deeper breaths. Taking sufficient breaths through singing thus activates a parasympathetic nervous system response, bringing calm and alertness. Acquah (2016) investigated aspects of the well-being of students and lecturers singing in a mixed chorus at the University of Education in Winneba, Ghana. He comments about stress and anxiety that “singing involves deep controlled breathing, which counteracts anxiety. Deep breathing is likely to subdue anxiety and stress. Deep breathing involves an uninterrupted airflow, consistency of sound in all registers, phrasing and artistry, and all these have a positive effect on stress management” (Acquah 2016:8). It is no surprise then that Doyle (2001:1) passionately exclaims, “I believe that everybody can sing and everybody should. It is the ultimate release, when your body, mind and soul all connect to make sound.” Breath awareness is thus vital in unlocking the psychological well-being potential in SingEd. Furthermore, there is often the element of performance anxiety that can inhibit an optimal music performance (Trumbore 2018; Su *et al.* 2010; Fedson 2009). Lee and Campbell (2013:38) write:

“For performing artists, the breath not only governs the quality of the physical performance, but it also plays a key role in managing the accompanying fear, anxiety, excitement, and adrenaline – keeping the butterflies flying in formation as it were – so that they can be used to unleash the muse and fuel the creativity and spontaneity of the performance.”

Breath awareness can assist in navigating anxiety, staying focused and improving the overall performance experience. Trumbore (2018) explicitly recommends incorporating deep breathing and alternate nostril breathing into a musician’s rehearsal schedule before and during a performance to alleviate anxiety.

3.2.1.3 School investigations: breathwork and stress

Assisting learners in schools to deal with their wide range of stressors is at the heart of many recent research studies. In the following studies, breathing is used as a singular intervention strategy or combined with other modalities to investigate and contribute to stress management in schools.

In her PhD dissertation, Contreras (2020) investigated the impact of a two-week, online, 15-minute, deep breathing intervention on the test anxiety of 31 Grade 10 learners from a high school in Dallas, USA. Pre-test and post-test quantitative data were collected and analysed before and after writing a Biology test. Statistical results indicated a significant improvement in anxiety levels. “Schools could ... use deep breathing as a regular practice to help reduce test anxiety in students.” (Contreras 2020:Abstract) The author discusses breathing in her literature review, and this revolves around the ability to regulate breathing to slow down the heart rate and induce relaxation. Unfortunately, although this section is titled ‘Understanding Deep Breathing’, apart from the well-being aspect of deep breathing highlighted and some anatomical understanding of the nervous systems, this study offered no actual description of deep breathing and how it works.

Rowley (2018) investigated diaphragmatic breathing as an intervention strategy to counteract stress in a one-time group session with twenty 4-to-6-year-olds and their parents in Fullerton, USA. Data were collected pre-intervention and post-intervention. All parents reported an improvement in the children’s overall functioning. The literary review revolves around stress and preventative interventions that can induce a relaxation response in children. These are, among others, progressive muscle relaxation, autogenic training, mindfulness-based stress reduction and trauma-focused cognitive behavioural therapy. The author cites literature that depicts diaphragmatic breathing “as an effective stress management technique” (Rowley 2018:8). However, she failed to describe the precise technique employed while relaying the actual “intervention” (Rowley 2018:17).

In an experimental research design, Khng (2017) from Singapore performed pre- and post-tests on 122 Grade 5 learners. The research sample was divided into an

intervention and a control group. The former engaged in deep breathing prior to their test. The researcher said, “Taking deep breaths before a timed math test significantly reduced self-reported feelings of anxiety and improved test performance” (Khng 2017:1508). As a result, learners could control their thoughts, improve their state of mind during the test, and improve their performance. Once learned, deep breathing can become a self-regulatory tool at a child’s disposal to be applied to bring about a better state of mind and performance in anxiety-inducing test-like situations.

For one month, Terai *et al.* (2014) investigated the psychophysiological effects of slow diaphragmatic breathing on 32 Grade 3 learners in an elementary school in Japan. Research results showed that the breathing intervention reduced learners’ anxiety levels and breathing rates. This small excerpt from the Journal of Psychophysiology positions breathing suitably under the umbrella of well-being. However, the excerpt disappoints in revealing to the reader how the researcher executed the breathing intervention. Despite the lack of clear procedural information, the authors highlight that many research participants did not know how to breathe slowly in a correct mechanical manner. This highlights the necessity for breathwork awareness in schools.

The four studies mentioned above point towards breathwork being a helpful tool for anxiety management, whether employed independently or combined with other techniques. These articles and dissertations confirm the role that breathwork can play in addressing stress and anxiety in the school classroom. Furthermore, these studies, two from the USA (Contreras 2020; Rowley 2018) and one each from Singapore (Khng 2017), and Japan (Terai *et al.* 2014) are complimented by several more school studies conducted in the USA (Thomas 2014; Brown 2013; Buchler 2013; Larson & Rose 2011; Morgado 2011), in Germany (Kurth *et al.* 2020), India (Taroor 2013) and Taiwan (Su *et al.* 2010). The literary review only revealed one short South African study, supplementing an Honours degree (pre-Master’s degree) in psychology (Chetty 2017), that investigated breathwork as an anxiety intervention strategy in a South African school, but no further local articles, master’s, or doctoral investigations could be found. Therefore, I believe that the national South African educational science tableau is out of sync with that of international schools and breathwork investigation.

Just like the school textbooks discussed in Chapter 2 (see 2.2), the mentioned articles assume that the reader is familiar with the practices of ‘diaphragmatic breathing’ (Rowley 2018; Terai *et al.* 2014), ‘deep breathing’ (Brown 2013; Contreras 2020; Khng 2017; Larson & Rose 2011;), ‘breathing’ (Thomas 2014), and ‘breathing exercises’ (Buchler 2013; Kurth *et al.* 2020; Taroor 2013). In my view, only Morgado (2011) and Su *et al.* (2010) shared replicable breathwork details that can assist further scientific enquiry. Furthermore, of these 12 international studies, most were conducted from the perspective of psychology (Brown 2013; Kurth *et al.*, 2020; Rowley 2018; Terai *et al.* 2014), educational psychology (Khng 2017; Larson & Rose 2011; Taroor 2013; Thomas 2014) and childhood education (Buchler 2013; Contreras 2020; Morgado 2011) but only one from a music education point of view (Su *et al.* 2010). This is in stark contrast with the South African CAPS syllabus (see 2.2 and 3.1.1) which requires breathwork concepts to be taught under Performing Arts, but none is required under Personal and Social Well-being. The Life Skills CAPS does not consider breathwork as an element of well-being management, which is totally misaligned with these international studies.

3.2.2 Managing emotions

In The Paperback Oxford English Dictionary (Soanes *et al.* 2006) and the Longman Dictionary of Contemporary English (Summers 2004), ‘emotion’ is described as a deep instinctive feeling, such as love, joy, hate or anger and is distinguishable from clear, logical thought. According to Lee and Campbell (2013), the relationship between emotions and breathing is reflected in our everyday language, such as breathing a sigh of relief, waiting with bated breath or being left breathless when something profound moves us. De la Huerta (2013) and Reid (1998) calculate the word emotion as ‘e-motion’ and further as ‘energy in motion’. The natural respiration process can become constricted owing to unprocessed and pathological holding of emotions; thus, energy that is not in motion. Several healing therapies employ breathwork to connect patients to their inner worlds, to release and heal emotional wounds, and to get the energy that is not in motion to flow. Strom (2015:18m:4s) believes: “Some doors only open from the inside, breathing is a way of accessing that door”. For Manné (1999), breathwork is a valuable aid in revealing deeply affecting and traumatic experiences and becomes a method to connect with unpleasant emotions. Therefore, the power of

breathwork lies in overcoming defences that guard suppressed feelings and in transmuting these feelings (Ehrmann 1999). In this regard, Taylor (1994:3,4) says, “The breath is our key to reconnecting with aspects of life from which we have become split off”, and Brulé (2017:5) adds, “Breathwork can be used to heal attitudes, emotions, and behaviours.”

3.2.2.1 Mind and emotion

“We are slowed down sound and light waves, a walking bundle of frequencies” (AZQuotes.com n.d.)¹. Each time we breathe, the brain scans these frequencies of the body–mind complex. The frequencies, from lowest to highest, are scanned as we breathe in. As we breathe out, the scanning goes from highest to lowest. This scanning procedure enables the brain to correct any imbalances in the bodily system (Veltheim & Muiznieks 2013). How well the brain can do this depends entirely upon a well-functioning breathing mechanism. If the breathing cycle is constricted, the brain cannot make corrections. According to De la Huerta (2013), Manga (2018), Veltheim and Muiznieks (2013), the act of breathing out all the way is characteristic of fully letting go of the attachment to life’s experiences. If someone spends their entire life in emotional turmoil, the body stops breathing out wholly, and the brain stops scanning the lower frequencies. On the other hand, when we breathe in, we enter the higher frequencies of thought and emotion. People who do not breathe in wholly will experience emotional and mental challenges. Eventually, the brain will not recognise the emotional and mental state and will be unable to intervene and correct the problem. In this regard, Janov (1990:335) remarks, “breathing is one automatic way tears are kept down. Shallow breathing doesn’t dip into the body where feelings are stored”. Rama *et al.* (1996:16) emphasise that we “must bring back into our awareness a whole area of ourselves that we’ve cut off, gradually reintegrating it into our consciousness”. Morningstar (2018:8) adds: “The monitoring of breathing through all feeling states allows us to tap into the non-verbal wisdom of emotions and the richness with which they colour our existence.” It is clear that breathing plays a significant role

¹ Although this quotation is attributed to Albert Einstein, sources agree that this is incorrect. No source has been found.

in our psychological well-being. By becoming more conscious of how breathing affects emotions, it becomes possible to work through discomforting feelings.

Of significance to this study is that several authors agree on the bidirectionality of breathing and emotions, which implies that our emotions affect our breathing and, correspondingly, that our breathing has an impact on our emotions (Vranich & Sabin 2020; LeBorgne & Rosenberg 2019; Peyton 2019; Del Negro *et al.* 2018; Moraveji 2014; Lalande *et al.* 2012; Indik 2009; Homma & Masaoka 2008; Edwards 2005; Fried 2000; Manné 1999; Clarke 1996; Boadella 1994; Naifeh 1994; Timmons & Ley 1994). Rama (1996:84) states, “If a certain state of mind results in a certain mode of breathing, then conversely, by consciously adopting that mode of breathing, we can evoke the corresponding state of mind”. Balasubramanian (2015:10m:12s) agrees by saying: “Controlling your mind is possible by controlling your breathing.” For example, if we are laughing, we often employ the diaphragm muscles, activating the vagus nerve that sends safety signals to the brain. Conversely, by consciously activating our diaphragm muscles, i.e., breathing lower in the body, we can evoke a feeling of calm and safety. In this regard, Morningstar (2018:8) states: “Our breath can help us be safe with our feelings.” This bidirectionality of breathing and emotions implies that we can aid learners in navigating their emotions through breathwork education.

In his book *Body sense: the science and practice of embodied self-awareness*, Fogel (2013) presents a useful exposition demonstrating the bidirectionality of breathing and emotions. He also adds corresponding muscle tension to the list:

Table 3.1 Emotion, Respiration, Muscle Tension (Fogel 2013:235).

Emotion	Respiration	Muscle Tension
Tenderness/Joy	Regularly spaced, slow breaths with longer expiration than inspiration and long expiratory pause	Relaxed
Erotic Love	Deep, fast breaths sequenced with slower and shorter breaths (high variability depending on level of engagement), which may or may not have an expiratory pause	Relaxed and effortful alternation

Emotion	Respiration	Muscle Tension
Laughter	Deep and abrupt inspiration with short expiratory bursts and short expiratory pause	Relaxed
Sadness/Crying	Longer inspiration with short bursts and tremors, and sighs during expiration. May or may not have an expiratory pause	Mostly relaxed but there may be some tension in the chest in inspiration
Anger	Extremely deep and fast breathing with little variability and no expiratory pause	Effortful
Fear/Anxiety	Very fast, highly variable, shallow breaths with incomplete exhalations and no expiratory pause	Effortful

Table 3.1 informatively lists several typical human emotions that learners in our school classrooms cannot escape for “every psychological, emotional.... state has a corresponding breathing pattern or quality” (Manga & Murray, 2022b:5). One of the psychological challenges in our world, especially for our youth, is trying to keep up with preconceived ideas of what you should look like or how you should behave to be acceptable to others (Hymes 1996). This notion is also a contributing factor to pathological breathing habits. The literary exploration came across various authors expressing their unique opinions on this matter. Wallden (2017:348) believes the accelerating diagnoses of ‘body dysmorphic disorder’ amongst adolescents to be the result of the media promoting a ‘perfect physique’. The author further cites the resultant “utilisation of the abdominal wall musculature to create an intrinsic corset” as a strong contributor to the “high incidence of dysfunctional breathing patterns in today’s millennial population.” Vranich and Sabin (2020:30) agree that the media-inspired posture, which leads to children ‘sucking in’ their stomachs, “inevitably forces you to breathe the most with the parts of the lungs that are the least efficient at exchanging gases: the top parts.” Also, Smith (2007), and Lee and Campbell (2013) agree that, when we try to pull in our stomach for the sake of vanity, unfortunately, in the process, it also binds up our abdomen. This is not conducive to normal and natural breathing and consequently constricts energy in motion, i.e., emotion. These children

might not feel safe in their environments and will therefore constantly display nervous tension.

Not only perceived ideas of 'how to look' but also perceived ideas of 'how to behave' inhibit self-expression and, in turn, affect the respiratory system (Douglas-Klotz 1997; Rosenberg 1985). Manga (2018:73) states, "As our beliefs and perceptions get moulded, the more our breath gets jagged and restricted". The traditional stance of 'boys don't cry' is a prime example of how internal psychological tension is created by men not being allowed or not allowing themselves to express grief. Strom (2015:9m:20s) comments, "There is a tremendous relationship between breath, the lungs, and grief." He further believes that we are taught that expressing grief is socially unacceptable and, as a result, we tend to avoid people in grief, or we do not know how to respond to grieving people (Strom 2015). The concept of self-integrity, allowing ourselves to look and behave according to our own free will, conscience and consciousness, is in line with well-being concepts, as described by The National Wellness Institute (2020), of assessing personal limitations realistically and developing individuality. The flow of natural emotion, energy in motion, is interrupted and diverted pathologically by being inhibited from expressing oneself or trying to 'fit in', by being something other than who you truly are. A person who is truly free in themselves can breathe freely. If breathing is bidirectional, as discussed previously, skilling our youth with breathwork knowledge and awareness could assist them in growing in self-awareness and self-acceptance.

3.2.2.2 Diaphragm and emotion

The nature and mechanical functioning of the diaphragm muscle, "the primary muscle of breathing" (Manga & Murray 2022b:8) are explored in Chapter 2 (see 2.6.3). However, pertinent to this discussion is that the diaphragm is considered a processing unit of our emotions (Manga & Murray 2022b; Putt 2020; Singh 2000; Wallden 2017; Gauci 2015; Cruikshank 2014; Veltheim & Muiznieks 2013; Stone 1999). In this regard, Bordoni and Zanier (2013:281), as well as Kocjan *et al.* (2017:224), consider the diaphragm a significant "crossroad" of "information involving the entire body". According to Manga and Murray (2022b) as well as Veltheim and Muiznieks (2013), emotions arrive at the diaphragm from various sources such as immediate personal

responses to life stressors, old pathological memories that resurface, reactions to other people's emotional states, and imagined adverse outcomes about something that may or may not happen. The diaphragm processes emotions and directs this 'energy in motion' to various locations in the body. For example, the energy or emotions of grief and anger can go up to the chest or head and manifest as crying or shouting. Emotions can go down to the intestines to be eliminated by the body, be held in the diaphragm for a while and then taken over by the liver that stores it somewhere else in the body. It can also stay in the diaphragm itself and thus continually compromise the function of this muscle.

Singh (2000) says that diaphragmatic problems often occur owing to intense self-repression and fear of expression, resulting in self-restrictive and self-immersed behaviour. Gauci (2015:1) writes that the diaphragm is "a common place to hold tension" and is "often the site of our unconscious yearning, sadness and grief". Intentionally releasing conscious or unconscious emotional muscle tension is at the heart of many breathwork modalities (Green 2012; Stone 1999). In this regard, Aideyan *et al.* (2020:79) describe breathwork as "a self-regulated process that connects the conscious with the unconscious, allowing the individual to work through physiological resistance to emotional processing". Young *et al.* (2010:115) further expound that breathwork "provides a bridge between the conscious and the unconscious, allowing transparent beliefs to come into conscious awareness, where they can be examined intentionally and subsequently transformed". Rosen, the developer of Rosen Method Bodywork, states that the degree of relaxation in the diaphragm muscle is an indicator of how fully humans allow themselves to feel and acknowledge the physical and emotional distress that is affecting them in the present moment (Rosen 2003).

Regarding the link between emotions and the diaphragm, Green (2012:10) explains that the emotional centres influence our breathing patterns within the limbic brain. She explains:

"The emotional pathway connects with the respiratory control centre in the brain stem and travels through the phrenic nerves to the diaphragm. The connection of the limbic system to the diaphragm evolved because there are different oxygen requirements for

different emotional states: we need more oxygen for the fire of anger than for the glow of contentment.”

The role of the diaphragm muscle in managing our emotions, as explained by Veltheim and Muiznieks (2013) and others, offers valuable insights into diaphragmatic breathing in SingEd. In managing this muscle while singing to control the outflow of air, do we release energy or emotions trapped inside this muscle, thus aiding in the individual’s well-being? Singing and breathing exercises accompanying singing are increasingly used as a complementary aid to manage emotional stress and turmoil. In investigating the effects of singing on people with dementia (Osman *et al.* 2018), research has showed that the improvements in memory and emotional release have assisted patients in accepting and coping with this challenge. The intervention methodologies included music therapist facilitators providing singing-based activities with vocal warm-ups and exercises. These included breathing exercises, vocalises with melodic and rhythmic variation, and physical stretching and balancing exercises. Sakano *et al.* (2014), also conclude that breathing exercises effectively improve the mental health of the elderly. This is supported by studies of Clements-Cortés (2015) and Lee *et al.* (2015), concluding that group singing improves mood and positive feelings, and combats depression, anger, fatigue and confusion in the elderly. In summary, “By developing awareness of our breath, we become closer to our emotions.” (Lee & Campbell 2013:219). Some studies have been conducted in schools to investigate emotional self-regulating interventions and will be discussed next.

3.2.2.3 School investigations: breathwork and emotion

Comparing 54 European American learners from three public schools in West Virginia, USA, with 89 Chinese learners from two public schools in Hong Kong, China, Wan and Savina (2016) explored culture-specific emotion-regulation strategies to develop culture-sensitive learning programmes. Alongside deep breathing, other emotional regulation strategies like situation avoidance, positive distraction, talking to someone and experiential suppression were discussed and investigated. The preferences of research participants were probed for a specific regulation strategy to manage anger, sadness and fear. The research question asked whether cultural differences impact preferences for emotional regulation. Specifically, regarding breathing, in both the

American and Chinese samples, research participants rationalised their choice for this particular strategy because they experienced breathing altering their emotions positively. While 26% of American children indicated that deep breathing could prevent them from acting out on anger, only 2,25% of Chinese children indicated the same for managing anger. However, the percentages for breathing as a favourite strategy to regulate sadness and fear were almost equal among the two cultural groups. Specific to the breathing intervention, a brief indicator was found in the appendix of “how to breathe”. The authors wrote nothing more than “Deep breathing: Take a deep breath” (Wan & Savina 2016:158). In the article itself, the authors did not discuss the specific breathing intervention. Therefore, more details are not on offer on the breathing strategy. However, this article does substantiate that breathwork can be an instrument of emotional self-regulation within schools.

Keller *et al.* (2017) explored perceptions and traits of 28 Grade 4 learners, 64% female, about mindfulness interventions in a southwestern American public school. The authors believe that “Schools are an excellent place to teach mindfulness because substantial numbers of children can be taught how to use mindfulness to improve their learning and social skills and to integrate mindfulness into their daily routines” (Keller *et al.* 2017:509). The research population was characterised by participants from lower-income and ethnic minority backgrounds, mainly 89% Hispanic and 11% Afro-American. In the experiential group, 15 of the 28 research participants received instruction in mindfulness practices before their literacy class. These mindfulness practices included mostly breathing but also listening to guided meditation and mindful eating. The only indication of what the breathing exercise might have been is the following: “Breathing with the bell was the most common practice. The teacher taught students to sit up and take 5 to 10 breaths after she rang the bell. She used the bell as a way to transition between activities” (Keller *et al.* 2017:511). The remaining 13 participants were all part of the control group and did not receive instruction in mindfulness practices. All participants completed 27 sessions within the research period, seven sessions conducted by the first researcher and the following 20 by the class teacher after training. Research methods included teacher observation, journalling and drawing to determine their progress in understanding and applying mindfulness to academic and personal situations. Research results from teacher observations revealed that learners who consistently practised mindfulness breathing,

could regulate their attention, had a positive attitude towards academic work and were generally more mindful. Assessing the journals of research participants led researchers to conclude that some students are not receptive to mindfulness training because of differing themes between receptive and resistant children. As a whole, those who were more receptive to mindfulness training found that it assisted them in negating negative emotions and in increasing positive feelings. Breathing as a mindfulness tool assisted learners positively with their emotional turmoil.

King, Henderson and Sandhu (2018) investigated deep breathing as an intervention strategy for 19 learners in an Australian year 10 science class. Breathing exercises were conducted in the first couple of minutes of each lesson by the class teacher who received prior training in breathing from a yoga instructor, specific to this study. The yoga practitioner guided learners, “hands on your belly and breathe in for three seconds, then out for three seconds, really trying to push your belly out when you breathe it. Really trying to draw the air down into your diaphragm” (King *et al.* 2018:6). These researchers used an ethnographic case study design and spent eight weeks in science class collecting ethnographic data using videos, interviews, field notes and students’ diaries. The diaries were used for learners to pen their emotions experienced during a lesson, accompanied by a brief description of what they were doing at the time of the emotion occurring. At the end of the diary, learners had to answer the question, “After you did the breathing exercise, did you experience any change in your emotions? If so, which emotions did it change?”. Each learner was also interviewed for 10 minutes after the lesson to discuss aspects of their diary and breathing. The researchers found that learners responded differently to the deep breathing exercises as the study progressed. Initial hesitation and negative comments turned into positive remarks in later weeks. One such research participant who gradually understood the value of deep breathing commented that these exercises calmed him down, gave him a “fresh head”, and helped him “look at the problem from a different angle”. They conclude that the intervention is as successful as the willingness of learners to participate. The authors recommend and encourage professional development in breathing for teachers to enable teachers to assist learners in gaining deep breathing knowledge and skills.

In their study, designed to explore the experience of learners of a mindfulness programme, Bannirchelvam *et al.* (2017) recruited 20 English-speaking learners from Grades 3-6 at a single public primary school in Melbourne, Australia. The class teachers nominated research participants whom they understood to have high anxiety levels, who struggled to cope, or who potentially found the transition from primary to secondary school challenging. The researchers employed the Triple R mindfulness-based programme consisting of six sessions, once a week for one hour, with two booster sessions towards the end. The sessions started and finished with short mindfulness-guided meditations, which included focusing on the breath and visualisation, observing thoughts, paying attention to sensory stimuli, scanning different body parts, and noticing feelings. Unfortunately, the article does not discuss the separate components of the mindfulness programme but only reflects on the general perceptions of the learners. The research question revolved around wanting to know more about the experiences of learners of the mindfulness-based intervention, their motivation for choosing a specific mindfulness technique and how they practise mindfulness. Bannirchelvam *et al.* (2017:309) indicate: “The responses revealed a global perception expressed by all of the students that mindfulness is “good” or “helpful” for emotional regulation” and add that breath focus was the most favoured mindfulness technique of the research participants, perhaps emphasising the accessibility and ease of this technique. Hence, breathing management techniques assisted learners with emotional regulation. The article is well supported by literature, citing statistics on anxiety disorders in Australian children (6,9 % of children between 4 and 11; 7% of adolescents between 12 and 17) and discussing factors driving children’s emotional distress (parental separation, violence, financial difficulty, parental mental illness).

These four studies from China, USA and Australia respectively, demonstrate how breathwork can be utilised to aid learners in navigating emotional challenges. I believe SingEd, which is essentially also a mode of breathwork, whether formally in a performance sense or informally for enjoyment, worship or education, can assist participants in the subtle transformation of tensions and emotions. Rockwood (2018) believes that, amidst the challenges of everyday life, we can stay in touch with and respond intelligibly to our emotions when we breathe fully and freely. Thus, through intentional breathwork we can “shift emotional gears” (Rama *et al.* 1996:17).

3.2.3 Mental focus

Efficient breathing practices not only assist in counteracting stress and managing emotions but also contribute to mental clarity and alertness (Vranich & Sabin 2020; Briffa 2002; Ehrmann 1999). When the sympathetic nervous system (see 3.2.1.1) is triggered, we gain possible protection from danger; however, “both the brain and the heart are readily observed to lose their natural-balance rhythm when breathing loses its natural rhythm” (Fried 2000:2). Mental calm and focus are lost owing to an overly active sympathetic nervous system that is accompanied by unnatural breathing. For example, Nestor (2020:172) writes that modern-day office workers suffer from continuous partial attention, labelled ‘email apnoea’: “We’ll scan our email, write something down, check Twitter, and do it all over again, never really focusing on a specific task. In this state of perpetual distraction, breathing becomes shallow and erratic.” As a result, we are not functioning in the present moment, i.e., on the task at hand, but are continuously side-tracked by various external elements. To this, Manga & Murray (2022a:4) add, “There are hidden stress factors which arise from digital technology overload which make for serious destruction on our Instagram/TikTok-age school children. Children have less patience and ability to listen and pay attention in class”.

Focusing on attaining naturally slow, deep breathing can bring about a premium mental focus (Balasubramanian 2019; Del Negro *et al.* 2018; Trumbore 2018; Chen & Reekie 1995). Green (2012:15) argues that, when the breathing is in a standard slower gear, “our perceptual field widens so we can notice more options”. In this regard, Morningstar (2018:8) expounds:

“The brain uses a disproportional amount of oxygen to the rest of our body. It is only 3% of the body’s total weight but uses 25% of the available oxygen. The energy we expend in mental activity requires it. The clarity that comes with mental mastery opens the door to creativity.”

Lee and Campbell (2013:28-29) write: “Our emotions often send us spinning off into the future or past, while breath awareness keeps us here and helps us to retain our objectivity in the face of strong feelings, allowing us to navigate through our emotions”. Furthermore, “When we are dwelling in this breath, we cannot dwell in the next one,

or the last one.” (Lee & Campbell 2013:57-58). Focusing on the breath can assist us to be in the present moment and not to be distracted by regrets and longings for yesterday or fears and longings of the future. It follows that, by observing our breath, we can better observe the world around us (Vranich & Sabin, 2020). Several studies conducted in schools investigated breathwork as a method to enhance attaining mental focus. These are discussed in the following sections.

3.2.3.1 School investigations: breathwork and mental focus

The literary exploration revealed studies from New Zealand (Higgins & Eeden 2018), Canada (Spencer 2020; Idler *et al.* 2017), USA (Cornell 2019; McCoy 2019; Dietrich, 2016; Minkos 2016) and Australia (Jensen *et al.* 2012) and can be summarised in the words of Rechtschaffen and Rechtschaffen (2015:59), “When we show students how to be present and focused, they not only learn better, but they also live better”. Four studies are presented here.

In an action research project, Spencer (2020) investigated the effectiveness of a mindfulness programme, which included breathing as part of yoga in a Canadian Montessori school. In the class that combined Grades 4,5, and 6, 19 learners participated in a six-week ‘The MindUp’ curriculum. This curriculum consisted of teaching learners “about neuroscience and the benefits of mindfulness in their daily lives. Students also participated in a weekly yoga session to practice mindful movement over the six weeks-study” (Spencer 2020:13). Data were collected through surveys, student journals, student work cycle folders, and observation. The results display the ability of learners to complete tasks owing to the gained skill to self-regulate and focus in the classroom.

In her quantitative descriptive study, McCoy (2019) investigated the relationship between a self-regulation breathing technique and the academic achievement of 28 11th- and 12th-Grade high school learners from Florida, USA. Although breathing is the intervention strategy, the author neglected to describe breathing in her ‘Definition of Key Terms’. Also, the literary study revolves around studies on self-regulation and test anxiety but does not elaborate on breathing. Learners were divided into an experimental and a control group and also completed a pre-test and post-test anxiety

test in an intensive online reading programme. All the students in the experimental groups improved their scores reflected in before and after testing. However, not all in the control group improved their scores. Some showed a decline in their scores. Breathing thus plays a significant role in helping students to advance their performance by improving mental focus.

Cornell (2019), after conducting a thorough literature review on mindfulness practices and school psychology, closely monitored three Grade 5 learners who had been introduced and educated in the 'Mind-on-Breathing' intervention programme, which aims to promote the academic achievement of learners and to reduce off-task behaviour. Learners were acquainted with mindful breathing exercises for five minutes per day over two weeks. The details of the breathing intervention are explained in the appendix of the research document (Cornell 2019:115):

“1. Sit or stand with your best posture; 2. Close your eyes; 3. Place a hand on your stomach; 4. When you inhale, focus on the feeling of the air entering your body and filling up your lungs. Draw the air into your body, through the nose, by contracting the diaphragm. You should feel the air expand your body, filling up your lungs as your diaphragm pushes out your stomach. Feel this with your hand; 5. Once your body feels full, notice the period between the inhalation and exhalation; 6. Following the natural inclination of your body, let go of the breath. Do not forcibly exhale the breath. Instead, let the difference in pressure gradients release the air from the chamber of your lungs, like air from a balloon. Feel your stomach returning to its resting position using your hands; 7. Once empty, notice the moment between exhalation and inhalation. Following the natural inclination of your body, repeat the process.”

Learners were taught to “nonjudgmentally let go of unwanted thoughts and return attention to the breathing exercise” (Cornell 2019:30). His research data suggests that this breathing intervention was effective for all three research participants. Although the results are encouraging, the population sample is limited.

The two researchers, Higgins and Eeden (2018), conducted a study in a New Zealand public primary school. Their investigation was on how mindfulness-based breathing practices can assist learners with mental concentration and attentiveness. They had access to 30 research participants aged between 10 and 12 in a mathematics class. For their study, each mathematics class started with ten minutes of breathing

exercises. The children were encouraged to focus on their breathing as a 'skill for life' and attentiveness. Posture was particularly emphasised. During the last 15 minutes of the mathematics lesson, five to seven students were taken aside, and they entered into dialogue with the two researchers and one teacher. Data were collected in this way through observation and conversation over three months. Students had to explain what the breathing exercises meant to them, not only within the breathing lesson but also within the mathematics lesson and private life world milieu. Attention was paid not only to what the research participants communicated but also to how they communicated their insights. The researchers argue that breathwork highlights how emotions influence learning. In particular, learners benefitted from this exercise in becoming aware of how they can control their wandering minds by focusing solely on their breathing, increasing their ability to concentrate on the task at hand. Many of them reported feeling relaxed, quiet and calm. For others, it assisted them in being less 'fiddly' and more focused on the learning environment. However, many learners experienced conflicting tension between their minds wandering and trying to focus. As a result, they became anxious, unsure whether they were 'doing it right'. Higgins and Eeden (2018:685) write:

"For the students, the breathing practice initially seemed to be about having some quiet time to calm down before engaging in lessons, however, it seemed that they have begun to capture the essence of mindfulness as being about paying attention and being aware, the students began to forefront the notion of focusing."

They conclude that mindful breathing exercises impact the learners' psychological well-being positively. They also felt that their particular research model of group dialogue contributed to a collective understanding of mindfulness-based breathing, enhancing the classroom learning environment. The direct transcripts of learners' conversations demonstrate the value of breathing for mental focus and concentration. It is evident that conscious breathing can be a valuable tool for learners to enhance and improve their learning experience. Unfortunately, the breathing intervention itself, i.e., how participants were instructed to breathe, is unclear.

From these four studies, it is evident that breathwork as an intervention seemed to impact the ability of learners to concentrate on their schoolwork, i.e., enhance their learning abilities. Hence, it is possible to aid learners within the South African Life

Skills programme with mental focus. Smith (2006:30), writing from a music educational point of view, writes: “Incorporate breathing exercises into the first few minutes of a lesson, class, or rehearsal. This helps young minds focus on the task at hand.”

3.2.4 Synopsis

It is evident from the transdisciplinary literary exploration, especially surveying the data from studies conducted in various schools around the world, that breathwork can support the psychological well-being of learners. Breathwork is verified to be a valuable aid in dealing with stress and emotional and mental regulation. Although the concept of breathing for well-being is not an explicit focus of SingEd literature and practices, it is evident that deep breathing or diaphragmatic breathing, a primary breathwork requirement in SingEd (see 2.6.3), is not unlike that implied by most investigators reviewed under the heading of psychological well-being. Thus, SingEd can also be considered a valuable catalyst to enhance psychological well-being as it employs the same technique. Accordingly, Life Skills educators can gift learners with a valuable life skill when the matter of breathing is approached and addressed efficiently. In the words of Sharamon and Baginski (2003:157), “When we deliberately direct our consciousness to our breathing, we can bring about enormous positive effects”.

3.3 PHYSIOLOGICAL WELL-BEING

“Stated most simply and broadly, physiology is the study of how living organisms work.” (Widmaier *et al.* 2008:2). The Longman Dictionary of Contemporary English (Summers *et al.* 2004:1437) echoes this statement by describing ‘physiology’ as “the way the body of a person or an animal works”. The Paperback Oxford English Dictionary (Soanes *et al.* 2006:562) reiterates this by explaining the concept as “the branch of biology concerned with the normal functions of living organisms and their parts” as well as “the way in which a living organism or bodily part functions.” In this section of Chapter 3, the relationship between bodily well-being and breathwork is considered. The literary exploration of breathing revealed many varied aspects related to physiological well-being. In the following discussion, not only are physical exercise and good eating habits explained but also respiratory health and sleep apnoea.

3.3.1 Physical activity

McKeown (2015:2) writes: “Overall fitness and sports performance are usually limited by the lungs – not by the legs, the arms, or even the mind.” Also, Indik (2009), and Lee and Campbell (2013) state that peak performances in physical activities such as weightlifting, running, climbing, swimming, biking, martial arts, and hiking depend on breathing efficiency. “From a purely physiological standpoint, our breath is the energy source for every activity we undertake” (Lee & Campbell 2013:28). Morningstar (2018:7) agrees in saying, “Peak performance and achieving one’s personal best have always involved a mastery of one’s breathing.” Improving fitness relies on increasing the release of oxygen to all the muscles, organs and tissues involved in physical exertion because increased oxygenation aids higher exercise intensity (McKeown 2015). In this regard, Tsatsouline (2003) views breathing as an essential athletic skill.

Vranich and Sabin (2020) believe that strengthening breathing muscles is a vital component of fitness training for athletes and first responders because it contributes to high-level endurance, precision, and strength. “The respiratory muscles don’t just move air in and out of the body; they also create stability and, broadly speaking, stability creates strength” (Vranich & Sabin 2020:138). Falsone (2018:1) supports this statement by saying, “Breath facilitates movement. Movement facilitates breath. Breath facilitates stability. Stability facilitates movement. It’s just one big circle.” Thus, improved breathing can aid improved fitness, but conversely, improved fitness can aid breathing (Nestor 2020; Vranich & Sabin 2020; Del Negro *et al.* 2018; McKeown 2015; Vasiliev & Meredith 2006; Edwards 2005). This reciprocal process highlights breathing as a key player in physical well-being.

Whereas Western literature, discussed in the previous two paragraphs, alludes to physical activity in terms of outer physical fitness, Eastern literature includes internal body parts. For example, Ramacharaka (2008:58) writes: “The internal organs also need exercise, and Nature’s plan for the exercise is proper breathing”. Therefore, Holden (2010), a teacher of qi gong, promotes the internal massaging of organs while engaging in this modality’s breathing and movement exercises.

Singing can also be viewed as physical activity. Doyle (2001:1) writes, “Being a singer is a lot like being an athlete”. Also, Hansen *et al.* (2014:51) make the statement, “Because singing demands the mental acumen and physical agility of any athletic activity, relaxation of the mind and spirit, as well as muscles of each singer, must be addressed systematically”. In this regard, Shear (2008:32), LeBorgne and Rosenberg (2019:29) equate singers to ‘vocal athletes’. LeBorgne and Rosenberg (2019:44) further explain that, although vocal athletes in their training do not necessarily contemplate building breathing muscle strength, they should well consider it, for it could possibly “change the effort level needed to produce voice”. Pop and Filip (2019:220) also write: “The professional singer must discover what the elite athletes, martial arts champions and yogis have always known – that by controlling breathing, one actually controls well-being and the level of performance”.

It is clear that peak physical performance is linked to an optimal breathing apparatus, not only in sporting activities but also in singing. Breath education can thus play a valuable role to enhance and support the physiological well-being of learners.

3.3.2 Good eating habits

The kind of food we eat can affect the way we breathe positively or negatively (Nestor 2020; Manga 2018; Ballentine 1996). Modern-day humans consume more acid-forming foods, such as processed products, dairy, meat, bread, sugar, coffee, and tea compared to previous generations who consumed more alkaline-forming foods like vegetables, fruits, and water. According to McKeown (2015), and Manga (2018), acid-forming foods stimulate the breathing rate because the body is trying to maintain the pH balance. “A natural response to experiencing a greater demand for breath is to open the mouth to take in more air. Over time, the brain adjusts to this larger intake of air, and over-breathing becomes a habit” (McKeown 2015:59). What we consume daily thus also has a potentially positive or negative impact on our breathing.

Obesity is a major phenomenon in many countries all over the world. Being overweight causes the diaphragm muscle, the major muscle of respiration, to become inhibited. “The compressive weight on the body makes inhales and exhales more effortful, and thoracic rigidity that is self-imposed is an all-too-common modern phenomenon”

(Vranich & Sabin 2020:28). McKeown (2015) agrees that overweight individuals tend to exhibit poor breathing habits. Resultant breathing from the upper chest and through the mouth leads to chronic hyperventilation and frequent sighing. To this list of overweight consequences, Nestor (2020) adds snoring and sleep apnoea. A balanced and healthy body weight thus contributes to balanced and healthy breathing mechanisms that affect general well-being. Therefore, obese people could improve their respiratory functioning and associated well-being by losing weight.

Ruben Meerman, a scientist at the School of Biotechnology and Biomedical Sciences of the University of New South Wales, asked himself the question, “When you lose weight, where does the fat go?” His scientific explorations led him to conclude that for every 10 kg dropped, 8,4 kg is carbon dioxide and 1,6 kg is water. “That makes lungs the major excretory organ for weight loss” (Meerman 2016:25). His findings are affirmed by Lee and Campbell (2013), Nestor (2020), and Morningstar (2018). A well-functioning breathing mechanism is thus a key role player in the body’s metabolic processes, for without oxygen, the body cannot burn food or generate energy (McKeown 2015; Clarke 1996; Hymes 1996). As a result of improved oxygenation, the functioning of all physiological systems improves, including those responsible for expelling waste products (Vranich & Sabin 2020; Morningstar 2018; McKeown 2015; Lee & Campbell 2013; Hymes 1996; Yesudian & Haich 1959). An optimally functioning respiratory system, therefore, increases the energy-receiving capacity of the body and is crucial in eliminating toxins and waste generated by the metabolism of the body. For Ramacharaka (2008:21), “weak lungs and poor digestion are so often found together.” Being more breath conscious could therefore support our dietary regimes and, in so doing, aid physical well-being.

3.3.3 Respiratory health

“It is impossible for imbalances in the body to exist if a person is breathing correctly” (Veltheim & Muiznieks 2013:56). Pathologically functioning respiratory mechanics are the cause of several major physiological health problems (Acar 2016; Adhana *et al.* 2016; Balasubramanian 2015; Bhikkhu 2015; Nistor *et al.* 2015; Nugent 2009; Briffa 2002). Manga and Murray (2022b:5) state: “When our cellular respiration becomes inefficient, we increase the likelihood of many diseases and illnesses, and we reduce

the overall quality of life.” Nestor (2020:xix) writes: “No matter what we eat, how much we exercise, how resilient our genes are, how skinny or young or wise we are – none of it will matter unless we’re breathing correctly.” To this, Morningstar, (2018:19) adds: “The fear generated by not being able to breathe is some of the most intense and immediate fears wired in the human organism.” A well-functioning respiratory system is necessary to transport the life-giving force of oxygen to all of the body’s tissues. Compromised respiratory mechanics cause a limitation in this process of oxygenation (Novotny & Kravitz 2013). The term ‘hypoxia’ is ascribed to this lower-than-expected level of oxygen supply to the body (Harch & McCullough 2016; McKeown 2015).

The literature on well-being and breathing has highlighted several aspects that inhibit natural respiratory flow. Nestor (2020) explored the development of the human skull. Together with Dr Marianna Evans, a dental researcher, Nestor investigated ancient and modern human skulls at the Pennsylvania Museum of Archaeology and Anthropology and learned that the human jaw has been shrinking progressively over eons of time. As a result, the chins of humans are growing shorter, jaws are slumping back, the larynx is lowering, and the sinuses are shrinking (Nestor 2020; Tweed 2018; Di Francesco *et al.* 2004). The challenge that the latter issue poses for modern-day humans is that a vertically positioned nose is less efficient at filtering air and, therefore, more exposed to airborne pathogens and bacteria. Also, a smaller mouth and sinuses reduce the space in our throats (Nestor 2020; Del Negro *et al.* 2018).

“When mouths don’t grow wide enough, the roof of the mouth tends to rise up instead of out, forming what is called a V-shape or high-arched palate. The upward growth impedes the development of the nasal cavity, shrinking it and disrupting the delicate structures in the nose. The reduced nasal space leads to obstruction and inhibits airflow (Nestor 2020:6).”

This highlights the crucial importance of breath education to adapt to the challenge of a narrowing nasal capacity.

Fried (2000:2) asks the question, “So, as babies grow into adults, what’s become of their “natural breath”? Where did it disappear to?” Smith (2007) echoes this question in saying that from infancy to adulthood, people frequently develop pathological breathing habits. In 2019, Vranich (Vranich & Sabin 2020:27) conducted a study of

158 children between the ages of two and 11 and found that “the age of change from an anatomically perfect breath to a mimicking, dysfunctional one occurs at exactly five and a half years of age”. What causes this change? “Starting to sit, spending less time on the floor, imitating parents and superheroes, stress, and shame about weight/body image” (Vranich & Sabin 2020:27). Manga (2018:74) agrees that being ‘desk-bound’ influences the natural breathing cycle. Yesudian and Haich (1959:51) also state: “Our way of living that involves so much sitting, or long hours of standing – and consequently flat feet – or bending over a desk has caused the modern man to forget how to sit, walk, stand and breathe.” Ramacharaka (2008:11-12) agrees that modern man has adopted improper methods and attitudes of walking, standing and sitting “which have robbed him of his birth right of natural and correct breathing”. It seems that growing up and merely appearing on the world stage changes our breathing from natural, correct breathing to unnatural, incorrect breathing.

Another element concerning our modern lifestyle that seems to impact natural breathing is insufficient breastfeeding (Tweed 2018). Felcar *et al.* (2010:6) explain that breastfeeding should be the preferred way of feeding a baby, because the “use of baby bottles, even in association with breastfeeding, leads to changes in orofacial development.” Related to the topic of breastfeeding is tight clothing. Women wearing tight breast support devices restrict chest movement, and as a result, respiration is confined (Manga 2018). Tight clothing can also include belts and the lining of pants. Compressing the stomach restricts the movement of the diaphragm muscle, our primary muscle of respiration (see 2.6.3).

Balasubramanian (2019:30) points to environmental factors such as dust, smoke and artificial air fresheners being culprits affecting respiratory health. There seems to be an increased prevalence of asthma all over the world, not only owing to environmental triggers such as pollution and viruses but also owing to emotional triggers (Bowden *et al.* 2020; Nestor 2020; McKeown 2015; Novotny & Kravitz 2013; Ramacharaka 2008; Widmaier *et al.* 2008; Hymes 1996). “Currently 235 million people around the world have asthma” (McKeown 2015:12), and it is also understood to be “the most chronic childhood illness” (Nugent 2009:111). Asthma is a result of chronic inflammation that causes wheezing, shortness of breath, chest tightness, and persistent coughing (McKeown 2015; Novotny & Kravitz 2013; Widmaier *et al.* 2008; Soanes *et al.* 2006).

The respiratory functioning of an individual with asthma is therefore severely compromised. This literature review is not a medical, scientific exploration of physical ailments. However, breathwork is employed as a complementary modality in many medical fields to aid in correcting or relieving pathological physical conditions. Thomas and Bruton (2014) state that asthma cannot be cured and point out that a compelling body of evidence proves that simple breathing exercises can assist in managing this health challenge positively. Bowden *et al.* (2020:Abstract) write: “A shift in current health policy has seen heightened focus on non-medical interventions which can be delivered out with formal healthcare settings, to complement and enhance the clinical care of people with long-term conditions.” Manné (1999:13) adds, “With regard to the new medical systems of healing, many of those now adopted into conventional medicine as it expands its field ... are conscious of the importance of breathing.” Breathwork, accompanied by singing, and the breathing exercises associated with it, are employed in various research strategies to combat asthma, chronic obstructive pulmonary disease and other respiratory health conditions (Gick & Nicol 2015). MacDonald (2013:1) writes: “Motivated by a desire to investigate innovative, non-invasive, and economically viable interventions that embrace contemporary definitions of health, practitioners and researchers across the world have been developing and researching arts inventions.”

Owing to the high prevalence of asthma in Australia, Eley and Gorman (2010) investigated breathing exercises through singing for girls aged 5 to 17 years over a period of ten months. Qualitative feedback from participants and their parents indicates an improvement in managing their asthma and a sense of well-being from participating in an enjoyable activity. In a different mixed-method study to evaluate choir singing as a non-medical intervention for 7- to-12-year-old children with asthma, Bowden *et al.* (2020), noticed a marked improvement in asthma control with the added benefit of improving self-esteem. Wade (2002) investigated the effects of vocal exercises and singing compared to music-assisted relaxation to measure peak expiratory flow rates on nine research participants aged between 8 and 13, diagnosed with asthma. Results indicated maintenance or increased lung functioning after singing, but no consistent, measurable result after the relaxation intervention. It can thus be seen that “[t]he act of singing, as well as the warm-up exercises that are associated with a choir, may help to reduce the symptoms of ... illnesses by improving

breath control” (Clements-Cortés 2015:8). Smith (2006:31) writes: “Many children with asthma can learn to sing quite successfully by acquiring healthy breathing techniques.” Also, Azoulay and Loewy (2009:Abstract) state that “active music-making using the breath directly ... can support optimal respiration”.

Simoneau *et al.* (2020) investigated whether implementing Easy Breathing for Schools (EzBfS), a five-element school nurse-led asthma-management programme, would affect absenteeism. The five-element programme consisted of school nurses assessing each learner’s risk, asthma control, asthma education, asthma medication, and communicating with the primary caregiver. Their motivation, substantiated by appropriate literature, is that asthma is the leading cause of school absenteeism in the USA. A total of 14 schools, 15 nurses and 288 learners from Hartford, USA, took part in this two-year study. The prevalence of asthma in the 14 schools was 23%, and school-documented statistics indicated that these students were more prone to absenteeism than those who do not have asthma. However, after implementing the asthma-management programme, absenteeism among those with asthma dropped by 23%. This study emphasises the value of breathing within the physical dimension of wellness. However, other than indicating that the school nurses assessed the inhaling technique of learners within the context of asthma education, no details on ‘how to breathe’ transpired. The teaching and learning strategy is also not further explained.

In their article, Kulkarni *et al.* (2013) discuss the outcomes of their study on the autonomic and pulmonary functions of 20 learners, aged between 9 and 12, from the K.L.E. School of Music, Belagavi, India. Autonomic and pulmonary functions of learners receiving 45-minute singing lessons were measured before and after their lessons, using instruments measuring blood pressure, expiratory volume, and expiratory flow. A control group of the same age, not receiving singing lessons, underwent the same tests. Results demonstrated a significant difference between the two groups. The singing group had a superior expiratory flow rate than the non-singers. After these results, the authors suggest that singing be used as an intervention strategy for children with asthma. Not only asthma but also chronic obstructive pulmonary disease is addressed through singing.

Chronic obstructive pulmonary disease (COPD) is a disorder characterised by airflow limitation that is not fully reversible, seen in patients with emphysema, chronic

bronchitis or a combination of the two. These diseases “which cause severe difficulties not only in ventilation but in oxygenation of the blood are among the major causes of disability and death in the United States” (Widmaier *et al.* 2008:454). According to Nistor *et al.* (2015), COPD is currently the fourth most frequent cause of death worldwide. This is evident in the current COVID pandemic that startled the world since 2020. Bonilha *et al.* (2009) employed singing-related respiratory exercises to counteract the physiopathological effects exhibited by COPD patients, such as thoracic hyperinflation, decreases of maximal respiratory pressures and dyspnoea. Lord *et al.* (2010) tested the hypothesis “[l]earning to sing requires control of breathing and posture and ... ha[s] benefits that translate into daily life” to investigate singing as a modality for breathlessness in patients with chronic respiratory disease. Twice weekly ‘singing for breathing’ workshops were held for patients with respiratory conditions. Of the 150 patients that attended, 98% thought that the workshop had taught them about breathing differently, and 81% felt a marked physical difference after the workshop. Singing and singing breathing assisted greatly with improving levels of under-breathing.

Goldenberg (2018), searching multiple databases, reviewed 17 studies about singing as a therapy supporting both physiological and psychological diseases. Conditions included asthma and chronic obstructive pulmonary disease, and cancer, cystic fibrosis, multiple sclerosis, Parkinson’s disease, and quadriplegia. She noticed that several research participants indicated an improvement in expiratory pressure and overall breathing technique and concluded that singing can be employed as an adjunctive healing treatment for respiratory ailment. Nistor *et al.* (2015:159) state that, in remedying symptoms of COPD:

“[t]he therapist aims to educate the patient to acquire breathing strategies allowing optimal control of symptoms, as well as to preserve residual pulmonary function and prevent pulmonary disease complications; the challenge for the therapist is to increase the degree of independence for these patients.”

In our daily living, the consequence of insufficient oxygen is yawning, a natural reflex that forces oxygen into the lungs (Manga 2018; Guinness *et al.* 1986). Yawning is thus the result of under-breathing, but there is also the opposite of under-breathing. Chronic hyperventilation or over-breathing is breathing an air quantity greater than the physical

body requires (McKeown 2015). Over-breathing causes the body to lose considerable levels of carbon dioxide and triggers symptoms such as exhaustion, gasping, trembling, dizziness, choking or feeling smothered as a result of a decrease in circulation, especially in the brain (Nestor 2020; Acar 2016; Meerman 2016; McKeown 2015; Novotny & Kravitz 2013; Briffa 2002; Manné 1999). Furthermore, much carbon dioxide is released during chronic hyperventilation, and the pH balance starts to lean towards acidity, “a breeding ground for chronic illness” (Manga 2018:76).

3.3.4 Sleep-disordered breathing

From the field of sleep research comes the most revealing science about breathing. It was found that people who breathe through their mouths as children, develop narrow faces, narrow jaws, crooked teeth, sunken cheekbones and a smaller nasal capacity (McKeown 2015; Ruth 2015). Guilleminault and Sullivan (2014:Abstract) explain that “Chronic oral breathing is an important clinical marker of orofacial muscle dysfunction, which may be associated with palatal growth restriction, nasal obstruction, and/or a primary disorder of muscular or connective tissue dysfunction.” Thus, the tongue that stays in the roof of the mouth when breathing through the nose assists in natural, healthy or normal jaw formation. Consequently, breathing through the nose is crucial for an infant’s development. “Nasal breathing during the formative years is absolutely essential to help to ensure the correct development of the face, jaws and airways” (McKeown 2015:92), and a most crucial factor in overcoming sleep disorders (Fountain 2019; Rockwood 2018; Tweed 2018; Galland *et al.* 2015; McKeown 2015; Pacheco *et al.* 2015; Ruth 2015; Guilleminault & Sullivan 2014). A characteristic of sleep apnoea syndrome is paused breathing, which can last up to one minute during sleep, owing to mouth breathing.

Sleep disorder breathing is associated with an assortment of symptoms. Common night-time characteristics are snoring, gasping for air, snorting, restless sleep, unusual sleeping positions, night sweating and bedwetting. The lack of a good night’s rest results in daytime symptoms such as morning headaches, daytime sleepiness, anxiety, confusion, depression, inattentiveness, and lack of concentration (Harding *et al.* 2020; Nestor 2020; Cafasso 2019; McKeown 2015; Felcar *et al.* 2010; Di Francesco *et al.* 2004; Hymes 1996). Ramacharaka (2008:38) writes: “The man who breathes

through the mouth at night, always awakens with a parched feeling in the mouth and dryness in the throat. He is violating one of nature's laws, and is sowing the seeds of disease." The benefits and pitfalls of mouth and nasal breathing are discussed in Chapter 2 (see 2.2.2).

Guilleminault and Sullivan (2014) explain that nasal breathing is crucial in overcoming sleep disorders. They write: "Elimination of oral breathing, i.e., restoration of nasal breathing during wake and sleep, may be the only valid end point when treating OSA" (Guilleminault & Sullivan 2014:10). OSA is short for 'obstructive sleep apnoea', the condition that leads to a repeated stopping and starting of breathing while asleep. Through learning to breathe correctly, i.e., breath education, mouth breathing and their dire consequences can be addressed (Fountain 2019; Rockwood 2018; McKeown 2015).

Galland *et al.* (2015) conducted a meta-analysis study of 488 publications to evaluate the relationship strength between academic performance and sleep-disordered breathing in New Zealand school-age children and adolescents. They concluded that sleep-disordered breathing had a significant impact on poorer academic performance in the subjects of language arts, mathematics and science. In another study, Joyce and Dimitriou (2017) argue that sleep affects the school preparedness, cognitive development and academic outcome of learners. They also state that people with Down syndrome are particularly predisposed to sleep-disordered breathing. With this rationale in mind, they conducted research assessing the sleep of 22 Down syndrome and 22 pre-schoolers without Down syndrome in the United Kingdom. They conclude that the non-Down syndrome research sample, with longer sleep duration, scored higher academically and had fewer emotional problems than those with Down syndrome. Although the scientific methods seem sound, one can say that this result was to be expected due to Down syndrome children having a predisposition towards sleeplessness.

Learning to breathe in a conscious manner can thus contribute to a good night of rest and make an important contribution to physiological well-being. Ruth (2015:42) remarks that a "conscious effort to ensure that people predominantly nose breathe would likely result in a healthier population and a resultant decrease in healthcare expenses".

3.3.5 Synopsis

It is evident from the literary exploration that breathing and physiological well-being are interconnected. The saying in Hatha Yoga that “if a person has perfect breath, they will have perfect health” (Veltheim & Muiznieks 2013:56) rings true. From the discussions above about fitness and endurance training, weight loss and diet, and the treatment of respiratory diseases and insomnia, we can see that a physically optimal functioning breathing mechanism is key to physical health and to life. Compromising this natural function leads to physical ill health. Therefore, focusing in a school classroom on the correct way of breathing can assist learners indirectly to avoid becoming victims of ill health. By no means is it implied that breathwork in itself can cure any or all illnesses. However, it can be seen as “an adjunct practice that could aid healing” (Balasubramanian 2019:31). Hymes (1996:37) writes that the “application of such a simple, safe, and inexpensive method as an adjunct to other therapies is an exciting one for further research”.

Within a broader school context, we are not always or hardly ever familiar with the inner struggles of each student, be they physiological or psychological. Through SingEd, learners can gain a skill that can assist them with these struggles, perhaps indirectly just through singing but also perhaps more consciously through purposeful, directed breathing exercises. Singing necessitates sound respiratory mechanics or breathwork. Through SingEd, the Life Skills educator can aid the respiratory health of a school community. McKeown (2015:21) states: “Better breathing is the gateway to a new realm of health.”

3.4 SPIRITUAL WELL-BEING

“The most beautiful thing we can experience is the mysterious. It is the source of all true art and science.” (Leavy 2009:1). Both the Paperback Oxford English Dictionary (Soanes *et al.* 2006:603) and the Longman Dictionary of Contemporary English (Summers 2004:1862) define ‘spiritual’ as a concept that concerns the human spirit as opposed to material things. It could also refer to a religion or to religious belief. Braud and Anderson (1998:xx) remark on the increased acknowledgement in social sciences of spiritual experiences that shape and drive individual or collective attitudes

and actions. Furthermore, according to Alder (1983), the process of investigating any subject should embody not only the visible but also the invisible. Boyce-Tillman (2014) further remarks that theorists are currently bringing into their models a spiritual component in order to transcend the limitations of a traditionally dominant machine model of what it means to be human. However, the RSMSPB theoretical framework, discussed in Chapter 2 (see 2.3), itemises breathing principles only from a technical–mechanical perspective. In the words of Boyce-Tilman (2014), the RSMSPB reflects a ‘machine model’. That said, Vasiliev and Meredith (2006:35) clarifying the Russian Systema Method, state that “beyond the gateway of the breath lies a vast open country of pure spirit”.

Three leading chains of thought transpired from this transdisciplinary exploration of breathing, well-being and spirituality: union with the supreme deity, oneness with all life, and knowing of self.

3.4.1 Union with the supreme deity

“Through breathing we are in fact in contact with the all-permeating life force, without which there would be no Creation as we know it.” (Sharamon & Baginski 2003:157) De la Huerta (2013:17m:37s) state: “The breath is intelligence ... We are being breathed by something greater than we are. We are being breathed by the Holy Spirit; we are being animated by the Holy Breathe”. When we consider that no human life is possible without breathing, questions arise about the origins and nature of our existence: Who are we? Where do we come from? Who created us and who created everything? For this, we look up at the sky and ponder the role of the unfathomable Creator in all this. Gauci (2015:1) reminds us of the virtue of gratitude by saying, “every breath is a blessing from the Creator, every breath a loving caress from the Divine. May we live our lives conscious of this blessing”. The various Divine scriptures are full of referrals to breath.

Most spiritual teachers of all religious traditions have recognised the importance of breathing (Brulé 2017; Lee & Campbell 2013; Douglas-Klotz 1997). In first book of the Old Testament, in Genesis 2:7 it is written: “The Lord God formed the man from the dust of the ground and breathed into his nostrils the breath of life, and the man became

a living being.” (Bible 1986:2) The psalmist David exclaims in Psalm 150, “Let everything that has breath praise the Lord.” (Bible 1986:563) In the New Testament, in John 20:21, we read, “Again Jesus said, ‘Peace be with you! As the Father has sent me, I am sending you.’ And with that, he breathed on them and said, ‘Receive the Holy Spirit’.” (Bible 1986:111) In the Muslim Quran Sura 15:28-29, it is written: “See, I am creating a mortal of a clay of mud moulded. When I have shaped him, breathed My spirit in him” (Pickthall 1997:178). Christianity and Islam, therefore, share the idea that a Creator God breathed life into humans. But what about other religious traditions?

For Buddhists, breath is considered a bridge between the body and the Spirit (De la Huerta 2013; Douglas-Klotz 1997). Two suttas in the Buddhist tradition are devoted to breathing exercises. In these suttas, the Buddha himself is speaking, “There is one dhamma, Monks, which when developed and practised frequently is very fruitful and deserves great praise. What is this one dhamma? It is mindfulness of breathing” (Manné 1999:24). Also, in Indian Vedanta philosophical scriptures, it is taught, “Without breathing there is no life on earth” (Yesudian & Haich 1959:48). Nearly every spiritual tradition has attached importance to breathing and has developed a large variety of consciousness-expanding exercises as a result (Vranich & Sabin 2020; Lee & Campbell 2013; Sharamon & Baginski 2003). It can be assumed from the latter writings that breath awareness is well situated within spiritual philosophy and practices.

According to Lee and Campbell (2013:61), the word ‘inspiration’ that is, to in-spire, to in-hale, means to receive the ‘breath of God’. In various ancient languages, the terminology for breath and Spirit are used interchangeably (Manga & Murray 2022b; Nestor 2020; Hoyt 2019; Peyton 2019; Morningstar 2018; Trumbore 2018; Moraveji 2014; De la Huerta 2013; Young *et al.* 2010; Edwards 2008; Ramacharaka 2008; Edwards 2006; Vasiliev & Meredith 2006; Edwards 2005; Bottomley 2004b; Douglas-Klotz 1997; Rama 1996). According to these authors, when acutely listening to the sound of respiration, the well-known descriptors for the Supernal, ‘Yah-weh’ or ‘Al-lah’, can be heard. Thus, in every in- and out-breath the name of the Supernal is reiterated.

Table 3.2 ‘Breath of God’ concept descriptors from various cultures (Potgieter 2023).

Culture	Descriptor	Meaning
Chinese	Chi	Vital life force
Egyptian	Ka	Vital human breath energy
Greek	Pneuma	Breathe, air, wind, lung, spirit, soul
Hawaiian	Ha	Breath of life, life-force energy
Hebrew/Aramaic	Ruach/Ruakh	Wind, air, gas, spirit, breathe
Latin	Spiritus	Breath, breath of life
Russian	Vozdooh	A heap of Spirit
San	N/um	Healing energy
Sanskrit	Prana	Vital life force; absolute energy
isiZulu	Umoya	The wind, ancestral spirit energy

The various names listed in Table 3.2 all try to capture the uncapturable which, in many ways, remains outside of our comprehension. Although true understanding of the Supreme Deity eludes the human mind, spiritual experiences are very real. Green (2012:5) writes:

“Our full potential includes the spiritual experience of being in union with something more encompassing than our individual selves. We access this spiritual connection, this “pearl beyond price,” in those moments when our diaphragms release and we breathe fully, with no effort and no holding back.”

From a scientific point of view, Puente (2014) explored the effects of Holotropic breathwork, a psychotherapeutic procedure involving hyperventilation, focusing explicitly on occurrences of mystical experiences. In a daylong breathing workshop in Moscow, Russia, at the 14th International Transpersonal Association Conference, the 134 research participants answered a States of Consciousness questionnaire afterwards. The researcher indicates that 13 of the participants met the criteria for a ‘complete’ mystical experience. Thus, conscious breathwork induced a transcendental mode of being, opening the door to spiritual well-being.

Music and spiritual experience are interminably intertwined. For thousands of years, all cultures used to sing to worship their Creator. Songs with spiritual themes have elevated the human spirit since time immemorial. Singing in itself and the breathing embedded in this singing can lead to a sense of elevation and connection to the Divine (Hoyt 2019). Here is a traditional hymn with its roots in the Anglican Church tradition entitled ‘Breathe on me, Breath of God’ alongside a traditional hymn from the Hindi tradition in India called the ‘Gayatri Mantra’. The lyrics in the latter glorify God for His creation and for bringing light to the dark human mind.

1 Breathe on me, Breath of God, fill me with life a -
 2 Breathe on me, Breath of God, un - til my heart is
 3 Breathe on me, Breath of God, till I am whol - ly
 4 Breathe on me, Breath of God: so shall I nev - er

new, that I may love what
 pure; un - til with thee I
 thine; un - til this earth - ly
 die, but live with thee the

thou dost love, and do what thou wouldst do.
 will one will, to do and to en - dure.
 part of me glows with thy fire di - vine.
 per - fect life of thine e - ter - ni - ty.

Om bhur bhu-va-h sva-h tat-sa-vi-tur - va-ren-yam bahr-go-de-va-sya- dhi - ma-hi

dhi yo yo na h pra-cho-da-yat. Om bhur bhu-va-h sva-h tat-sa-vi-tur - va-ren-yam

bahr gode vasya- dhi - ma hi dhiyo yo na-h pra-cho-da yat. Om bhur bhu-va-h sva-h

tat-sa vi-tur varen yam bahr-go-de-va-sya - dhi-ma-hi dhi yo yona-h pra-cho da yat.

Om bhur bhu-va-h sva - h tat - sa - vi - tur - va - ren - yam

bahr-go de - va - sya - dhi - ma-hi dhi - yo yo na - h pra-cho - da-yat.

Both songs, one from a Western Christian tradition and the other from an Eastern Hindu tradition, acknowledge a larger life force beyond the small self. Through song and lyrics both, each in its unique way and context, commune with the Divine.

Although school policies surrounding religion, a sensitive topic, are to be respected, praising the Supernal through song and accompanied breathwork could elevate spiritual well-being in schools. However, even if spiritual practices are excluded from schools, just focusing on correct breathwork through singing secular songs or intentional breathwork education separate from singing can give learners a suitable foundation for further exploring their personal spirituality and communion with the Divine.

3.4.2 Oneness with all creation

Several authors agree that breathing is the foremost universal common denominator and free method of energy exchange and interrelationship with our shared environment (Manga & Murray 2022b; Nestor 2020; Morningstar 2018; Fitzmaurice 2015; Lee & Campbell 2013; Ramacharaka 2008; Edwards 2005). Leboyer (1975:43) states: “To breathe is to be in accord with creation”. Sharamon and Baginski (2003:157) add: “Human beings, animals and plants all breathe the same air. You inhale the air they have exhaled, and vice versa.” Nestor (2020:39) explains:

Everything you and I or any other breathing thing has ever put in its mouth, or in its nose, or soaked in through the skin, is hand-me-down space dust that’s been around for 13,8 billion years. This wayward matter has been split apart by sunlight, spread throughout the universe, and came back together again. To breathe is to absorb ourselves in what surrounds us, to take in little bits of life, understand them, and give pieces of ourselves back out. Respiration is, at its core, reciprocation.

In this regard, breathing becomes the thread that binds all of creation and reminds us of our coexistence and codependency. This coexistence is not just between things of a material nature, but also interdimensional, as seen in the next example.

According to Manga and Murray (2022b:11), “Breathwork also served as a healing modality throughout many shamanic cultures around the world”. These authors mention Native America as an example where, in the space between the in-breath and the out-breath, individuality fades and awareness of a collective oneness resides (Manga & Murray 2022b). In South Africa, the Zulu sangoma uses breathing to commune with ancestors. Edwards (2008:143), Professor of Psychology at the University of Zululand writes:

“During a typical divinatory session (vumissa), after contacting the spirit of the ancestors, the isangoma may breathe this spirit into the divinatory bones, before throwing them. Likewise, clients may be required to inhale this ancestral spiritual breath energy from the bones and use it in various healing rituals. Depending upon the depth of the past evolutionary ancestral call, diviners may breathe like roaring lions (ukubhodla kwengonyama) or even pythons in their silent communication (inhlwathi igingile). However, typically the isangoma is breathed by recently departed ancestors who had

previously appeared to her in dreams, called her to become a diviner and accompanied her through a creative illness in the form of a religious conversion experience until she completed her apprenticeship under a qualified diviner in a spiritual rebirth macro-process called ukuthwasa.”

The preceding information is also echoed in the article by Nzima *et al.* (2006) and an explanation of the same by Manga and Murray (2022b:13). Breathing in this regard is not just a requirement of the physical body to maintain homeostasis, but is applied consciously in interdimensional communication.

The topic of breathing that connects humans with all life, with all existence, is rich and diverse if not also poetic and inspirational. More than just a function to maintain the life force of the human body, breath is a shared universal property. De la Huerta (2013) emphasises this shared attribute with a practical breathing exercise:

*Stand up. Take a full in-breath through the mouth. With intent
Take the first breath – Breathing in the same air shared by all beings present and past
Take the second breath – Breathing in the same air as all humanity
Take the third breath – Breathing in the same air as all creation
Take the fourth breath – Breathing in One Love as taught by all spiritual masters*

This exercise could be appropriate to use in a classroom context to create an appreciation for divinity in all life. Teaching humane values and respect for each other and all creation, therefore contributing to a peaceful existence, through breath awareness, can only benefit our educational environment. With this in mind, Montgomery, Van Driel and Vandendriessche (2019) undertook their qualitative research, within the context of social studies education, exploring ways of promoting peace in a kindergarten classroom through mindfulness activities like breathing, mindful moments, nature walks and mindful eating (Montgomery *et al.* 2019). These 5- and 6-year-olds were taken through these mindfulness paces for three weeks, receiving three 20-minute lessons per week. Aside from citing relevant literature on social studies education and mindfulness programmes as intervention tool in schools, the study reflects on the spontaneous reaction of the learners after being educated in these mindfulness practices. Although there is no reflection on the research methods or data-gathering, the authors communicate valuable mindfulness strategies. The

following breathing exercises were used in this exploratory study (Montgomery *et al.* 2019:27):

Flower Breath: Imagine smelling a beautiful flower. Breathe in through the nose and out through the mouth. Say 'Ahh', and drop shoulders on the exhale, releasing any tension.

Snake Breath: Inhale slowly and deeply through the nose, and breathe out through the mouth with a hissing sound, slow and long. Put together and slither the hands like a snake during the exhale.

Bunny Breath: Take three quick sniffs in through the nose and one long exhale out of the mouth.

Belly Breath: Put the hand, or a stuffed animal, on the belly whilst laying down. Take slow, deep breaths that will make the belly rise and fall. In through the nose and out through the mouth.

Volcano Breath: Stand up and rub the hands together like they are hot lava. Then put the hands on the thighs and take a super deep breath in through the nose as hands are raised up along your sides, putting the palms of the hands together over your head. Hold the breath for a few seconds, then while exhaling through the mouth, let the hands fall down to your sides.

Pretzel Hug: Stand up, cross legs, put both thumbs up, then both thumbs down, cross arms over one another upside down and lock fingers, twist in arms towards the chest, hold arms/hands in tight like a hug and take a few deep breaths in this position.

These breathing exercises were done one after the other and then practised three times each, thus familiarising the learners with the exercises and reinforcing their use. Research participants reported being happy, at peace and calm doing these practices. Of significance is that the children reported using these skills in their everyday relationships, such as 'breathing out' anger and meanness towards a friend or a sibling and, therefore, staying at peace with themselves and keeping the peace with the other person. The South African Life Skills curriculum demands that educators engage in breathing exercises. However, once again, these exercises are intended to focus on 'warm-up and play' and certainly not on the conscious employment thereof for a peaceful shared existence.

Browne (2020) explored meditative breathing to support the development of self-regulation and learner well-being of 28 learners, aged between 8 and 10, in a semi-rural state primary school in Wellington, New Zealand. The research questions revolved around finding out whether guided meditative breathing contributed to learner well-being and how learners experienced it. She encouraged research participants to describe their experiences through dialogue and journalling. Both educators and learners reported a calmer and more peaceful classroom environment. This study is curious because the literature review focuses on well-being, mindfulness and intervention; however, it does not explicate breathing.

In a qualitative descriptive research design, Piotrowski, Binder and Schwind (2017), using open-ended and semi-structured questions during interviews, questioned four primary school teachers from Ontario, Canada, regarding their perceptions of mindfulness practices with young learners. The opening statement of their article read thus “In Canada, it is estimated that one in seven children aged four to 17 is experiencing symptoms related to mental health disorders ... which affect their livelihood at home and in the school environment.” (Piotrowski *et al.* 2017:225) Their study is supported by relevant literature illustrating the concepts of mindfulness, student learning and teacher personal practice. They situate their study within the field of the growing interest in classroom mindfulness practices. Factors that motivated these research participants to include mindfulness practices in the classroom included finding ways to assist learners with ways to reduce and cope with stress. All four research participants included not only sensory awareness and movement but also especially breathwork in the mindfulness strategies. One research participant noticed an overall sense of calm in her classroom directly after learners participated in breathing exercises. Unfortunately, details about the specific breathwork strategies employed are not clarified in this article. Overall, all research participants found that the integration of mindfulness practices resulted in noticeable changes in student behaviour and overall classroom dynamics. One of the recommendations of the researchers is for teachers to integrate their mindfulness practices with an arts-based element.

On a more musical or arts-based note, research in neuroscience at the University of Gothenburg found that breathing patterns regulate the heartbeat when participants are singing in a choir. Moreover, when choristers sing together their heartbeats become synchronised, growing faster and slower in parallel with the synchronisation of their in- and out-breath (Vickhoff *et al.* 2013). Research by Müller and Lindenberger (2011) supports the latter finding and found that synchronisation of cardiac and respiratory patterns increases significantly during singing. From a different angle, the harpist Fedson (2009:70) remarks that, while accompanying a soprano, “the synchronicity of our breathing gave an instant cohesiveness to our phrasing. Breathing together was likely the element that made our performance ‘click.’”. Thus, we can say that a sense of spiritual elevation resulted from unity, oneness with each other, synchronised breathing. It is possible that, through singing in groups and just breathing in and out simultaneously, improved social unity could be established. In this regard, the Life Skills educator, utilising SingEd as the catalyst, can make a meaningful contribution towards a harmonious school community. It seems breathwork can be intentionally used as a tool to experience being in rhythm, being in oneness with one another, contributing to the well-being of shared peaceful existence.

3.4.3 Contemplating self

For Edwards (2005), spiritual beliefs and practices are rooted in the lived experience and observable occurrence of life and death. Breathing is the very constituent that makes human life possible. When we are born, we take our first breath, and when we die, we take our last breath (Del Negro *et al.* 2018; Rockwood 2018; Lee & Campbell 2013; Ramacharaka 2008; Smith 2007; Manné 1999). Thus, we live to breathe and breathe to live (Gilchrist 2014; Green 2012; Nugent 2009; Edwards 2005). More than that, neurologist Antonio Damasio argues that breath and breath awareness “contribute to humans’ consciousness of self” (Indik 2009:134). On this topic, Morningstar (2018) remarks that, in nurturing self-improvement, breath awareness and breath training are key components. Sharamon and Baginski (2003:157) also believe: “Our breathing does not only unite us with the external world but, it also establishes continuous contact and exchange with the internal world.” Reiterating this, Manga and Murray (2022b:9) state: “Conscious breathing is a pathway inward”, and Alder (1983:15) suggests the virtue of “scientific breathing” as a prerequisite of the

“disciple on the Path of the good life”. Thus breath-consciousness is an essential aid in spiritual and personal development (Manné 1999). Through consciously taking charge of our breathing, an unconscious activity for most of a person’s day, we can become self-reflective and are empowered towards a meaningful existence since “[w]ellness is a conscious, self-directed and evolving process of achieving full potential.” (National Wellness Institute 2020:1).

According to Indian philosophy (Ramacharaka 2008; Yesudian & Haich 1959), an individual is allotted a predetermined number of breaths for each incarnation. Breathing carelessly, fast and hurriedly is said to shorten a person’s lifespan while breathing intelligently, quietly and slowly potentially guarantees long life. McKeown (2015) agrees that, just as humans have an essential amount of water and food to consume every day, humans also have an essential quantity of air to breathe. A 70-year longitudinal research programme focused on heart disease confirms that breathing is a critical factor in longevity. Data, gathered over two decades from 5200 subjects, revealed that it was not diet, genetics or physical exercise that contributed to improved lifespan but lung capacity (Nestor 2020). Breathing is thus a significant role player in longevity. The length of our time spent on planet Earth from birth to death and, more so, the quality of this lifetime, is at the root of various conscious breathing exercises and practices developed in ancient India and China and, more recently, in the Western world.

In India, the science of breath, called ‘svarodaya’ is at the heart of self-mastery (Trumbore 2018; Ramacharaka 2008; Johnsen 1996). Rama (1996:72) writes: “One who has learned to control prana has learned to control all the energies of this universe – physical and mental. He has also learned to control his body and mind.” In Indian Yoga, the breathing practices are called ‘pranayamas’ and are often combined within specific bodily postures termed ‘asanas’ (Aideyan *et al.* 2020; Morningstar 2018; Trumbore 2018; Indik 2009; Nugent 2009; Rama *et al.* 1996). Also, in China, the exercise form that combines breathing and movement, called Chi Gong, developed to enhance energy flow in the body (Jong-Won 2009; Nugent 2009; Bottomley 2004b). Breathwork traditions from the East teach that when we breathe consciously, we are not only taking in oxygen but also ‘prana’, ‘life force’, or ‘qi’ energy. According to these Eastern teachings, oxygen works in conjunction with the circulation system; however,

prana works in conjunction with the nervous system. In this regard, prana is considered a universal energy that flows in currents in and around the body (Nugent 2009; Rama 1996; Yesudian & Haich 1959). According to Yesudian and Haich (1959:59) the nose is the most important inlet of prana:

“When we are hiking in the high mountains or along the beach where prana is plentiful, the air is rich in ‘ozone’, we breathe deeply and immediately feel the great freshening ‘lift’ augmenting our strength. Now let us breathe in the same amount of air through the mouth, and the refreshing effect is lacking. The air absorbed through the mouth is tasteless – it lacks the ozone-scent, the prana ... In the mouth there is no organ for absorbing prana.”

In this context, breathing in through the nose seems to be not only beneficial to oxygen intake affecting our circulatory system, but also to prana intake affecting our nervous system. This subtle energy considered an infinite, all-pervading cosmic energy, promotes and activates innate healing, wellness and spiritual growth. In the Christian tradition, this equates to the Holy Spirit that breathes in man (Nestor 2020; Westmacott-Brown 2019; Morningstar 2018; Young *et al.* 2010; Nugent 2009; Ramacharaka 2008; Vasiliev & Meredith 2006; Douglas-Klotz 1997; Clarke 1996; Hymes 1996; Johnsen 1996; Rama *et al.* 1996). Manga (2018a:77) writes: “More than simply delivering oxygen to the cells, life force rides on the back of the breath.” Our respiration, when employed consciously, can thus be a valuable tool for navigating our existence. The quality of our breathing therefore affects well-being. In this way, breathing management becomes the key that unlocks the door towards spiritual well-being.

Ramacharaka (2008:28) writes about the Indian yogi’s distinction between oxygen and prana:

“The oxygen in the air is appropriated by the blood and is made use of by the circulatory system. The prana in the air is appropriated by the nervous system, and is used in its work. And as the oxygenated blood is carried to all parts of the system, building up and replenishing, so is prana carried to all parts of the nervous system, adding strength and vitality.

Morningstar (2018) reiterates this knowledge shared by Ramacharaka: “Prana is not the same as oxygen; rather it is prana that gives oxygen its life-giving quality and is

cultivated by a variety of breathing practices or pranayama which employ both slower and faster than normal breathing”.

Just as oxygen is supplied to the body by breathing, so is prana. Therefore, good breathing practices, i.e., breathwork, assist the body to optimise both functions, adding to the quality of our lifespan between birth and death. In summary, oxygen fuels the circulatory system and prana fuels the nervous system. According to Rama (1996:73), and Nugent (2009:75), the pranic energy is subdivided into five major and five minor categories in relation to the function it performs within the human body. The major pranas are:

Table 3.3 The five major Pranas (Potgieter 2023).

Category	Body part	Function
Udana	Area above the larynx	Governs the subtle senses
Prana	Area between the larynx and base of the heart	Governs speech, vocal functioning, respiratory system and corresponding muscles
Samana	Area between the heart and navel	Governs digestive metabolic activity
Apana	Area below the navel	Governs kidney, colon, rectum, bladder and genital function
Vyana	Entire body	Governs musculature relaxation and contraction as well as joint movement and corresponding structures surrounding them

The concept of prana, considered in Eastern philosophy and captured in Table 3.3, is not readily explored by Western science. The latter, in essence, only considers oxygen as the life-giving force. Of interest to this study is the second of five pranas that govern the breath. Rama (1996:74) explains further:

‘It is through the control of respiration that the yogi proceeds to control the other subtle energies of prana, which may explain the use of the same word for the universal energy as well as for the specific prana governing respiration.’

It seems that the concept of prana is an acknowledged role player regarding spiritual well-being. Also, expanding the awareness of educators and learners about what

constitutes the air that we breathe in can enhance breathing consciousness and self-development.

In a quasi-experimental study design, Miller and Nielsen (2015) investigated whether Holotropic breathwork affected the development of self-awareness of 20 participants in Denmark. Research participants took part in four Holotropic breathwork sessions. Two sessions were conducted initially, and the final two sessions took place only 12 weeks later. To assess self-awareness changes, the researcher made use of the Temperament and Character Inventory. "Temperament refers to the emotional response we have automatically. High character scores indicate high self-awareness, maturity, and a well-regulated personality, which is also connected to wellbeing." (Miller & Nielsen 2015) Some of the temperaments measured included persistence, self-directedness, cooperativeness and self-transcendence. Although the sample size was small, the authors concluded that this technique induced significant beneficial temperament changes. This modality is quite extreme and perhaps not suited for a general class teaching scenario, but it is clear that breathing can have a profound effect on self-awareness and self-empowerment. Various similar established modalities that incorporate breathwork aim to create awareness not only about how to manage to breathe but also about the significance of breathing and how, with intention, it can be employed as a vehicle for self-growth.

3.4.4 Synopsis

The transdisciplinary literary exploration of breathing within this transcendental realm revealed how conscious and intentional breathwork assists in elevating spiritual well-being in the areas of communing with the one Divine Deity and being in harmony with our external and internal worlds. Breathing seems to be the thread that connects the visible to the invisible. Manga and Murray (2022b:9) state: "Breathwork is a simple and universal way to tap into our spirituality and have an experience of the divinity that resides within. This brings us meaning and a deep sense of peace and fulfilment".

To what degree this aspect can be incorporated within a school curriculum is debatable. Major sensitivities exist about religion and religious affairs in schools. I believe this is the reason that not many school educational studies were found exploring breathing and spiritual well-being. However, it is possible for the Life Skills

educator to create awareness regarding the use of breathing for spiritual well-being. Which of these practices are appropriate for use in a school classroom can perhaps be left to the particular training, context and discernment of the school community and educator.

3.5 CONCLUSION

I have to agree with Manga and Murray (2022b:5) that “[o]ur respiratory system is remarkable in that it is both an unconscious part of our autonomic nervous system but also under our conscious control” and that “[c]hanging the pattern of the breath is an entry point to change the way we think, feel, and react.” (Manga & Murray 2022b:51). In Chapter 3, breathwork was explored together with its connection to achieving balance, and being in a natural state of health and energy. The literary exploration revealed rich accounts of the role of breathwork for well-being to counteract stress, manage emotions, gain mental clarity, peak physical performance, respiratory health, diet, sleep, and interconnectedness with all creation.

The RSMSPB theoretical framework discussed in Chapter 2 (see 2.1.2) does not have a separate entry for the concept of well-being. Also, the Life Skills CAPS uses the terminology ‘breathing awareness’ only in a mechanistic sense with no real understanding of its value for well-being. Accordingly, in CAPS-compliant learner workbooks the breathing and well-being connection is not explored or discussed. However, exploring the rich and deep literature regarding well-being highlighted that BWTL should be a priority in school curricula, school textbooks and teacher training.

From the transdisciplinary literary exploration of breathing and well-being, it is evident that many facets of our well-being are dependent on a good breathing mechanism. That said, in several of the scientific papers explored, the authors assumed that the reader had adequate pre-knowledge about breathwork delineators. They employed breathing as a research tool and discussed the well-being benefits at length; however, failing to give details and a description of the breathing intervention methods employed. Chapter 2 revealed clear breathwork delineators (see 2.2; 2.3; 2.4; 2.5; 2.6; 2.7; 2.8), and therefore, an inadequate use of breathing as a primary investigative

research tool is short-sighted. Therefore, the credibility of the research results can be questioned in some cases.

Sound breathwork can affect many areas of our lives positively when we work consciously with our breath. Breathwork is central to SingEd. Therefore, by engaging in BWTL within the various singing education settings, i.e., class music, individual vocal training, choir and vocal ensembles, we can gift learners with skills for life. In this way, when deliberately directing our consciousness towards our breathing, SingEd is well suited to playing a meaningful and valuable role within the Life Skills curriculum of South African schools. In the singing classroom, the teacher can equip learners with the necessary breathwork tools to gain and maintain well-being. Rechtschaffen and Rechtschaffen (2015:60) write:

“Any educator can use fun and accessible practices to foster a school environment where students’ well-being is a top priority. Instead of always telling students to pay attention, we can guide them to ‘play attention’ or teach them breathing techniques that help them manage their emotions when flooded with intense feelings.”

In the Life Skills CAPS, there is an unopened or little-explored well-being treasure chest. As an experienced music and singing teacher, I make the claim that a school without singing is deprived of happy children, deprived of individual and collective well-being.

CHAPTER 4:

RESEARCH METHODOLOGY AND DESIGN - *BREATHING OUT*

4.1 INTRODUCTION

The Russian Systema Method Seven Principles of Breathing (RSMSPB) theoretical framework, supported by relevant transdisciplinary breathwork literature and breathwork literature within singing education (SingEd), was elucidated in Chapter 2. Chapter 3 explored the role of breathwork for well-being in the domains of physiology, psychology and spirituality. In Chapter 4, I am ***breathing out*** the research process employed during this study is documented and supported with relevant literature. The chapter clarifies the research questions, qualitative research design, research methods, data analysis and interpretation used during this investigation. Reflections on trustworthiness, ethics and research assumptions conclude this chapter. The research questions determined the research process and methods and are revisited.

4.2 RESEARCH QUESTIONS

- What are the breathwork paradigms of South African Singing Education Lecturers (SASingEdL)?
- Why should breathwork concepts be included in a singing education breathwork teaching and learning (SingEdBWTL) framework?
- How is breathwork of significance to well-being?

4.3 QUALITATIVE RESEARCH DESIGN

The research design is defined by Yin (2016:83) as a “logical blueprint” that maps out the research process. This map lays out the route, i.e., research procedures and route markers (evidence generated), which enabled the researcher to arrive at the destination (appropriate answers to the research questions) (Bryman 2016; Maree & Van der Westhuizen 2012). Also, a research design ensures that “rigour, fitness for

purpose and high quality” are addressed (Cohen *et al.* 2011:142). The research questions (see 4.2) lend themselves to a qualitative research design, following an interpretive approach while embarking on a multiple case study journey.

4.3.1 Interpretivism

An interpretative approach, aimed at meaningfully analysing and interpreting data meaningfully, underpins qualitative scientific inquiry (Nieuwenhuis 2012c). Interpretivism has its origins in hermeneutics and can be described as the theoretical and applied study of interpretation (Nieuwenhuis 2012a). In this regard, Heidegger (1962) refers to a ‘hermeneutic circle’ where interpretation is dependent on understanding the symbiotic relationship between the whole and its parts. Within a qualitative research context, interpretivism is the way of looking at and the meaning-making of data as juxtaposed to a positivist approach within quantitative research (Bryman 2016; Maree & Van der Westhuizen 2012). Opponents of positivism rejected the idea that human behaviour can be governed by “general, universal laws and characterised by underlying regularities” (Cohen *et al.* 2011:15). Therefore, the study of the social world requires “a different logic” when studying humans as opposed to studying the natural world by means of a quantitative research process (Bryman 2016:24).

Instead of explaining human behaviour (positivist approach), trying to understand human behaviour (interpretive approach) is a key aspect of a qualitative research design (Bryman 2016). The quest to understand human behaviour is therefore driven by ‘why’ and ‘how’ questions (Nieuwenhuis 2012a). Therefore, in this breathwork research endeavour, why and how questions were instrumental in constructing the interview schedule (see Addendum A). Besides essential biographical information which, when compared among research participants, could yield positivist statistical data and analysis, my investigation, on the whole, was interpretative; therefore, qualitative. The meaning-making of research participants was explored through the research methods of semi-structured interviews and document collection (see 4.4).

Cohen *et al.* (2011) allude to criticisms against an interpretative approach that mainly evolve around the trustworthiness of the researcher and participants and data authenticity. Here are my responses to these criticisms:

Interpretivism criticism	How is this applicable to my study?
“The qualitative researcher can easily fuse various participants’ subjective voices. However, a reflective and critical stance towards interpreting the data is still needed.” (Cohen <i>et al.</i> 2011:20-21)	Although I had an in-depth look at the breathwork paradigms of SASingEdL, analysing the data was only one critical step of the research process. In order to formulate or create the desired SingEdBWTL framework, the findings were reflected upon critically by situating them within the extensive literature study and theoretical framework. Also, the transdisciplinary research approach rendered research results that are plausible scientifically.
“Incorrect or weak questioning in interviews could easily yield incorrect, misleading and weak data and study findings.” (Cohen <i>et al.</i> 2011:20-21)	I have completed a comprehensive literature review, which yielded a sensible and comprehensive pre-existing theoretical framework (see 1.7.1) that guided the process of questioning. Also, only highly educated experts were approached to act as research participants (see 4.4.3). My personal comprehensive experience and expertise in the study topic (see 1.3) also contributed to suitable follow-up questioning.
“Working with a limited number of participants within a particular research field does not necessarily make for	While it is true that I worked with a limited number of only nine research participants, the fact that I focused on a particular phenomenon and tested it

findings or truths that can be generalised.” (Cohen <i>et al.</i> 2011:20-21)	against a pre-existing theoretical framework resulted, in my view, in findings that are relatively generalisable within the SingEd milieu. There is a high measure of transferability (see 4.6.4) and authenticity (see 4.6.5) of the research results.
“A study focusing on a participants’ actions and behaviours within an isolated and bounded context cannot determine all the external forces that influenced an individual’s decisions.” (Cohen <i>et al.</i> 2011:20-21)	The focus of my study was a specific phenomenon shaped by the experiences and external factors of research participants, although these factors were not the sole focus of this study. Brief biographical and institutional information that was gathered contributed towards a deeper appreciation of participants’ reality, albeit in a small way. In particular, research participant Yellow (see 5.2.6) offered unique cultural perspectives on the breathwork research phenomenon.

The interpretative research approach afforded me the opportunity to answer the research questions (see 4.2) in a meaningful way. Exploring the breathwork paradigms of research participants in this way assisted in the assembly of an emergent SingEdBWTL framework.

4.3.2 Multiple case study

Nieuwenhuis (2012a:60) writes:

“The ultimate aim of interpretive research is to offer a perspective of a situation and to analyse the situation under study to provide insight into the way which a particular group of people makes sense of their situation or the phenomenon they encounter”.

For this purpose, I opted for a multiple case study. Case study research design aims to study and to explain a particular phenomenon within context (Pickard 2013). It is therefore a bounded system in which the researcher undertakes a holistic, in-depth investigation of participants' perspectives, experience and practices regarding the studied phenomenon (Pickard 2013; Nieuwenhuis 2012b).

In this study, the purpose was to investigate the specific phenomenon of breathwork (see 1.4) and also to test the RSM theoretical framework (see 1.7) against the knowledge and experience of research participants. It could therefore be viewed as an “instrumental case study” (Pickard 2013:102). To this end, nine case studies were undertaken. The research sample (see 4.4.3) consisted of six SASingEdL, and three breathwork experts in the fields of Life Skills education, healthcare and martial arts.

Crystallisation is a key component of a multiple case study (Pickard 2013; Maree & Van der Westhuizen 2012). The aim is to collect data from more than one source, thus approaching the same phenomenon from different angles (Nieuwenhuis 2012b). Hence, Cohen *et al.* (2011:299) describe case studies as ‘eclectic’ owing to the various types of data that are used. Using multiple sources also ensures that the weakness of a particular data collection mode is compensated for by the strengths of a different collection strategy. Through the process of crystallisation, nine main themes emerged from the fieldwork research (see 5.7).

Pickard (2013) expands on three phases of case study research. An expounding of these phases demonstrates my case study research process.

Phase	Case study considerations (Pickard 2013:103-109)	Application to my study
Orientation and overview	1. Who were the research focus?	1. Singing Education Lecturers at South African Higher Education Institutions, supplemented by orientational breathwork expert interviewees.

Phase	Case study considerations (Pickard 2013:103-109)	Application to my study
	2. Why were they involved?	2. To test an existing breathwork theoretical framework (see 1.7.1) against the knowledge, skills and experience of participants.
	3. How many were involved?	3. In this collective, multiple case study, six SASingEdL and three additional BWTL specialists, thus a total of nine research participants, were involved.
	4. Where did you find them?	4. The SASingEdLs were all highly qualified lecturers from five South African Higher Education Institutions across four South African provinces. The three experts were seated at three different focal points from where they practise their regular vocations.
	5. What was the unit of analysis?	5. Of the six participants, two were classical voice specialists, two were choral conductors, and two were music education specialists. Of the three experts, one is a Director of Education, one an International Representative of the Russian Systema Method and one is the founder of Breathwork Africa.
	6. Why did you focus on this sample?	6. Within music education, SingEd is a specialised subcomponent.

Phase	Case study considerations (Pickard 2013:103-109)	Application to my study
	7. How did you go about organising the case database? 8. How did you collect the data?	Furthermore, within SingEd, the phenomenon of breathwork is a subtopic. Purposive sampling was thus employed to focus on the specialised research phenomenon of breathwork. The experts were consulted to substantiate and verify the SASingEdL research results. 7. After nine research participants were identified, all were assigned pseudonyms. Interview transcripts and documents were diligently assigned to these pseudonyms to ensure case database integrity. In addition, nine entries were made in the electronic filing system to manage the data collected. 8. The COVID pandemic raised the ethical matter of 'no harm'. As a result, I opted for online, cyberspace qualitative, semi-structured interviews and document collection.
Focused exploration	9. How did you engage with your sample?	9. During the first semester of 2022, participants were contacted, permissions were obtained, an interview schedule was drawn up, online interviews were conducted and documents were collected.

Phase	Case study considerations (Pickard 2013:103-109)	Application to my study
	13. When was the cross-case analysis be conducted?	13. The process of cross-referencing could only take place after the interview transcript was verified and documents were collected. Themes that emerged during data analysis were corroborated and used to engage critically with the existing RSMSPB theoretical framework.
	14. How will you present the research findings?	14. Research findings are presented in Chapter 5, arriving finally at an emerging SingEdBWTL framework for use by educators and researchers in Chapter 6. In future, the findings will also be shared in academic journals and at national and international conferences.

In this research endeavour, the case study method of inquiry was deemed suitable for use and yielded meaningful results.

4.4 RESEARCH METHODS

Creswell (2007:40) argues: “We conduct qualitative research because we want to understand the contexts or settings in which participants in a study address a problem or issue”; therefore, we need appropriate methods that illuminate our research interests. The research methods utilised in this BWTL exploration are further illuminated in the following passages.

4.4.1 Role of the researcher

The qualitative researcher acts as the “research instrument” of the data collection process (Nieuwenhuis 2012b:79), observing and recording data as accurately as possible (Maree & Van der Westhuizen 2012). Hence, in qualitative studies, the researcher needs to be vigilant of personal bias that may deflect from the viewpoints of participants. After verbatim transcripts of nine interviews were completed, these were sent back to the research participants to read. I requested participants to sign an authentication letter indicating that the interview transcript is an authentic reflection of the discussion between them and the researcher (see Addendum C). Also, from these transcripts, direct citations were used in the reporting and analysis phase of the research. In this way, ‘accuracy’ and ‘bias’ were addressed.

To enable data collection, the researcher must establish and maintain collaborative partnerships with suitable participants (Yin 2016; Maree & Van der Westhuizen 2012). During this research process, I maintained a respectful relationship and communication with research participants that could ease collaborative efforts. In doing so, I have been invited since by two research participants, White and Blue (see 4.5.3), to present workshops.

The qualitative researcher can either be an insider or an outsider researcher. In my study, I assumed the role of an outsider researcher. As a self-employed music education specialist working in primary (ages 7 to 13) and secondary (ages 14 to 18) public schools in Johannesburg, South Africa, I am not a member of the Higher Education research participant population. However, it can be argued that I was also partly an insider researcher as far as my knowledge and experience of the research phenomenon of breathwork are concerned. I was an outsider to the field but an insider to the topic under investigation.

4.4.2 The research site

The research participants in this investigation are primarily six SingEd lecturers from five South African Higher Education Institutions, supplemented by two breathwork experts and one education specialist. Yin (2016:116) postulates that fieldwork “takes

place in real-world settings, with people in their real-life roles”. Also, Nieuwenhuis (2012a) adds that within qualitative research, people and systems are often studied interacting with and observing participants in their regular environment. However, the COVID pandemic necessitated an online data collection stratagem. Due to data collection taking place only online, the research site was cyberspace.

This cyberspace research site was highly convenient for the researcher and participants since, during the pandemic lockdown periods, interviews could be conducted online from any location. In this regard, the research site was “suitable and feasible” (Maree & Van der Westhuizen 2012:34). Owing to the ease of scheduling online interview times, I and the research participants mostly connected from our private homes. Thus, there were no restrictions in terms of pandemic travel restrictions or the prohibition to meet in public spaces. Also, no safety protocols, i.e., wearing masks, sanitising hands, social distancing, needed to be adhered to. Vaccination preferences also did not have to make any person uncomfortable. Focusing on a very specific phenomenon, i.e., breathwork, perhaps did not necessitate viewing research candidates in their ‘real world’. Questions in the interview schedule (see Addendum A) were expertly answered, despite not meeting in the working environment of participants. However, it is possible that observation as a data collection tool was compromised. The online screen view did not allow for surveying the participants’ environments. Thus, no other external data concerning BWTL, for example, posters, props etc., could be observed.

4.4.3 The research sample

Selection of the research sample, i.e., research participants, is an essential consideration of the qualitative research design (Maree & Van der Westhuizen 2012; Nieuwenhuis 2012b). There are several research sampling designs. The most common designs are purposeful sampling, chain referral or snowball sampling, random sampling, and criterion sampling (Bryman 2016; Nieuwenhuis 2012b; Yin 2016). I employed purposive sampling in this qualitative research design (Yin 2016). As the word implies, the sample has a purpose. Participants are selected explicitly since they are considered “the holders of the data” and an information-rich source (Nieuwenhuis 2012b:79; Yin 2016:93). Most noteworthy is that participants need to

have experience, knowledge and skills on the BWTL phenomenon. The research sample constituted six singing education, one martial arts, one healthcare and one Life Skills specialists.

Owing to the specific focus on the particular breathing phenomenon, only SingEd lecturers within the broader music education lecturer pool, who potentially engaged with BWTL were consulted. These included two specialists, each in the SingEd branches of classical voice training, choral conducting, and class music training. I used the umbrella term, South African Singing Education Lectures (SASingEdL), for these various lecturers. Specific SASingEdL, competent in the phenomenon under study and responsible for educating and training future teachers, were identified in the purposeful sampling process. Being competent refers to choosing responsible, mature individuals who will make good or correct decisions if given relevant information (Diener & Crandell 1978). All research participants in this study were reputable, experienced, academically well qualified, and therefore, highly competent to provide appropriate data.

In order to protect their identities, I chose to code these six research participants with colours for no logical reason. I thought about each research participant and assigned them the first colour that came to mind. These were Pink, Purple, Yellow, Green, White, and Gold.

Table 4.1 Singing education lecturer sample (Potgieter 2023).

Participant pseudonym	Race	Gender	Age	University	Highest qualification	SingEd status
Purple	Indian	Female	30–40	A	MMus	Voice lecturer
Pink	Mixed	Male	40–50	B	DMus	Voice lecturer
Yellow	Black	Male	30–40	C	MMus	Music education lecturer
Green	Black	Male	30–40	D	MMus	Music education lecturer
White	White	Female	40–50	E	MMus	Choral conducting Lecturer
Gold	White	Female	60–70	E	MMus	Choral conducting Lecturer

The SASingEdL research sample reflects a participant composition of four different races, two genders, five Higher Education Institutions and a diverse age range. On

the whole, participants were academically well qualified and in positions of influence to shape the future SingEd educator generations of South Africa. This diverse research sample contributed to a rich assemblage of BWTL knowledge, skills and applications within the SingEd context. I am not sharing the provinces/districts where the universities are situated within South Africa since some provinces/districts have only one university and that would make the research participant easily identifiable. This would be contrary to the commitment made to the research participants to protect their identities, i.e., it would be unethical. What I can share is that these five universities are situated within four of the nine provinces of South Africa. Yin (2016) argues that a sample must be equitable. Hence, no person is to be included or excluded unfairly. However, the relatively small population pool – for example, there is, for the most part, only one choral conductor at each university – did not make this concern applicable to my study.

Sourcing the nine research participants was not without challenges. The POPI Act of South Africa, which makes sharing of personal information without prior consent an offence, was an obstacle. Most, but not all Higher Education Institutions share the email addresses of staff on their websites but not their phone numbers. Also, even though multiple invitations to possible participants were sent to university email addresses, only two participants, Pink and White, responded. Pink immediately responded positively and, after his interview, referred me to Purple. If it were not for this referral and contact details, I would not have had six research participants. Yellow and Green came through the contacts of my research supervisor. One of these participants (I think) felt that he owed my supervisor a favour for past assistance and therefore participated. This fact in no way made the participant less enthusiastic; quite the contrary. White was the only other candidate other than Pink who reacted to my original emailed invitation. I was familiar with Gold, owing to my having attended a training course of hers many years ago. I retrieved her phone number and sent an invitation via WhatsApp. She had no hesitation in agreeing to participate. On the whole, I experienced the use of WhatsApp voice recording invitations more successful than the use of email in getting people to respond to the invitation to participate in the research.

Besides the six SASingEdL, in a transdisciplinary approach, I consulted a breathwork expert in martial arts, a breathwork expert in healthcare and a Life Skills education specialist. Two of these three participants gave permission for me to reveal their true identities.

Table 4.2 Orientational expert interviewee sample (Potgieter 2023).

Participant	Race	Gender	Age	Institution
Vadim Dobrin	White	Male	50	Russian Systema Method
Dr Ela Manga	Indian	Female	45	Breathwork Africa
Blue	White	Female	63	Gauteng Department of Education

Aside from diverse occupations, the orientational expert interviewee sample also reflects a diverse range of gender, race and age. However, these three research participants, like their SASingEdL counterparts, have in common that they all engage in the BWTL.

The bulk of the research participants were not English first language speakers. First languages other than English included Russian, Afrikaans, Sesotho and isiXhosa. However, the official teaching language at South African HEIs is English; therefore, most research participants were comfortable communicating in English. Only the interview with Participant Green from University D left me perplexed at times in trying to decipher the meaning of his English language usage.

4.4.4 Data collection plan

The qualitative research design typically accommodates multiple forms of data-gathering techniques (Schurink *et al.* 2014; Nieuwenhuis 2012b); therefore, the collection of rich descriptive data requires a data collection plan. Yin (2016) remarks that data collection methods need to align with the study topic. It is, therefore, necessary to be clear on the purpose of the data collection. Different data collection strategies were employed in this qualitative research study to capture the true essence of participants' perspectives and practices regarding the study phenomenon. In this investigation, relevant data were assembled primarily through interviewing and supplemented by collecting documents. The advantage of using multiple data

collection methods is that “the strengths of one procedure can compensate for the weaknesses of another approach” (Strydom & Delport 2014:377). Owing to the COVID pandemic, data collection was conducted online (see 4.4.2).

4.4.4.1 Interviews

With the emergence of an “individualising discourse comes the communicative event known as the interview” (Henning *et al.* 2004:51). An interview can be described as an enquiring conversation whereby the interviewer collects data and gain insight into the interviewee's knowledge, skills and behaviour (Bertram & Christiansen 2020; Nieuwenhuis 2017; Yin 2016; Nieuwenhuis 2012b; Cohen *et al.* 2011). Interviewing is the most widely used mode of qualitative inquiry (Bryman 2016; Yin 2016). According to Forsey (2012), interviews, as opposed to a pen-and-paper survey, offer an expedient method of gathering rich data. This data collection strategy allows for procuring data on how participants assign meaning to their world and how they explain or make sense thereof (McMillan & Schumacher 2014; Forsey 2012).

To understand how the phenomena of breathwork play out in social reality, I drew on the experience of research participants through focused discourse (Cohen *et al.* 2008; Mouly 1978). For this reason, a qualitative interview format was purposefully selected. The aim of the interviews was to investigate breathwork through the eyes of the participants (Nieuwenhuis 2017; Forsey 2012). Even though I relied on the recordings, I still opted to take notes as that allowed me to focus on the participants' answers and to clarify what I did not understand (Nieuwenhuis 2017). In this regard, Forsey (2012:372) advocates active listening, which entails internalising the words of the participants, attending to the ‘inner voice’ and accommodating processual aspects such as timekeeping, energy levels and non-verbal cues.

The nature and quality of breathwork in South African SingEd primary and secondary school programmes are influenced and shaped by the experience, skills and knowledge of South African singing education lecturers (SASingEdL). De Villiers (2017) agrees that South African school teachers are dependent on tertiary training programmes to prepare them for their vocation. Therefore, this study investigated breathwork paradigms of SASingEdL to contemplate an emergent SingEdBWTL

framework for use by Life Skills and SingEd teachers. SingEd programmes at South African Higher Education Institutions, which integrate breathwork practices, consist of three domains: specialised individual voice training, singing as an element of choral conducting training, and singing as a subcomponent of general music education training. Two practitioners of each of these three domains made up the complement of six SASingEdL participants who were interviewed.

Outside of the primary research sample of six SASingEdL, three orientational expert interviews were conducted (see 4.5.2). An interview with an RSM instructor was initiated to gain perspectives on the RSMSPB from an experienced practitioner. Also, to cognise the role and value of well-being, an semi-structured qualitative interview was conducted with an experienced healthcare breathwork specialist. It was also necessary to schedule an interview with a CAPS specialist curriculum developer to explore the BWTL requirement within the Life Skills school programme.

The purposive research sample of three experts and six SASingEdL were contacted and requested to participate in a qualitative semi-structured focused interview. All interviews lasted approximately one hour. These interviews all took place during the April and the early part of May 2022. In order to ask focused questions, qualitative face-to-face interviews were conducted with volunteering participants, executed in cyberspace (Jansen 2012; Leedy & Ormrod 2010; Cohen *et al.* 2008). The Zoom meeting platform was utilised for this purpose. Bryman (2016) postulates the advantages of online personal interviewing: flexibility, cost- and time saving, convenience, and minimal safety concerns. The matter of safety was a serious consideration owing to the COVID pandemic. In this regard, Creswell and Creswell (2018) see interviewing as a useful data collection strategy.

The Zoom platform allowed interviews to be audio- and video recorded. Audio recordings of these interviews were dragged and dropped into the Otter online transcription service. It took approximately 30 minutes to receive a notification from this online service that the transcription was completed. However, it still took five to seven hours at a time to listen to the recordings and to verify each individual transcription. Many mistakes had to be rectified. As an example, the term 'breathing' often became 'bleeding' or 'bleating' in the transcription. Unique accents tested the AI transcription abilities. In cases where the interviewees had a good command of

English and words were clearly enunciated, transcriptions took the least time to rectify. I sent the verbatim transcriptions to the research participants and asked them to verify the contents prior to writing a report on it (see Addendum C). All of the research participants were satisfied with the transcripts and clarified some words that neither I nor AI could identify from the recordings.

Qualitative structured interviews are characterised by an interview schedule approach that allows for topics to be selected in advance. However, this data collection method is characterised by open-ended questions (Creswell & Creswell 2018; Yin 2016; McMillan & Schumacher 2014; Forsey 2012; Cohen *et al.* 2011). My interview schedule (See Addendum A) was semi-structured around brief biographical and institutional information and BWTL methodology in the context of the RSMSPB theoretical framework. In this regard, Nieuwenhuis (2017:92) notes that qualitative semi-structured interviews are often utilised to “corroborate data emerging from other sources”. Although the interview questions sought answers to a priori topics, participants could elaborate on each topic in their own words. Forsey (2012) recommends opening an interview with biographical questions because it signals an interest in the participant and what they have to share; questions are simple and easy to answer; and they set the scene for the interviewing process.

Questions were also not necessarily asked in the strict order of the interview schedule. The conversation sometimes flowed spontaneously into a new concept, which was not necessarily next on the interview schedule (see Addendum A). I chose not to block the flow of the sharing, but rather to allow the interviewees to voice their perspectives without interruption. However, I endeavoured to have all interview questions addressed.

All six interviews were conducted via the Zoom online platform. Despite the South African power utility ESKOM's having extended load shedding schedules and therefore a continued power supply was not guaranteed, we could arrange suitable dates and times to conduct the interviews online. Only during the last interview, Yellow twice had to change the power supply to enable the connection. The video image and sound were unstable during those times. However, on the whole, we could communicate well and this small hiccup did not diminish the research effort. Although a weakness of semi-structured interviews is that “important and salient topics

may be inadvertently omitted” (Cohen *et al.* 2011:413), supplementing the interviews with document analysis assisted in bridging this divide. I also made the effort to ask participants, in concluding the interviews, whether they felt the need to add anything to the breathwork conversation. However, no supplementary comments were offered by any of the nine research participants.

4.4.4.2 Collecting documents

In qualitative research, documents can be collected as entities of data (Strydom & Delport 2014; Henning *et al.* 2004), and these are useful in rendering more visible the phenomena under study (McCulloch 2011; Creswell 2009). In this regard, Nieuwenhuis (2017:89) remarks that documents should be “contextualised within the circumstances of their construction”. Therefore, documents can assist in validating the data obtained from other qualitative collection sources (McMillan & Schumacher, 2014:388).

Unlike interviewing and participant observation, document collection is a “noninteractive strategy” (McMillan & Schumacher 2014:386). According to Creswell and Creswell (2018), the benefits of qualitative documents include: accessing the participants’ personal semantics, acquiring data from a source previously attended to by a participant, granting easy access to data and, unlike interviewing and observations, they do not require transcribing. Acquiring documents for research purposes may include all types of written communications – primary or secondary, published or unpublished, public or private, printed or handwritten, official or unofficial, textual or visual – that assist in illuminating the phenomenon being studied (Nieuwenhuis 2017; Strydom & Delport 2014; Middleton 2012; McCulloch 2011). These documents allow for an “internal perspective” on how participants engage in the study phenomenon (McMillan & Schumacher 2014:387).

Prior to and during the orientational- and semi-structured interviews, research participants were requested (McMillan & Schumacher 2014) to share applicable documents to substantiate the primary data collected through interviews. This request for the secondary data yielded a minimum outcome. Three of the nine interviewees sent me documents of varying nature. Green sent me a document reflecting the music

education syllabus of University D. Manga shared her keynote document highlighting crucial breathwork for healthcare considerations. Dobrin shared a typed-up list of 25 reasons why nasal breathing is paramount in the domain of martial arts. The other candidates merely referred to textbooks that they often use, even offering me a list of their bibliographies. However, the fieldwork exploration was about probing the personal breathwork paradigms of research participants (see 4.2) and not of authors outside of the research population. The latter have been dealt with in the literature reviews in Chapter 2 and Chapter 3.

The critical examination and analysis of the various documents afforded me the opportunity to ascertain which breathwork principles found their way into lived-world practices. Through a process of meticulous reading and re-reading, breathwork data were identified and disassembled in alignment with a priori codes. The documents were thus not read in their entirety but 'selectively mined' to trace specific themes (Middleton 2012:302). These documents were analysed with the purpose of the study project in mind: to solidify my understanding of key breathwork principles. I found that the codes that emerged were highly consistent with those which emerged from the interviews and literature review.

4.5 DATA ANALYSIS AND INTERPRETATION

Data analysis is a frequentative process preceded by data gathering, processing and reporting (Cohen *et al.* 2011; Nieuwenhuis 2012). A methodical data analysis process must be intact for re-visiting data easily, making a thorough and complete analysis, and addressing researcher bias (Yin 2016). Schurink *et al.* (2014:398-399) write that, although qualitative data analysis is "messy, ambiguous and time-consuming", it is also creative and captivating and therefore can be viewed both "as science and as art". Cohen *et al.* (2011:537) reiterate that, although a single correct qualitative data analysis method is non-existent, the chosen approach should still be "fitness for purpose".

Within the realm of scientific inquiry, contrasting data analysis approaches are prevalent reflecting "different ways of shifting between data and concepts" (Yin 2016:100). These methods include deductive reasoning, inductive reasoning, or a

combined inductive–deductive approach (Cohen *et al.* 2008). Deductive data analysis is often associated with a positivist approach, whereas inductive data analysis is often employed in an interpretative approach (Maree & Van der Westhuizen 2012). In inductive analysis research findings crystallise from repetitive noteworthy concepts (Yin 2016; Nieuwenhuis 2012). Deductive analysis “tend[s] to let the concepts ... lead to the definition of the relevant data” (Yin 2016:100). According to Schurink *et al.* (2014), most qualitative researchers use an inductive approach. However, according to Yin (2016:100), “nothing is wrong with taking a deductive approach”.

From the RSMSPB theoretical framework and supporting literary review, I gained a priori codes that guided the data collection process. Instead of an inductive approach, these predetermined codes dictated a deductive analytical approach. Hence, the advantage was that I did not have to wait for relevant concepts to emerge (Yin 2016). On the other hand, Yin (2016:101) argues the disadvantage of a deductive approach possibly to be “premature loss of any fresh insights”. Therefore, I had to remain vigilant regarding preconceived expectations and to approach the analysis with an open and reflective mind. In this research investigation, I tried to validate the RSMSPB theoretical framework through a deductive approach, working from specific units of meaning towards substantiated generalisations.

Yin (2016) discusses five recursive and iterative analytical phases of qualitative data, a convenient framework for discussing my data analysis process. These five phases are: compiling, disassembling, reassembling, interpreting and concluding.

4.5.1 Compiling

The compiling phase requires systematically organising all data amassed from data collection in a consistent order to prepare a useful data archive for optimum disassembling, reassembling, interpreting and concluding (Yin 2016; Schurink *et al.* 2014).

The first step after interviewing research participants was to transcribe the data. Thereafter, I opted to write a report on each transcription, highlighting the essence of the interview (See Addendum D1-D9). In general, the 15-to-20-page interview transcriptions have been reduced to approximately three to eight pages in the data

report, capturing the essence and emitting unnecessary repetition of the data. To stay true to the essence of the interviewees' contributions, extensive quotations were provided to reflect the unique and diverse language use and choices of participants. I believe, in this way, the data reports are an authentic representation of the interviews that were conducted. In these reports, I chose not each time to type up the specific research question. Rather, I wove the questions into the dialogue, and the reader will see the main a priori codes highlighted.

In this study, the verified transcribed interviews (see Addendum C) and the collected documents were organised into Microsoft Word electronic files. In order not to lead to confusion, separate subfiles were created, and they carried the pseudonym labels (see 4.4.3) of participants used in the research study.

4.5.2 Disassembling

A central feature of qualitative data analysis, coding, enables a researcher to “search and retrieve” data that bears similarities (Cohen *et al.* 2011:53). Hence, the disassembling phase requires the compiled data to be broken down into meaningful smaller pieces and fragments (Yin 2016; Schurink *et al.* 2014). The meaning assigned to these data fragments accords with the research questions (see 4.2) and purpose (see 1.4) of this thesis. In order to ensure accuracy, it is worthwhile to repeat the process (Yin 2016; Cohen *et al.* 2011).

My initial enthusiasm for using online data analysis software to disassemble data, was dampened by the disappointment I experienced in using a recommended data-collection software programme, as well as by the extensive electricity load shedding South Africa is experiencing. Times when electricity was available, did not necessarily correlate with the hours I had available to attempt this research obligation.

I resorted to placing A1-sized posters on my dining room wall. Each placard was assigned to one of the a priori codes. In a deductive analytic approach, initial coding was re-evaluated to group codes in line with a priori codes. These codes were derived from the RSMSPB theoretical framework and are, amongst others, inhalation preferences, posture and relaxation, breath continuity, and breath awareness. I also had one blank poster for possible non-matching concepts. For each research

participant, using a pseudonym, I used a different colour highlighter to distinguish the data from the others. On each poster I wrote the three questions: what, why and how? I focused on one RSM principle at a time, diligently reading through the interview transcripts, ensuring that I captured the essence and did not 'drop' valuable information. Thus, I read through the transcripts repeatedly to identify significant codes. A line-by-line coding strategy was followed. After writing up the critical data on the placard, I read and reflected on them cautiously, looking for commonalities and differences. Subsequently, I typed the analysis script (see 5.4). Similarly, the three documents collected were disassembled in alignment with the RSMSPB theoretical framework.

4.5.3 Reassembling

The reassembling phase requires that the researcher reorganise the codes that emerged from the disassembling phase in a meaningful and insightful way (Yin 2016; Schurink *et al.* 2014). Research strategies like constant comparison, negative instances, and rival thinking can be employed to manage the reassembling process. Codes can be organised and depicted in various ways. Data representations and displays can include visual aids like graphics, lists or tables (Yin 2016; Schurink *et al.* 2014; Cohen *et al.* 2011).

In a deductive analytic approach, the data was reassembled in line with ten a priori codes. The ten codes consisted of the seven principles embedded within the RSM theoretical model as well as three well-being codes. In this study, my goal was to contemplate, refine and transform these ten a priori codes to suit the needs of an emergent SingEdBWTL. In the process, I looked for data that either confirmed or were in conflict with these a priori codes. I was also alert to codes not included in these ten a priori codes. The fieldwork did not yield significant data regarding the three well-being codes so I decided to merge the three well-being codes into only one well-being code. This one well-being code plus the seven RSM codes equal eight codes. A ninth code emerged from the disassembling of the data. I labelled this code breath awareness. Thus, the initial ten a priori codes became nine codes in the final analysis. These codes are intake sufficiency, breath leading, non-tension, well-being, inhalation

preferences, breath continuity, awareness, pendulum, and independence. The codes are all included in the data presentation (see 5.7).

4.5.4 Interpreting

The interpreting phase requires the researcher to utilise the reassembled material to create a new narrative (Yin 2016; Schurink *et al.* 2014). The reader of the study needs to understand what these findings mean. Also, these findings need to be complete, fair, empirically accurate, credible, and must add value to the research topic (Yin 2016).

With the research purpose and research question in mind, the nine codes were evaluated that emerged from the analysis process breathwork codes. My interpretation of these codes was informed by the literature reviewed, the voices of research participants, and personal experience. In my estimation, two of the seven RSM principles (pendulum and independence) were not useful for Sed, and one of the seven RSM principles (intake sufficiency) can become two principles (intake sufficiency and breath resistance). Thus, six codes transposed from the RSM theoretical framework to an emergent SingEdBWTL framework. These are the principles of nose inhalation and mouth exhalation, breath leading, intake sufficiency, breath continuity, non-tension and breath resistance. Together with well-being and awareness, eight codes were ultimately fused into a new framework for use by Life Skill teachers. (see 6.4).

4.5.5 Concluding

In the last phase, the researcher draws conclusions from the entire study, integrating all the insight gained from the compiling, disassembling, reassembling and interpreting phases. Therefore, the value of the entire study is underscored (Yin 2016). The researcher thus communicates the essence of what the data revealed (Schurink *et al.* 2014).

In Chapter 6, I reflect on the consciousness gained through every process of the research project. I conclude that, of the eight BWTL codes deemed worthy of

consideration, the Life Skills CAPS (see 2.2) and resultant learning textbooks, only address two (awareness and resistance) of these eight themes. The Life Skills programme is found to be lacking in BWTL consciousness. The pinnacle of the research conclusion is a recommended emergent SingEdBWTL framework.

4.6 TRUSTWORTHINESS

The Paperback Oxford English Dictionary equates trustworthiness with honesty, truthfulness and reliability (Soanes *et al* 2006), all instrumental qualities of research integrity (Yin 2016). Bryman (2016:551) defines ‘trustworthiness’ as “A set of criteria ... for assessing the quality of qualitative research”. Bryman (2016), Pickard (2013), and Cohen *et al.* (2011), reference five distinct components – credibility, dependability, confirmability, transferability, and authenticity – concerning trustworthiness in qualitative research. These concepts and how they apply to this study project are discussed next.

4.6.1 Credibility

According to Schurink *et al.* (2014:419), and Bryman (2016:302), credibility in qualitative research is the counterpart of “internal validity” in quantitative research. Within this context, Mayan (2001) describes credibility as an authentic mirror of a unique context or event. According to Cohen *et al.* (2008), the mirror reflects authenticity and credibility when the researcher’s elucidation of a particular event, issue or set of data can indeed be sustained by relevant data. Also, Yin (2016:85) remarks that a credible study provides assurance that data was collected and interpreted adequately “so that the findings and conclusions accurately reflect and represent the world that was studied”. To this, Leedy and Ormrod (2010:197) add that credibility is the degree to which the research design and the data allow the researcher “to draw accurate conclusions about cause-and-effect and other relationships within the data”.

I endeavoured to mirror an authentic, honest and balanced reflection of the investigated phenomenon and its context and to reconstruct it in a way that reflects the reality of the participants and contextual reality (Schurink *et al.* 2014). It was

indeed my task to “develop congruence between concepts and observations” (Bryman 2016:302). To achieve this, research participants had the opportunity to review and validate the authenticity of the transcripts (see Addendum C). I received a 100% return on the authentication requests with one participant offering clarification of some unclear explications. Thus, an effort was made at “seeing and reporting the situation through the eyes of the participants” (Cohen *et al.* 2011:180). In this regard, Bryman (2016:303) states that “respondent validation” or “member checking” establishes congruency between the researcher’s impressions and the participants’ views. Therefore, respondent validation is essential (Schurink *et al.* 2014; Cohen *et al.* 2011). Furthermore, the process of cross-referencing interviews and document analysis strengthened credibility. Utilising multiple sources was a means of validating research findings internally since the different sources could verify each other. The professional mirroring by my supervisor also assisted in the attempt to give credibility to this study.

4.6.2 Dependability

Bryman (2016), Schurink *et al.* (2014), and Pickard (2013) accentuate a suitable, well-documented and auditable research process. Durrheim and Van der Riet (2012:90) reiterate that dependability relies on leaving the reader with no doubt that the findings are a true reflection of the research endeavour. Hence, the research community should be able to rely on the findings. To assist this process, it is advisable to keep an audit trail to demonstrate stability and consistency (Bryman 2016; Cohen *et al.* 2011). Transparency of research procedures is essential “so that other people can review and understand them” (Yin 2016:13).

Complete records must be preserved of all phases of the research process (Bryman 2016). As per the policy of the Faculty of Education, University of Pretoria (University of Pretoria 2023:3), all the interview recordings, transcripts thereof and documents analysed during the research process will be stored for ten years until 1 April 2033. The incognito research data remain the intellectual property of the University of Pretoria.

4.6.3 Confirmability

The aim of confirmability within qualitative research is “to ensure that the results, accepted as the subjective knowledge of the researcher, can be traced back to the raw data of the research” (Pickard 2013:22). Therefore, the research findings must reflect the collected data accurately. Furthermore, investigator bias should be limited (Pickard 2013; Cohen *et al.* 2011). Finally, according to Bryman (2016:303), confirmability ensures that the researcher has “acted in good faith”.

In an iterative process, maximum effort was made to double-check transcripts of interviews with participants. This process verified correctness, ensuring a true reflection of participants’ voices, and guaranteed that researcher bias did not cloud the data (see Addendum C). Absolute objectivity is not attainable within a qualitative investigation (Denzin & Lincoln 2018; Schurink *et al.* 2014; Cohen *et al.* 2011). Therefore, I endeavoured to give a true reflection of the participants’ perspectives and experiences that transpired from the collected data. To this end, rich and thick data descriptions were undertaken reflecting the true resonance of the participants’ ontology, knowledge, skills, and experience, and reflected in the research document (Bertram & Christiansen 2020; Bryman 2016; Yin 2016; Cohen *et al.* 2011; Creswell 2007).

4.6.4 Transferability

Transferability, also referred to as “applicability” by Nieuwenhuis (2012:80) and “external validity” by Bryman (2016:302), is viewed as the reader’s ability to use the research findings in parallel contexts (Bertram & Christiansen 2020; Yin 2016; Schurink *et al.* 2014; Durrheim & Van der Riet 2012; Cohen *et al.* 2011; Leedy & Ormrod 2010; Cohen *et al.* 2008).

Owing to a high congruency between the RSMSPB theoretical framework, the non-SingEd and SingEd literary explorations and empirical findings of the codes that emerged can be further explored in dissimilar research populations and research sites. For example, whereas I focused on the voices of SASingEdL in South African Higher Education Institutions, it is possible to replicate the study in all the different

phases of primary and secondary schools, and in private studios. Owing to the transparency of my research process (Cohen *et al.* 2011), it should be possible to replicate it in other parts of the world: I believe the themes are transferable between nationalities – we all breathe in and out – although the application thereof could yield context- and modality-specific results. Therefore, the emergent SingEdBWL framework can be meaningful to what Jansen (2012) refers to as a global audience.

4.6.5 Authenticity

Bryman (2016), drawing heavily on the material of Lincoln and Guba (1985) (as do most research methodology books explicating qualitative research) in his exposition of trustworthiness, lists five criteria for authenticity, which I find applicable to this investigation.

Authenticity criteria (Bryman 2016:303)	How is this applicable to my study?
“ <i>Fairness</i> . The research reflects a fair representation of the different viewpoints among members within a social setting.”	The particular study phenomenon was viewed through the eyes of a varied non-SingEd and SingEd population sample. Not only were participants all highly experienced and qualified but the research populations also encompassed different ages, genders, races and settings. All of these participants had the same amount of time to reflect on the same interview questions. I believe a fair comparison and representation resulted of the different perspectives.
“ <i>Ontological authenticity</i> . The research aids members to arrive at an expanded awareness of their particular social milieu.”	SASingEdL had the opportunity to reflect on a highly valuable yet neglected aspect of SingEd. The transdisciplinary research results can aid participants to

Authenticity criteria (Bryman 2016:303)	How is this applicable to my study?
	view the BWTL research phenomenon with new insight and ideas.
“<i>Educative authenticity</i>. The research aids members to comprehend the views of other members within their social setting.”	The RSMSPB framework held up a valuable mirror for breathwork in SingEd. The suggested SingEd version of this framework can aid in easing communication regarding the subject within the social setting which, in turn, will aid co-learning. It will be indispensable to communicate research findings to participants and the scientific community at large by contributing to scholarly journals and conferences.
“<i>Catalytic authenticity</i>. The research acts as a motivation to members to activate change within their social setting.”	The research highlights the value of BWTL at a time when well-being is at the forefront of many scientific explorations. It cannot be guaranteed that research participants will make use of this new emergent framework; however, their students can benefit from the inclusion of well-being as an outcome of traditional SingEd breathwork mechanistic considerations.
“<i>Tactical authenticity</i>. The research empowers members to take steps to activate change within their social setting.”	The emerging SingEdBWTL framework can be used as guidance for SASingEdL to empower themselves and their students on the topic of breathwork. Either the entire framework or parts of this framework can be utilised in BWTL experiences as well as to further scientific exploration.

Meditating upon these five criteria of fairness, ontological authenticity, educative authenticity, catalytic authenticity, and tactical authenticity raises the question of research value. For me, the research was not merely a self-serving intellectual pursuit but a quest to make an impact on my profession (see 1.3).

4.7 ETHICAL CONSIDERATIONS

Cohen *et al.* (2008) state that the research community and those who might apply findings have every right to expect ethically conducted research. In order to achieve this goal, the researcher has to adhere to a code of ethical principles and should therefore be mindful of ethical research prerequisites (Yin 2016; Strydom 2014; Henning 2004). For Bryman (2016), and Yin (2016), ethics in scientific research is a matter of integrity. To avoid unethical occurrences, constant participation “from conscience, from stakeholders and from the research community” is required (Stake 2000:372). After a thorough examination, the University of Pretoria Ethics Committee approved my BWTL exploration proposal. In the following script, ethical concerns related to this study are pondered.

4.7.1 Informed consent

Before investigative fieldwork can commence, participants need to give their informed consent to participate (Yin 2016; Henning 2004). Informed consent is an outcome of a human’s right to liberty and self-determination (Strydom 2014; Cohen *et al.* 2011; Cohen *et al.* 2008). For the research participant to make a free-will choice to participate or not participate, the researcher is obliged to present accurate and adequate information (Strydom 2014; Diener & Crandell 1978). Information provided should therefore encompass the research purpose, the nature of the research participants’ involvement, foreseeable risks, benefits that might arise from the research, and participants’ rights (Bryman 2016; Yin 2016; Strydom 2014; Creswell 2009; Cohen *et al.* 2008; Creswell 2007; Leedy & Ormrod 2001). Also, a signed written agreement is required to participate (Bryman 2016; Yin 2016; Leedy & Ormrod 2001).

After obtaining the ethical clearance certificate, potential research participants were contacted via email to ascertain their participation willingness. Participants were introduced to the title and purpose of my study, their expected role in the research, the ethical principles of the research and possible benefits to themselves. I offered no incentives or rewards for their participation. Contact details were provided should they have any questions regarding the research. A signed consent document (see Addendum B) was required before the actual fieldwork could be initiated. Nine invitees responded positively to my invitation (see 4.4.3).

4.7.2 Voluntary participation

The researcher has to practice discretion in acquiring research participants. Nobody should be coerced into participating, i.e., participation ought to be voluntary (Yin 2016; Strydom 2014; Leedy & Ormrod 2010). Voluntarism can be viewed as an active principle of informed consent and implies that participants consciously and willingly consent to participate in the research being mindful of all possible positive or negative anticipations (Cohen *et al.* 2011). However, research participants may withdraw their consent or to discontinue participation at any given time (Forsey 2012; Cohen *et al.* 2011). During my investigation, all research participants were aware that they were participating voluntarily. They also knew of their right to withdraw their participation or contributed information at any time.

4.7.3 Protection from harm

Scientific research must be conducted in a way that ensures that participants are not endangered physically, psychologically, socially, economically or legally (Bryman 2016; Yin 2016; Leedy & Ormrod 2010; Braud & Anderson 1998). The principle of 'do no harm' is embedded in the Hippocratic oath (Bertram & Christiansen 2020; Cohen *et al.* 2011; Cohen *et al.* 2008). Hence, data should not be collected "at the expense of human beings" (Strydom 2014:113). It was therefore imperative for the researcher to be conscious of the safety, dignity and reputation of research participants (Forsey 2012). In this regard, Bryman (2016) advocates that the identities and records of individuals should be kept confidential. All data gained from participants were labelled according to their pseudonyms from the start and will also

be stored by this means at the University of Pretoria (see 4.6.2).

The essence of this anonymity is the protection of identities (Maree & Van der Westhuizen 2012; Cohen *et al.* 2008). Pseudonyms were used for both the research participants and also the university with which they were affiliated, owing to the small corps of SASingEdL at each university and the possibility that they could be recognised easily if universities were named explicitly (see 4.4.4).

Although every effort was made to ensure anonymity, the particular phenomenal focus of this study was breathwork, a technical matter, and therefore participants had no social contract to divulge sensitive personal information. I endeavoured to be truthful, respectful, and sympathetic towards participants during the entire research process. No risk, harm or deception was intended. Owing to the COVID pandemic situation at the time, I opted purposefully to conduct online interviews and to document collection to avoid undue issues regarding possible contamination.

4.7.4 Privacy and confidentiality

Strydom (2014:119) explains privacy as keeping “to oneself that which is normally not intended for others to observe or analyse”. Cohen *et al.* (2011:90) raise the matter of an individual’s “right to privacy” in contrast to the public’s “right to know”. The latter right positions a participant in a vulnerable position. Therefore, the researcher must employ strategies to ensure the privacy and confidentiality of participants’ identities, research responses, and possible personal sensitive information that might emerge during the collection of data. Leedy and Ormrod (2010) accentuate the researcher’s obligation to inform participants of their right to confidentiality. All participant information and responses shared during the research process should be private (Leedy & Ormrod 2010). Yin (2016) insists that the names of organisations and places also be hidden.

I believe that my online data-gathering strategy contributed to privacy and confidentiality because no third party could observe that I paid a visit to research participants. Also, nobody was present in my study where I conducted and recorded the online Zoom sessions. Moreover, documents were saved in a secure file soon

after recording, under alternative names. Therefore, written data and all computer, audio or video records were kept confidential (Yin 2016).

I conclude the section on ethical considerations with the words of Cohen *et al.* (2011:92): “The essence of the matter is the extent to which investigators keep faith with those who have helped them.”

4.8 RESEARCH ASSUMPTIONS

For Leedy and Ormrod (2010:2), research is a way to “increase our understanding of a phenomenon about which we are interested or concerned”. Cohen *et al.* (2008) describe research as a combination of experience and reasoning with the following three characteristics: it is systematic and controlled, empirical, and self-correcting. Burrell and Morgan (1979) distinguish four assumptions that drive scientific research: ontological, epistemological, human nature, and methodological. This four-fold path is further explicated in the following discussion.

4.8.1 Ontological assumption

Ontology relates to what can be known about the nature of being or reality (Bryman 2016; Yin 2016; Nieuwenhuis 2012a; Creswell 2007; Soanes *et al.* 2006). Giddens (1976) postulates that social science has a subject–subject relationship with its field of study and works in a pre-interpreted world where the meaning-making of subjects depends on their construction of the world. Thus, the reality is shaped by individual consciousness (Maree & Van der Westhuizen 2012; Cohen *et al.* 2008; Creswell 2007) and, therefore, words, names, concepts and labels are merely subjective socially and historically informed thought objects (Maree & Van der Westhuizen 2012; Cohen *et al.* 2008; Burrell & Morgan 1979). Consequently, the conscious or unconscious truth of research participants revealed through personal and multi-layered conversations, shapes the research data (Creswell 2007; Ehrmann 1999). A nominalist research assumption underscored this research endeavour. ‘Nominalism’ is derived from the Latin word ‘*nominalis*’ meaning “in name only” (Manser 1997:296) or “in name but not in reality” (Soanes *et al.* 2006:507).

The nominalist ontological assumption directly influenced the construction of research questions and methodology (Bryman 2016). How breathwork concepts manifested were explored within the social reality of three breathwork experts and six SASingEdL. The ontological assumption of this research was nominalist owing to the acceptance that the social reality of each research participant is shaped and driven by their pre-interpreted meaning-making of breathwork concepts. This pre-interpretation was shaped by differences in geographic location, gender, race, age, and power positions at Higher Education Institutions as well as in scholastic training and personal experience.

4.8.2 Epistemological assumption

Epistemology relates to how knowledge is understood, acquired and communicated (Nieuwenhuis 2012; Cohen *et al.* 2008; Soanes *et al.* 2006; Henning *et al.* 2004; Braud & Anderson 1998), and therefore also underpins the researcher's beliefs "regarding the nature of knowledge and how it is derived or created" (Yin 2016:335). In qualitative research, knowledge is viewed as personal, subjective and unique (Maree & Van der Westhuizen 2012; Cohen *et al.* 2008). Consequently, data or knowledge is gathered by exploring the individual consciousness of research participants apropos a specific research phenomenon (Nieuwenhuis 2012). Creswell (2007) suggests that research be conducted in the locality of their living and working environments to comprehend the context of the contribution of research participants towards the research conversation.

In this study, breathwork knowledge and skills were investigated primarily through face-to-face online interviews with research participants, relying on their unique experiences and background to illumine the research topic. In this context, Habermas (1972) believes knowledge serves different socially constructed interests. Creswell (2007) also argues that the researcher endeavours to lessen the distance between himself and that which is being researched. The epistemological assumption in this research was therefore interpretive in that the voices of SASingEdL were the vehicle through which the phenomenon of BWTL was explored. This interpretative assumption was particularly suited to gain insight into SASingEdL perspectives regarding BWTL.

concepts that could assist in constructing a SingEdBWTL framework for use by SingEd educators and researchers. In this regard, Hopf (2007:64) believes interpretive epistemology is concerned with “reconstructing the inter-subjective meaning of [a] structure for the subjects of interests”.

4.8.3 Human nature assumption

Burrell and Morgan (1979) use the terms ‘determinism’ and ‘voluntarism’ to distinguish between the positivist and interpretivist human nature assumptions. In contrast with a positivist determinist, mechanistic and reductionist view of reality, a voluntarist assumption reflects on the subjective human experience which includes notions of choice, sovereignty, purpose, personality and moral responsibility regarding the universe (Maree & Van der Westhuizen 2012; Cohen *et al.* 2008). The nominalist ontological and interpretative epistemological assumptions are therefore attentive to the preferential choices of research participants since the individual is viewed as autonomous (Cohen *et al.* 2011).

In this research, human beings were viewed as responding voluntaristically to their environment; hence, “initiators of their own actions with free will and creativity, producing their own environments” (Cohen *et al.* 2008:8). This research report (see Addendum D1 to D9) captures the voluntaristic choices of SASingEdL in applying their distinctive BWTL strategies. Although interview questions were structured (see Addendum A), interviewees were free to respond in any way they saw fit. Each participant, therefore, had a personal choice in terms of what they contributed or volunteered to the scientific exploration, true to their own nature and accumulative experience. The role of the researcher was to grasp the participants’ frame of reference, thus gaining momentary access to their subjective consciousness (Cohen *et al.* 2011).

4.8.4 Methodological assumption

Methodology refers to the way knowledge is acquired (Bertram & Christiansen 2020; Henning *et al.* 2004). The knowledge acquisition methods are underscored by the ontological, epistemological and human nature assumptions (Hesse-Biber & Levy

2010; Cohen *et al.* 2008). In this research, the nominalist ontology, interpretive epistemology and voluntarist human assumptions dictated an idiographic research approach (Maree & Van der Westhuizen 2012; Nieuwenhuis 2012; Cohen *et al.* 2008). The principal concern was not only to gain knowledge about the “unique features of the case” (Bryman 2016:56) but also to understand how the research participants shape their worlds in relation to BWTL (Bryman 2016; Cohen *et al.* 2008; Braud & Anderson 1998). Owing to an idiographic methodological assumption, data collection methods were used that accessed the rich and unique worlds of the research participants suitably.

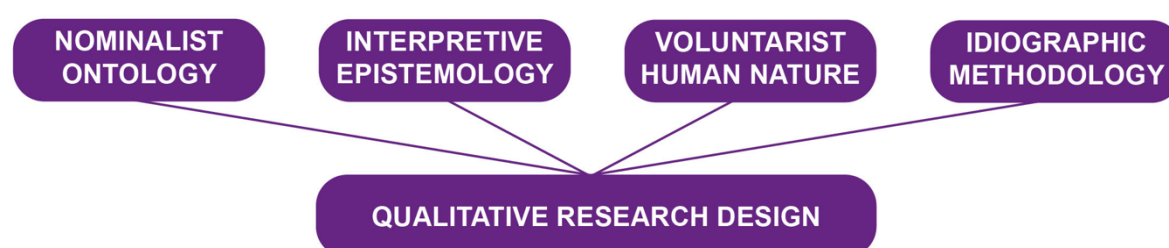


Figure 4.1: Research assumption (Potgieter 2023).

These assumptions – nominalist ontology, interpretivist epistemology, voluntarist human nature, and idiographic methodology – constitute the subconscious mind of qualitative research design. In the words of Bryman (2016:4), “The assumptions and views about how research should be conducted influence the research process.”

Data collection included interviews and document analysis (see 4.4.4). These collection strategies were the keys that unlocked the gate to the subjective meaning-making of the research participants of breathwork teaching and learning paradigms.

4.9 CONCLUSION

Chapter 4 elucidated specific research methodology descriptors. The research questions, design, methods, data analysis and interpretation procedures were stated. Thereafter trustworthiness, ethics and research assumptions were explained. In this qualitative study, an interpretative multiple case method was utilised to explore and interpret the breathwork paradigms of SASingEdL. Also, orientational expert interviews enriched and substantiated the data derived from the SASingEdL. The

varied research sample allowed for “multiple perspectives” (Pickard 2013:14). In this regard, the research process was an exercise in “understanding human behaviour” (Bryman 2016:25). I am convinced that my interpretative research methodology honoured “the complexity, interdependence and mutual causality” of the breathwork phenomenon and “the possibility of different interpretations and perspectives on reality” (Nieuwenhuis 2012:49).

CHAPTER 5:

DATA REPORT, ANALYSIS AND PRESENTATION – *BREATHING IN*

5.1 INTRODUCTION

Chapter 4 expounded on the research methodology and highlighted the research approach, research methods, trustworthiness, ethical considerations and research assumptions. Chapter 5 reflects an exposé of collected fieldwork data.

The chapter design settled organically into three metaphorical stages of flying (reporting on the data), driving (analysis of the data), and walking (presenting the data). With the first tour through the data, the individual and authentic voices of research participants are heard. Flying metaphorically over the data landscape, I gazed at the research data from a distance, becoming familiarised with the territory. In the second tour through the data, the individual voices enter into a dialogue on a priori codes. Still metaphorically, driving past the research landscape, the territory was viewed from a closer angle, allowing correspondences and discrepancies to be observed. During the third tour through the data, the nature and frequency of themes were identified. Yet again, metaphorically, walking the research landscape on foot, I calculated the landscape units. By no means it is implied that the data was only visited three times. On the contrary, each stage was recurrent. The metaphor seeks to demonstrate the process of getting closer and closer to the essence of the data.

Chapter 5, I am ***breathing in*** the data gained from nine semi-structured interviews (see 4.4.4.1) and three documents (see 4.4.4.2) that were collected. In the ensuing data analysis, the interview questions are stated explicitly and the voices of participants are fused in a dialogue on a priori codes. Finally, the frequency of themes and subthemes are specified and presented visually.

5.2 DATA REPORT: INTERVIEWS

The purpose of this study (see 1.4) was to construct an emergent singing education breathwork teaching and learning (SingEdBWTL) framework for use by generalist Life

Skills and specialised singing education (SingEd) educators. To reach this aim, nine semi-structured interviews were conducted to engage critically with the pre-existing Russian Systema Method seven principles of breathing (RSMSPB) in supporting and substantiating the quest to transform and morph the RSMSPB theoretical framework into a meaningful SingEdBWTl framework. I present here only the highlights of each separate interview. A thoroughly detailed report can be found in Addendum D1 to D9.

5.2.1 Vadim Dobrin from Russian Systema Method

I felt it imperative to have an expert interview with someone schooled in the RSMSPB theoretical framework that is at the heart of this breathwork research exploration. The native Russian instructor, Vadim Dobrin, agreed to share his understanding and views on the seven breathing principles with me. He has been the principal instructor of this South African Russian Systema Method Warrior School for approximately 25 years. Dobrin is not only the chief instructor of Systema South Africa but also the representative of Systema and the Association of Russian Native Combat Arts on the African Continent.

Dobrin explained that the seven breathing principles originated from fourth-century Roman-Byzantine Hesychasm. Hesychasm refers to a specific kind of monastic life in which practitioners seek Divine quietness (Greek *hēsychia*). According to Dobrin, the monks associated with the Greek Orthodox churches, during their long vows of silence while engrossed in physical labour and prayer, came to realise and contemplate the significance of breathing. The monks noticed a link between specific ways of breathing and their physical performance abilities. Dobrin stated that this information was mainly passed down by word of mouth, although some original documents may be found in Russian archives. The breathwork observations of the monks were adopted as one of the four main pillars of the Russian Systema Method (RSM). The four pillars of the RSM are breathing, relaxation, form, and mobility. This ancient Russian native martial art has only in recent years become more organised and branded 'Systema'. Dobrin indicated that the terminology 'Systema' refers to the integration of the four pillars that affects all systems of human bodily functions. He explained that, if one of these pillars is compromised, the other three pillars can act as support. For example, when breathing is impaired temporarily, like when one is submerged underwater or in a car

accident, the other three pillars *take over and by doing so they help one another*. The RSM is thus focused on endurance training, which can be applied not only in combat but also in day-to-day living. That being said, Dobrin emphasised that *everything that you learn in Systema it's based on breathing* (see Addendum D1 for a detailed report).

5.2.2 Ela Manga from Breathwork Africa

Owing to the exploration of breathwork not only from a mechanistic point of view of breathing but also focusing on the well-being aspect thereof, I considered having an expert interview with a breathwork and well-being specialist. Ela Manga graduated as a medical doctor from the University of the Witwatersrand, Johannesburg, South Africa in 1998. She also holds diplomas in Obstetrics and Child Health respectively from the College of Medicine of South Africa. She is particularly passionate about breathwork, which has played a significant role in refining her understanding of energy.

I asked, *Dr Manga, what is breathwork for you?* I prompted her for some kind of definition. She first explained that, historically, breathwork was synonymous with *conscious connected breathing, a very specific technique that has its roots in rebirthing*. However, this term is often also used as an umbrella term for the international breathwork community. She shared that subsequently, an Art of Breathwork Framework was developed. Manga continued:

but if you had to look at the definition of breathwork and what it is to me, it is the use of bringing conscious attention and intention to what is an unconscious function, making that conscious so that it can be applied intentionally for self-awareness, self-regulation, and transformation.

I prompted her about the mentioned Art of Breathwork Framework. According to her, this framework stands on three pillars, namely awareness, regulation and transformation. Manga reiterated that the purpose of awareness is to bring attention to an unconscious function. Manga explained in detail:

breathing is an autonomic nervous system function. It is always happening in the background, regulated by the respiratory centre in the brain. And our unconscious breathing pattern reflects our internal state, our emotions, our physical posture, and our tension patterns. Our breath is a language that reflects our physical and emotional

state. And a lot of that breathing pattern is dysfunctional, or is not supporting our optimum well-being. Because we get stuck into these patterns that then impact further our mood, and our emotional physical health. So, it doesn't fully support the nourishment of our physical body and our mental, emotional well-being. Breath awareness is bringing awareness to an unconscious function. And in doing so, bringing awareness to our thoughts, our physical body, our emotional life. Breath awareness is a tool for self-awareness. And it is an entry point into using specific breathing practices. It is the foundation of a mindfulness practice. And it is the foundation of any conscious breathing practice.

I prompted Manga further also to speak about regulation, the second pillar of the mentioned Art of Breathwork Framework. She said that when we *employ the breath more consciously, we can change the rate, the rhythm and depth of our breathing.* With specific breathing practices, changes can be manifested in the autonomic nervous system.

Thus, when we work with breath intentionally, it is an entry point to shifting the autonomic nervous system in either direction. Either in terms of sympathetic nervous system, parasympathetic nervous system or creating balance ... [T]his whole category of breath regulation works with all the available practices that are out there, and categorising it in terms of the impact that it has on our autonomic nervous system, so that we can use them with more skill and with specific intentions ... [T]here's a set of practices that we know when we do them, will take us more into that sympathetic state, certain practices that will drop us more into a parasympathetic state, and certain practices that will create balance.

Manga emphasised that, with intentional breath regulation techniques, we can regulate *our mental state, our emotional state and physical state.* She referred further to the simplicity and accessibility of breath self-regulation tools *that anybody can learn and practice.*

I also encouraged Manga to communicate her understanding of transformation, the third pillar of the mentioned Art of Breathwork Framework. She said that transformational breathing practices have the intention of changing one's state of consciousness. It enables access to cellular memory, to the subconscious mind and to places where the body often stores trauma. *Trauma could be patterns from our in-*

utero life to our birth experience to inherited trauma, collective trauma, so everything that the body holds. According to her, these transformational breathing practices create neurological changes and changes in brain activity to allow access to subconscious patterns (see Addendum D2 for a detailed report).

5.2.3 Blue from Gauteng Department of Education

This research, conducted through the lens of a Life Skills educator, explored ways to make manifest in the classroom the concepts of “breathing awareness”, “breathing exercises” and “breath control” as documented in the South African Life Skills CAPS (Department of Basic Education 2011b:12,34). Therefore, I felt it imperative to engage the Education Department to explore the nature and depth of breathwork training in South African Schools. After several searches, I was fortunate to find only one candidate who was willing to engage in an interview with me. She requested to remain anonymous, owing to work politics. I labelled her Blue, as she sang the blues’ regarding her perceived inadequate tableau of Life Skills education. Blue is a Deputy Chief Education Specialist in the Gauteng Department of Education (GDE) and holds an Honours Education Degree from the University of Johannesburg, South Africa.

I raised the matter of BWTL being part of the Life Skills CAPS requirements. Consequently, Blue, who needed no encouragement to talk, followed with a conversation touching on various aspects of her *constant fight for survival* regarding the Life Skills programme. Blue shared that the Creative Arts within the CAPS are allocated two hours of teaching time per week. Creative Arts is subdivided into performing arts (dance, drama, music) and visual arts, and each of these strands receives one hour of teaching time per week. Blue shared how, during the COVID pandemic, owing to reduced teaching time, a national directive demanded that Life Skills not be taught during 2020. The focus was on ensuring that key skills in *languages and mathematics as core subjects* are addressed sufficiently. Blue expressed her disagreement about what are considered to be core subjects and that what she terms *soft skills* are being neglected. She also expressed her dismay at Life Skills being *put on the backburner* and that nationally, developing the subject is a low priority. In her opinion, not all requirements in the Life Skills Foundation Phase CAPS are age appropriate or even designed by specialists in the various fields and that they

therefore beg attention. She said, *if they are writing things that are not really forming a golden thread in the development, and it's just a series of loose-standing incidents, the synapses cannot form in the brain to really be beneficial for the learner.*

Blue then touched on teacher training. In her view, owing to the emphasis on languages and mathematics, the *soft skills* are not well addressed during tertiary teacher training. Therefore, *the teachers are walking in and they like a blank canvas that we are working with.* To address this problem, *we will do some limited training.* I endeavoured to steer the conversation back in the direction of BWTL. I asked Blue whether, in her view and experience, the CAPS demands for BWTL are finding applications in Gauteng classrooms. She answered: *To a minimal extent, yes.* She reminded me of the many aspects and demands of the Life Skills programme and indicated that only a limited amount of time is allocated to each aspect (see Addendum D3 for a detailed report).

5.2.4 Participant Purple from University A

Purple currently lectures in Classical Voice at University A. Without my prompting, she dove into the topic of breathing within SingEd:

I find that really, if you're trying to grow your instrument naturally, you know, in terms of resonance, volume and support, breath plays a huge role in that. The other role breath plays is in terms of this kind of adrenaline rush that one receives. There are many terms for this. Stage fright, performance, anxiety, etc, etc, etc. Finding a grounded breath helps alleviate that. There's so much that breath allows us to do, with sport, with exercising, that's twofold you know: breathing improves the exercise and exercise improves the breathing.

Pertinent to this interview was Purple's transdisciplinary referral to other modalities to enrich her own understanding of breathwork. She divulged examples of yoga, Pilates and the Wim Hof methods of breathing to elaborate BWTL within SingEd. She also emphasised a *default, organic* way to approach BWTL. For example, she commented on breath continuity: *It's really what the breath wants to do. Even in speaking, it's continuous. There's just one small stream of air and whatever it is we say, we think, and it comes out of our mouths.* Hence, *it's actually organically what the body wants*

to do. It does not want things to be choppy [said latter sentence in a stuttering, choppy way]. It wants to be bind; it wants to be breathed. Therefore, she stated:

Your breath, it's such an organic thing, it is an independent thing ... if you are working your breath in the best possible way, in the way that in its optimum way, it is a default that in whatever situation you're in, and what you do, you would engage breath obviously, in its best way.

Participant Purple, more than any of the six SASingEdL participants, held significant views on breathwork and well-being. Purple felt strongly that good breathing habits cultivated in the singing studio can affect the physical health of students in a positive way.

*I feel modernisation has affected how we breathe so much. We don't have to walk; we don't have to play outside; we don't have to build; we don't have to carry bricks; we don't have to carry stones. We don't have to carry big containers of water. And then we would have, we'd be engaged with the big muscles in our body. And so, we breathe to those muscles and from those muscles. We don't climb trees any longer. Therefore, we're not using the muscles and then the breath; obviously, they work hand in hand. muscles support and breath, you know, work hand in hand. Hence, we now have this very shallow clavicular breathing, which is not able to sustain the body. So how can it sustain the mind? ... Our mind and body and breath are huge. Purple further commented on breathwork and spirituality, *I feel like if you are connected to the source, and there is no other way to be connected to, you know, the source of all things that this place of transcendency that is a deep, deep, relaxed place. And to make music from that place is just ... it feeds you; it feeds everyone else. But at the same time, it is not meant to be used to feed. It's not meant to give. It's just being connected to that, that the result is to give, is to serve. You're serving music* (see Addendum D4 for a detailed report).*

5.2.5 Participant Pink from University B

Participant Pink is a Professor in Singing and Opera at University B. Pink gave an extensive account of the breathing principle of non-tension. He indicated that his very first lesson with any student is on posture and breathing. He usually starts by creating

awareness of their feet. In his experience, sometimes students come from a choral tradition ...

where they would stand with both feet next to each other and I often see lots of swaying from side to side. And I try to explain to them that what we want is, any movement that you make with your body must be a conscious decision in order to promote the meaning of the music. Therefore, anything that has become habitual, like swaying from side to side, we want to stop that from happening. When I speak about posture, I work from the feet up ... I'd usually tell them: Put your feet next to each other, maybe one in front of the other. So that instead of shifting your weight from side to side, you can shift from front to back, especially if you feel like you want to approach a high note or something like that.

Pink emphasised that the posture should not be *trapped* or *locked*, and therefore he teaches students to shift their weight to their back foot when approaching a difficult passage or high note to assist them in letting go of bad tension in the neck muscles. *Then a lot of the tension, or a lot of the that weight is displaced, or that tension is displaced into the bum into the ground. And they really have the connections into the ground a lot more.*

After talking about feet, Pink addressed the topic of knees with his students. His instruction to them is *never locking the knees*; rather, it must always be flexible. He demonstrates to his students how a rugby player or American football player would have their stance when catching the ball *and that they have that feeling of energy in their body ... if you can imagine this feeling of I'm not totally stiff, but I'm ready to catch that ball. But there's not no tension in the body.* Pink reasoned that a distinction should be made between good tension *that's not going to block any kind of singing functioning* and bad tension *that's going to get in the way of phonation or breathing.* Locked knees are, for him, an example of bad tension.

After discussing feet and knees with students, he makes them aware of the pelvis and explains the pelvic tilt. Here flexibility is also necessary. He teaches students to tilt their pelvis slightly forward in conjunction with an elongated spine. Then, other postural considerations follow like elongating the spine, broadening the chest and relaxing the shoulders. *I'll usually tell them to roll their shoulders to the back and drop it.* In Pink's experience, it is also necessary to create neck posture awareness, since many

students have a tendency to stick their necks forward, which results in unwanted tension. Pink spoke of his cello teacher, schooled in Alexander Technique, who constantly adjusted his body and his neck and that he adopted this habit with his students.

So, especially in the neck, and having that feeling of length in the neck of pulling a string through the top of your head without any tension... that tall swan-like feeling ... So, just to reinforce again, I always tell my students, ... I don't want you to stand stiff like a soldier. But that you need to have that feeling of elongation in the body, and connection through the feet into the ground.

This was the second time that Pink made mention of being grounded and I decided to ask him why this is important to him.

Pink indicated that being grounded is being connected and that opera singing ...

is all about that connected sound ... I always emphasise that they really need to keep their feet into the ground. And if you want to get a little bit, what's the word I'm looking for? esoteric maybe, I think there is an energy that we can draw from the earth from the ground. And, and so I think there is energy that we can tap into.

He emphasised that all these postural considerations are not taught once-off but are constantly built into the lessons (see Addendum D5 for a detailed report).

5.2.6 Participant Yellow from University C

Yellow is currently responsible for teaching a choir methodology programme at University C. This programme is specifically aimed at preparing Life Skills educators for their vocation. Yellow's reflections from his own lived experience as a black African man added a unique flavour to the reflection on breathwork.

Yellow divulged his observations on why different race groups in South Africa might perhaps breathe differently. He said that culturally *we can't just breath in the same way*. He alluded to parents of different cultures having different expectations of how their children should or should not behave and how these expectations are communicated by the parents to their children. He gave examples of his own upbringing and experience where he noticed his white Afrikaans friends being

admonished with commands [I translated these all from Afrikaans to English] like *you're not allowed to laugh so loudly, people are looking at you, oh siss man, why do you talk so loudly and why do the people make such a noise?* In contrast to this inhibited way in which white children are raised, he demonstrated the louder, uninhibited way, sometimes perceived by white people as shouting, that black children use their voices. Yellow added: *The action that comes from the shouting out, breathing has played a certain role to ensure that this that kind of onset, how can I say, maybe the release of what you take out as you do it.* He mentioned that, while adjudicating Eisteddfodau, he cannot help sometimes but notice the thin, breathy sound of especially young white girls that he thinks is the result of their upbringing about inhibiting expression, inhibiting the breath.

Keeping close to the topic of racial and language differences, Yellow remarked that, in his culture, where even speaking to your mom, *you must actually sound like you're shouting*, managing the breath to sing softly can pose challenges. He equates the concept of breath leading with the ability not to *lose the energy ... in order for you to finish the phrase*. Losing energy, i.e., not *carrying through*, affects *the energy intensity required for the text to come out* and can detrimentally affect detrimentally the intonation of *phrases towards the end*. He reiterated the importance of maintaining energy intensity while singing softly by sharing a story from his upbringing. This story he relays to his choral students at University C. While attending church with his parents, *growing up, you tend to be naughty. And then you play around ... in church ... my mom, for instance, when she would say to me, I need to stop, she wouldn't say 'stop it' [demonstrated very soft, without energy, utterance, 'stop it']. Instead, she says 'stop it!' [demonstrated utterance with energy and intention]*. He mentioned that, as an educationalist, he loves to teach in a way that shares experiences that pupils or students are already familiar with. He termed this kind of learning *experiential learning*.

Yellow was of the opinion that the choice of breath support probably *depends on [the] context of [the] music*. He made mention of *istibili* singing:

Istibili, it's music that black choirs use to sing and dance. He explained that this kind of *step music* required that *the breath becomes accurate in terms of giving the rhythms their ability to actually come alive. And therefore, the breathing becomes the way it becomes.*

From this I understood that the breath is not just used as energy to sing, but also to execute the movements; consequently, breaths are taken more quickly and are therefore shallow. Yellow contrasted this way of singing with singing a Western Eurocentric Handel aria with extensive runs, which require optimum breath supply. With this he reiterated that there should *never* [be a] *crystallised notion of what is the correct way of breathing*.

On the topic of breathwork and spirituality Yellow shared:

It's quite a common thing ... It's for me, it is the thing that that [is] still happens to some of my students, maybe because they are affiliated with a religion or with spirituality. Certain songs when they hear them give them that, put them in that trance mode, like you saying that the higher level of that mode, and it happens a lot. It's something that is part of like choir rehearsal most of the time. ... With us it feels like it's an after effect of the trance mode, that trance that is happening. The choir will be singing a song in four parts. And then the students or the learners at that time will just get into this space. Because I don't know if you know what, African music we have these repetitive things that keep going on and they keep doing the same thing over and over and over and over until the person gets into that trance mode. And it's through breathing we can we bring them back to earth. After a moment, when they're going through that, there'll be two learners; we'll go to the person and maybe the one will be rubbing the hands and the other will be doing an internal/entire breathing with the person so that's there's a sense of channel between the watch the other one who is here is doing with the one who's out, and that channelling of just breathing is the afterthought, not necessarily what's happening when the singing is actually taking place.

Yellow emphasised that it is the music and the words of the music *that really drive my learners to that space* (see Addendum D6 for a detailed report).

5.2.7 Participant Green from University D

Green from University D affirmed that he is working in a School of Education and is responsible for training future teachers in the field of music education. He indicated that a significant part of the music education programme revolves around *singing and choral techniques*. He accentuated the co-relationship between BWTL and the

technical demands of different pieces of music. Green emphasised the importance of being well acquainted with the musical ideas and demands of a particular piece of music. *Then after you understand those musical ideas, that's where you can start playing.* To execute the musical demands of singing softly, loudly, or crescendo, *the breath can also play an important role there.* He went on to remark on the difficulty of soft singing. *Soft singing is not easy. Not everyone can sing soft. You need to work on it many times, many times and also you need paying attention on how we breathe often, you know, to overlook because it's completely automatic.* Regarding timbre or dramatic variances in the voice, Green shared the use of a laughing technique, *like you are laughing and singing.*

Green indicated that, during rehearsals, his students mostly sit down; however, once they are familiar with the work, he makes them stand up in order for them to better support and control their breathing. He indicated that *I like them to stand straight, not too much straight, but to take their shoulder up, you know, just to balance the body, so that they can be able to sing.* The reason he gave for this posture is for students to *control their breathing and maintain their health and accuracy of their voices.* He further remarked on vocal health and the need for students to keep their voices ...

strong and healthy... therefore it is essential for them to practise, for artists. So that when they sing long times and professional, it can be good, you know? Working on breath, exercise and technique, you know, it also helps to control the vocal.

I asked Green to comment on his inhalation preference. He answered: *Both of them they good, but me I prefer the nose one.* Green indicated that he observes and teaches his students intentionally to inhale through their noses. I asked him to explain why he prefers nose inhalation. He replied: *Because you won't lose a lot of pressure. You will be able to control it with the nose. With the mouth you can't because you will be saying [demonstrated exaggerated mouth inhalation] then that air is gone already, you know.* He indicated that nose inhalation is more *simple than mouth* in assisting singers not *running out of breath before they end of the phrase* and in assisting *the vocal cords and the larynx ... being used correctly.*

On asking Green about breathing and well-being, he displayed a keen interest and awareness of how breathing can assist students to control anger or stress, improving sleeping, managing cravings and improving overall performance.

We need to be able to be aware of incorporating breathing exercise into our daily routine. And you know, you have to have many benefits including promoting why, focusing, increasing focus, performing your best you know, it's a difficult thing to do, you know. Several times or several times a day taking breath can help you to refresh your energy, you know. It can increase focus, you know, it can let go of destruction, you know. Breath is very important ... I'm saying this, because with the stress being a constant presence in our life, you know. Taking time to process your emotions, it also decompress, you know, and it can get into the right frame of your mind, to absolutely be crucial, you know.

Finally, Green remarked that *without music, we are nothing I'm telling you* and he remarked how beautiful music in itself promotes relaxation and can reduce stress and frustration (see Addendum D7 for a detailed report).

5.2.8 Participant White from University E

Participant White from University E is responsible for undergraduate and postgraduate choral conducting methodology in the School of Music. She also teaches voice, *the correct way of singing* to future Life Skills educators in the School of Education. Participant White's unique perspectives on breathing principles were not only grounded in her extensive practical and tactile choral conducting experience, but also coloured by her postgraduate overseas training.

Regarding relaxation as a necessity for sound breathwork, White shared three exercises that she gained from her cultural exchange postgraduate studies. The first is a pendulum-like exercise where you swing the arms from side to side. Although this exercise is in preparation for learning how to conduct, it *relaxes the shoulders and the abdomen and everything*. The second exercise is doing a skiing action, with arms moving forward and backwards, at the same time bending the knees as if skiing in the snow. White mentioned that this exercise often evokes laughter in rehearsals, which also aids relaxation. White indicated that the first pendulum-like exercise with the arms is also crucial to indicate the tempo of a song. Additionally, when the pendulum gesture is closer to the diaphragm it will reflect subliminally to the choristers to sing from the lower support of their bodies. She often gets her students to use the pendulum

conducting gestures to in a tactile way grasp and feel *free breathing and relaxed breathing*. Third, along the same line of thought, while focusing on breathing, they play imaginary violins to encourage freedom of breath movement.

White remarked that singing is all about good *airflow* and *free sound*. She remarked that the challenge for a singer is to sustain a long phrase, and therefore they have to be mindful of the length of a musical phrase and *don't blow everything out at once*. She added that a choir conductor can aid choristers to sing legato through particular conducting gestures. *I will paint, paint, paint, paint* [showed conducting gestures] *all the way, with my hand gestures, paint all the way and try to, sometimes you go forward. You know, like that* [demonstrated moving hand forward with fingers hanging down]. *Or paint sideways* [showed sideways 'painting']. White indicated that she starts off rehearsals with five minutes quiet time *so that everybody can just decompose of what the day was, and just get into just, I'll almost say breathe within their own body. Just reconnect again*. She combines different kinds of physio stretches with breathing to help them to unwind. She remarked that *breathing really relaxes you* (see Addendum D8 for a detailed report).

5.2.9 Participant Gold from University E

Participant Gold from University E is a recently retired choral conducting methodology lecturer. She was not only influential at the university as a lecturer and conductor of the university choir, but also initiated and managed outreach programmes and choral conducting training sessions for African community choirs in the entire province.

Gold stated that good singing relies on three things: posture, diaphragm and headspace. Gold mentioned that, in her choir training experience, it is of *no use to bombard* [choristers] *with a lot of facts and, you know, technicalities. You must make it as simple as possible*. She reiterated *You see; I can't dwell on the theoretical because I had to be practical*. She would therefore not give direct instructions for choristers to 'stand up straight' but rather employ a physical exercise combined with breathing at the start of or during rehearsals to address weak posture. She instructs choristers on how to bend their bodies down forward to the floor or stretch their arms out to the front and *let all the stale air go out*. Then they stretch up, breath in, with their

arms high up above their heads while standing on their toes and giving their bodies a good stretch. They then slowly lower their arms, slightly *a little bit behind* [demonstrated]. By the time they have lowered their arms choristers will have attained, according to Gold, a *perfect posture*. She regards a perfect posture as the starting point of *whatever* and especially singing. The value of a good posture in singing is: *In this position your diaphragm is lifted already*. She explained that when the diaphragm is lifted, *all you have to do is you pretend that this is a balloon, and you inflate the balloon* and breath support will be in place. Parallel to the image of the balloon, she also shared the image of a cushion. She would instruct choristers to *just open up the space so that you sit on that cushion. It's a simple example but it works*. Gold further mentioned that sometimes when she notices choristers' heads *too forward*, she would say to them *feel that you are hanging ... like a puppet on the string* and then add to that, *pretend the inside of your face is a chicken egg, but you want an ostrich egg*. She reiterated the importance of these *three things, the posture, the balloon, the ostrich egg*. To further encourage an open head space, a *huge oval space*, she uses the image of going to a dentist and him/her putting a piece of cotton wool in the space between the lip and the teeth. She said that an open head space ensures that choristers' vocal cords do not tire and also that it *makes a huge difference to the resonance*. According to Gold, when you have optimum posture, an open diaphragm and open head space in place *you're ready for singing. It's as simple as that*.

I asked her why legato singing is preferred by singers. She replied: *For me it's the legato lines that carry the emotion. And obviously, it carries the sound, it carries the vowels. But that's for me the secret of good singing. It carries the text. It carries the emotion. It carries the sound. What more do you want?* I was intrigued by her saying *carries the emotion* and asked her to elaborate on that. She answered: *Well, if you say 'ooh' [demonstrated singing on pitch] and you say 'ooh' [demonstrated singing same pitch with a different feel], it makes a difference. And as soon as you break that line, you break that quality*. She ended the discussion on breath continuity by explaining: *After all my years with teaching and with the choir, I just came to the conclusion that yes, conducting is important. Yes, all these little exercises and whatever is important, but if the breathing is not there, there is nothing. For me it is absolutely 'uber al'.*

After I shared some findings on the value of breathing in the classroom from educational research articles, Gold replied: *Can I just say something there, that of my most wonderful moments in choir rehearsals or performances? Where ... they've [been] doing these breathing exercises? And they then sang long lines. And they just breathe together. There's something magic that happens amongst those singers that you can't explain ... sharing of the breathing.* She remarks that choristers leaving rehearsal happy and energised is due to ...

the breathing, because that for me, as I say, is the foundation of the singing and of the legato lines. And it is in the legato singing where you experience the emotion. And when they've had such an intense emotional experience, and they leave, you know... I know my members. They said, it doesn't matter what they've been through the day. Once they've been in that choir rehearsal, they feel safe. They've joined their souls together ... it's such a personal and an interpersonal sharing. You can never compare it with sports in a way or even with orchestra. It's making music together but it's intensely physically personal (see Addendum D9 for a detailed report).

5.2.10 Summary

It was evident that the nine research participants each has a unique lived-world experience in different contexts of singing and breathwork practices related to it. Each semi-structured qualitative interview was a unique encounter with SingEd breathwork concepts and practices. The breathwork paradigms of the research participants were informed not only by book knowledge and scholastic training, but rooted on practical hands-on skills and experience. In this way, throughout the semi-structured interviews, not only were the 'why' questions reflected upon but diverse 'how' practices were also shared.

5.3 DATA ANALYSIS: INTERVIEWS

Following the first stage of reporting – flying over the interview data – then, the second stage of data analysis – driving past the data – was undertaken. In the ensuing script, interview questions (see Addendum A) are stated followed by an analysis of the BWTL paradigms of the interviewees. Finally, a synopsis concludes each section, restating

the main theme and subthemes that emerged. Subthemes are either 'exclusive' to the particular theme discussed or 'inclusive' of other major breathwork principles. This inclusivity highlights the interdisciplinary nature and codependency of the various breathwork principles. The citations used seek to demonstrate the unique language use and perspectives of the research sample.

5.3.1 Question 1: The principle of nose inhalation and mouth exhalation

What is your preference for inhalation? Mouth and/or nose? Why?

How do you theoretically and practically impart this preference?

Dobrin shared four different ways of respiration (see Addendum D1); however, he remarked that the RSM preference is breathing in through the nose and breathing out through the mouth. He describes this preference as the *most productive ... most normal ... most natural way for us to breathe*. Manga replied to Dobrin's statement:

I differ on that point. I don't think there is one specific right way to breathe consciously. You know, our unconscious breath in our everyday life should be ... predominantly through the nose. But when we engage in ... specific practices ... there are multiple ways of breathing for different effects.

She further equates breathing with a form of art (see Addendum D2), which should be practised flexibly and creatively. Although Dobrin shared that he is *very regimental, very militant* in his teaching approach, he remarked: *But at the same time, we do have to reach out to people to make sure that we encourage them to find a sort of ways. They got to figure it out themselves*. Although each of the six SingEd lecturers has their unique approach to inhalation, they are all in agreement with Manga's statement because nose inhalation alone does not always provide sufficient air to execute a musical phrase. Purple, Green and White expressed an explicit preference for nose inhalation but at the same time acknowledged the modality-specific need for mouth inhalation to execute a musical phrase successfully. Pink and Yellow did not indicate an inhalation preference and merely acknowledged the existence of both inhalation methods. Gold was strong in her opinion that nasal inhalation is not suited to singing and advocates mouth inhalation only while singing.

Why and how research participants teach and practise inhalation preferences were explored further. From entering the interview discourse, it was clear that, in the minds of the research participants, both nose and mouth inhalation have noteworthy advantages and disadvantages.

On the advantages of nose inhalation: There was consensus between Dobrin and Purple that the nose not only filters but also regulates the temperature of the incoming air. Dobrin further mentioned that nose inhalation is part of the body's intelligent design: Nasal nerve sensors send information to the brain that assists the brain in regulating the oxygen–carbon dioxide levels in the body. Purple further remarked that nose inhalation connects a singer to their diaphragm, a key component of efficient singing. Also, Pink said *breathing through the nose is fantastic to feel that low area or where you're supposed to breathe low*. Green agreed that nose inhalation engages the diaphragm naturally and effectively and therefore, *you won't lose a lot of pressure*. Thus, using nose inhalation that naturally engages the diaphragm can support a singer not to run out of breath. In this regard, Purple considers nose inhalation *the calmest way to breathe*. Green also mentioned that the activation of the diaphragm assists in using the vocal cords and larynx correctly. Finally, White commented that she prefers nose inhalation *because of the fact that it helps lift the soft palate*. However, White's 'fact' is in disharmony with the three SingEd lecturers who indicated that the SingEd requirement to raise the soft palate is achieved through mouth inhalation.

On the advantages of mouth inhalation: Within the SingEd context, Gold, Pink and Yellow hold mouth inhalation in high esteem. The primary reasons are the free flow of air and improved resonance space. Pink commented, *more important than inhaling a lot of air, is where you feel that inhalation process*. Pink and Yellow envisage the start of mouth breathing as the feeling of the start of a yawn. Pink elaborated:

So, if you breathe through your mouth and you find that yawn space, what happens is that the soft palate raises and the extrinsic laryngeal muscles on the side here [demonstrated] relax. And that's very important for singing because for resonance, you want to make sure that your instrument, so the mouth and the pharynx, that they are in the optimal position for resonance.

Gold is in agreement that *the soft palate is lifted* when breathing through the mouth. To encourage choristers to create space for resonance, she tells them to imagine that the inside of their faces is a chicken egg, but for singing *you want an ostrich egg*. White also alludes to teaching choristers to create space having the feeling of *a big potato in the back* of your mouth; however, while engaging in nose inhalation and not mouth inhalation. According to Gold and Yellow, the free-flowing sound that results from mouth breathing affects sound production, sound placement, phrasing, and intonation positively. Yellow said that, with mouth breathing, *you're able to just carry the sound out*.

On the disadvantages of mouth inhalation: Purple disagrees with Gold, Pink and Yellow that mouth inhalation is effective in creating resonance space and commented: *There is this myth, this fake understanding, that breathing in through the mouth gives you this feeling of an open throat and yet it doesn't. The tongue locks over the throat space*. She remarked that nose inhalation rather *leads [the air] to the back of the throat*. Green also cautions that mouth breathing can result in loss of breath control when the diaphragm is not engaged correctly. Mouth breathing is associated naturally with clavicular breathing. Dobrin points out that the filtering and temperature regulation function fulfilled by the nose is absent with mouth breathing and, therefore, potentially harmful to the lungs and body.

On the disadvantages of nose inhalation: Gold is very strong in her conviction that for singing in general, mouth breathing is better owing to possible ailments disrupting the flow of air that is necessary to sing well. She commented: *What do you do when you're, you know, we have all these allergies? And people have sinus problems and you know, it's difficult. It's difficult to sing, have to breathe through your nose and you cannot*. Nose inhalation, consequently, can create unwanted tension for the singer. Although Purple believes that nasal inhalation gives access to nasal passages, Pink insists that the bigger and therefore better resonance spaces are the pharynx and the mouth. Hence, a disadvantage for singers of nose inhalation is that the resonance space is limited.

Depending on a lecturer's preferences, various approaches are employed to making inhalation concepts vivid to their students. Mention has already been made of Gold's *ostrich egg* and White's *big potato* to encourage efficient resonance space. To achieve

the same, Yellow gets his choristers to act surprised with a *hah* utterance while breathing in through the mouth. Gold further makes her choristers experiment with the difference in feeling and sound when opening up the resonance space or not opening up the resonance space. She further mentioned *that openness immediately puts your vowel position in an Aah ... you can just manipulate the inside and the lips to change to all the other vowels*. In contrast, Purple employs what she labelled a *baby sniffs* exercise to accustom her singing students to nose inhalation.

And you're sniffing gently up your nose [demonstrated]. And it connects you to your diaphragm at the same time. You sing from that position; you sing from above and not from below. And if you continue sniffing upward, you'll feel like your entire head fills with air. And that's possible, you know, the skull has cracks in it to allow for movement ... you really can fill that dome with air. I'm an advocate for that.

Green, an ardent promoter of nose inhalation, instructs his students to lie on the floor, to feel the difference between the two main inhalation modes. In his words, *sometimes you can try to lie on the floor and relax and breath normally, you will see the difference*.

In summary, research participants each had their distinctive approaches to inhalation. SASingEdL aims for resonance space while inhaling; however White insists that this aim is achieved through the nose, in contrast with Gold, Pink and Yellow who advocate that it is achieved through the mouth. The theme of resonance ties this research question to the principle of breath leading. SASingEdL also aims for continuous airflow. Here Purple, White and Green indicated that it is best achieved through nose inhalation, while Gold, Pink and Yellow strongly advocated mouth inhalation. The theme of continuous airflow ties this research question to the principle of breath continuity. Purple, Pink, Green all agreed that nose inhalation naturally assists with diaphragmatic activation, which ties this research question to the principle of breath sufficiency. Dobrin and Purple were concerned with aspects of air filtering and temperature regulation tying the research question to the theme of physiological well-being. The answers that emerged from this interview question regarding inhalation preferences highlighted some subthemes:

Synopsis

Theme: inhalation preferences: nose inhalation or mouth inhalation

Exclusive subthemes: natural breathing vs modality-specific breathing

Inclusive subthemes: breath sufficiency, breath leading, breath continuity, well-being

5.3.2 Question 2: The principle of breath leading

What do you consider the most important aspects of breath leading?

(pitch, dynamics, timbre) Why?

How do you theoretically and practically engage in teaching students to lead the breath through various musical demands?

Vadim emphasised that *whatever you do, it's supposed to ... be a by-product of your breathing ... whatever you do, breathing must come first*. He added: *It should get to the point where you should do it subconsciously. Completely automatically*. To this RSM understanding that breathing underpins all action, Manga agreed by saying: *Absolutely, that's 100%*. For the six SingEd lecturers, the terminology 'breath leading' was foreign, and they were all more familiar with 'breath management' and 'breath control'. That being said, both Purple and White were intrigued by the term 'breath leading' and indicated that they not only liked the term but might also integrate it into their own practices. White explained: *I actually like the word ... How do you lead the air out ... How do you lead the air out into the audience ... the sound and everything*, and added that 'breath control' might infer tension. Purple agreed that 'breath control' might be *suggestive of something more aggressive*. Hence, Purple and also Pink mostly used the term 'breath management'. Research participants Purple, Pink, Yellow and Green explained 'breath management' in different ways, but the theme of efficiency seems to be central to their understanding of this concept. For example, Purple clarified: *It's not about how much air you take in; it's how you manage the air* and Pink stated: *You've got to learn [how to] use ... air more efficiently*.

Yellow had a unique view on breath management. He expounded that the way children are raised affects the way they are breathing. More conservative and strict upbringing *block* their behaviour and resultant breathing patterns. More liberal and free upbringing

results in a less constricted *release* of air. None of the other research participants contextualised breath management according to Yellow's perspective.

Why then is breath management/control/leading of importance to SingEd? Pink indicated that *you use the breath for everything ... you can't do any kind of colouring or emotional response without the breath working efficiently*. Purple added: *If you're trying to grow your instrument naturally, you know, in terms of resonance, volume and support, breath plays a huge role in that*. Yellow mentioned that if the breath is not managed well, singers will find it hard to *finish the phrase ... The energy intensity required for the text to come out is ... lost* and phrases stand the chance of becoming *a little bit flat* towards the end. To overcome these challenges, Yellow goes about sharing personal anecdotes with his students (see 5.2.6).

Although the manner in which SASingEdL convey the concept of breath management to students varied according to their needs and contexts, two ideas emerged regarding breath efficiency. The first, being well acquainted with the musical score, and the second, awareness of the various other facets of breathing.

Gold said:

You must plan how you want to spend the breath. In this regard, Green declared, *You first check the musical ideas. Then after you understand those musical ideas ... that's where I can start deciding on how I can play with music*.

Green specifically mentioned being aware of the various dynamic levels required by a musical composition and also the importance of knowing where to breathe, which he termed *breathing breaks*. Pink emphasised that it is vital to know *how long the phrase is ... Where is the high note in that phrase? Where is the crescendo in that phrase? Where's the phrase going to?* Within the context of choir singing, White alluded to the conductor guiding choristers through all the musical demands through appropriate conducting gestures. This also implies that the conductor must be well acquainted with the musical score. Gold remarked in this regard that choristers mirror a conductor's posture. She added:

What I always say to my students is economise. And know that your breath must go to the end of the phrase, and you must plan how you want to spend your breath and how you want to spend the dynamic level to reach a sustained phrase.

Score examining is thus required in order to be cognisant of how the breath can be utilised while navigating the various musical demands. Finally, in the words of Green, *Once you understand your music, musical ideas and everything, you will be able to master [singing].*

Blue, the ninth, but mostly silent research participant, shared the only breath awareness exercise promoted within the GDE, among Foundation Phase, that is Grade1 to Grade 3, learners. She expounded:

Blow up a balloon, try and manipulate the balloon in the air by using your breath ... I think at this stage is just to make them aware that you need to breathe, you need to control your breath. And if you blow hard, then the balloon will move further, if you blow soft, the balloon won't move a lot, you know. And because the balloon is light, it's very easy for them to see that ... with the balloons, at least they can see something that they can do with it. And after that they use the balloon when they play.

This method can be described as child friendly; however, none of the six SingEd lecturers made use of props in conveying the concept of breath management. Blue's expounding can be linked to the principle of breath sufficiency. The contributions of Pink, Purple and Gold also had strong links with this principle. Pink commented on the challenge of singing softly when singers often mistakenly *relax the abdominal support. And it is not about relaxing the muscles, you still actually have to work even harder to control the sound.* You have to *engage more effectively* for a *proper connected sound*. Purple shared a particular exercise for abdominal awareness while trying to sing softly to bring awareness to *deeper and lower* breathing. Gold alluded to the necessity for the diaphragm to be in an optimal position to aid breath management. She said:

Well, if you, for example, have a difficult interval. And you have to jump or, you know, you just show them in your posture ... Open up. If the balloon is inflated, they can do anything and they can crescendo on that note. They achieve a crescendo, quite a volume of sound.

Purple further shared what she called *Semi-occluded vocal tract exercises* also to assist in training singers how to approach soft singing:

[U]sing the voiced fricative consonants, *v* and *f*... If I use a *v* [demonstrated singing *v*, doh me soh me doh followed by singing the same on ooh] ... *It's kind of a forward place to create the soft singing from ... So okay, so you could use fricative consonants to find the soft singing space. The other is a lip trill* [demonstrated lip trill on doh me soh me doh, then repeating on ooh]. *And then the other is a tongue trill* [demonstrates tongue trill on doh me soh me doh, then repeating on ooh] ... *And then the other thing they recommend is breathing in through the nose but singing through a straw* [picked up a straw and sang through it. doh me soh me doh], *because there again it's the smallest amount of air.*

This expounding by Purple emphasises the placement of sound, which affects resonance or timbre. Gold also remarked that *the way you start the sound* influences the energy intensity or dynamic level of a musical phrase, thus affecting tone. Green remarked in quite a different way about the same concept. He remarked that the focus, energy levels and emotional or mental space of the singers or choristers could also affect the tone. Consequently, he not only recommended *incorporating breathing exercises into our daily routine* to address and improve our daily functionality but also shared a *laughing technique* to improve singing tone. Green sang *Be-la-sig-no-o-o-ra* on doh me soh doh me soh doh and thus demonstrated singing *like you are laughing and singing*. Green was the only research participant linking breathing to a sense of well-being.

White shared a unique offering on assisting students with pitch. She said:

If you breathe on the pitch, I always had my singers, you know, breathe on the pitch, because when you breath you must hear the pitch. If you only hear the pitch, when you exhale, then it is too late, then you're flat ... breathe on the pitch.

None of the other research participants remarked on how to guide students with pitch.

White further shared a specific breath management exercise she labelled the *trombone exercise* or *David's exercise*. This label refers to one of her male choristers, a trombonist, who shared this exercise with her. He often initiates this activity on her behalf during rehearsals:

One of my basses is a trombone teacher and he has an exercise where you breathe all your air out [demonstrated], like literally pfff sound, like all the air out and you breathe in on four beats, 1, 2, 3, 4. ... But it's, so it's always eight. You first breath in on four and out on four; breathe in on three, out on 5, 2-6, 1-7 ... And then sometimes he will play around with the tempo, you will do it faster, or you will do it slower.

White's playful 'trombone exercise' seems to create awareness of and to exercise breath sufficiency. Yellow remarked in this regard that it is essential for singers to maintain *energy intensity*. Green commented on the value of breath awareness for efficient sound management. For Green, singers must pay attention to how they breathe in daily life because this *automatic* way of breathing influences how they will employ breathing in singing. Green's comment is congruent with the expounding of Dobrin and Manga of breath leading.

In summary, research participants agreed that breath must be managed efficiently. Efficiency can be achieved through an in-depth understanding of the musical demands of a song and by bringing into balance all the varying aspects of breathing. The answers that emerged from this interview question regarding breath leading emphasised SingEd modality-specific terminology and considerations:

Synopsis

Theme: breath leading, breath control, breath management

Exclusive Subthemes: breath efficiency, score preparation, breath awareness

Inclusive Subthemes: breath sufficiency, well-being

5.3.3 Question 3: The principle of intake sufficiency

Why is breath sufficiency important to singers?

What is your preference for breath support? Diaphragm, thorax and/or clavicle? Why?

How do you theoretically and practically guide students to breathe sufficiently?

Instead of asking the three questions one at a time, I bundled them together owing to the interview time constraint of one hour which, in hindsight, was perhaps not the best

idea. It took some effort to dissect the dialogue data and to comprehend what speaks of sufficiency and what speaks of breath support. That being said, it was evident that, within the context of SingEd, these two concepts, sufficiency and support, can be discussed separately but they function as a whole. Furthermore, the RSM principle of intake sufficiency has links with other major breath principles regarding the quality and nature of inhalation (see 5.3.1), breath management (see 5.3.2) and posture (see 5.3.7). There was an array of views regarding breath support. However, research participants were all of one voice that sufficiency is not a fixed correct or incorrect concept. Allowance must be made for the differences in the human physique, demeanour and preferences. For example, White stated, *I think it depends on person to person, because we are all put together differently* and Yellow indicated, *it's never, it's not ... a very crystallised notion*.

Within the realm of SingEd, there was agreement that sufficient air intake is vital for initiating the singing tone (White; Green; Purple; Yellow; Pink), sustaining and managing musical phrases (White; Yellow; Pink; Green), and maintaining and managing pitch (White; Yellow; Green). Pink best summarised these requirements by commenting that, with sufficient air, *the vocal folds ... vibrate and produce a sound and we then manipulate that sound*. Research participants voiced two main ideas on how to attain this sufficiency in the continual breathing rhythm of the *fill up and ... release ... activity* (Yellow): first, to 'fill up', i.e., inhale, the maximum lung capacity (Green) must be utilised; and second, the 'release', i.e., exhalation must be controlled by the breath support mechanism (Pink). The voices of the research participants are heard on these matters in the following passages.

Manga said that one of *the pillars of healthy breathing* is diaphragmatic breathing. She states, *The diaphragm is absolutely key. This below the ribcage* (Pink), *good deep breath* (Gold) preference is in contrast with 'high' breathing or 'chest' breathing which, according to White, creates *tension here in the vocal cords and the shoulders*. Purple, in agreement with White, said that ...

the tension we speak about is, is about not wanting to have tension in the upper torso... We don't want to have clavicular breathing. Clavicle suggests obviously that's where the clavicle sit. They call that, I love this term, the breath of exhaustion ... But that would be tension in the muscles that aren't conducive for vocal production.

Purple indicated that she tries to find *default, organic* ways to guide students in finding a *deep and low* point to *breathe in fully*. As an example, she shared:

Like if you starve yourself of breath, if you breathe out all of your air and you only breathed in when you absolutely needed to. What happens? Is it in, or is it out? So, how does the person interpret optimum breath and breath support?

To guide choristers to *breathe in as low as possible*, White expounded:

I always say, you know, your legs are like straws ... I would often say to them, just for a good example, just lift up the front of your feet. So, on the heel, I know that causes tension, but just for them to know that they must breathe from the legs.

She also pairs students up and engages them in a tactile awareness activity to *feel my tummy, feel how that goes. Now feel yours*. Discussing the first research question (see 5.5.1), it was evident that Gold's understanding that mouth inhalation assists in getting that 'low breath' is incongruent with the view of the other participants that nose inhalation engages the diaphragm automatically. However, regarding the research question on breath sufficiency, Gold reiterated:

My argument is ... if you breathe through your nose [demonstrated breathing through nose], you immediately lift there spontaneously [show high clavicular breathing]. And then you create tension here [pointed to vocal tract], whereas if you breathe [demonstrated mouth breathing] it's all down there.

It was clear that an optimum full inhalation is essential for Purple, White, Manga, Pink and Gold. However, the way to achieve this expansive feel differs amongst research participants.

In a quest to sustain the energy intensity of musical phrases, singers have to find a way to manipulate the diaphragm muscle to ensure an extended exhalation process. This requirement is referred to as breath support (Yellow; Gold; White) or breath resistance (Purple; White). The singer thus resists the natural recoil of the diaphragm that would result in a release of the air needed to complete singing a musical phrase. The SingEd literary review (see 2.6.5) revealed two camps of breath support: an 'in-and-up' approach and a 'down-and-out' approach. Research participants explained varied and practical ways to guide students through these various approaches.

Purple mentioned that *pressure points on the body* can assist a singer with *resistance*. According to her, one of these pressure points is situated *on the chest* [demonstrated]. Purple added, *it's always easier and best found if someone else is providing the resistance*; hence, suggesting that singer one can lay hands on singer two to feel where the point of resistance is situated. Purple did not express any explicit preference for an 'up-and-in' or 'down-and-out' breath support approach, but instead, she is guided by each student's unique individuality. She referred to practical ways to make this concept vivid:

sitting on an exercise ball, you'll experience the same. In order for you to stay on an exercise ball, you'll have to use the right muscles. You have to use tension, but it's a resistance. You need to have resistance in the core muscles, which is really where, posture-wise, we have to position ourselves.

To assist choristers to feel *all that resistance*, White commented: *I would often say, please go home and pack some books on your tummy. And remember, when you breathe, the books must go up. Obviously, as you know, this is a skill and it takes time.* White indicated that a 'down-and-out' breath support approach is preferable and said, *I prefer the resistance way ... expand as far as you can* [demonstrated movement away from the body, both back and front, as well as sideways]. *And when you exhale* [demonstrated resistance]. That being said, she mentioned that the 'down-and-out' approach to breath resistance also has an aspect of the 'up-and-in' approach: *I'm definitely don't do up and in [however] with down and out you do get a sort of in.* For her, the primary advantage of keeping the diaphragm expanded (down and out) is that it ensures *no tension in the vocal cords*. White's demonstration of an all-around expansive feel is congruent with Manga's view that *full diaphragmatic breathing is three dimensional*.

Green's practical approach to creating awareness of breath support and resistance is similar to that of White's. Both participants make students lie on the floor. He expounded:

Sometimes when you lie on the floor singing, you are producing a good sound... you should notice how ... your breath in your stomach and ribcage also rise, you know. And ... when you breathe, you must get smaller again and deflate... This can also help

you to feel the back of the diaphragm... As you feel resistance against the flow ... it can also help you to produce a good, very good sound.

Green was of the opinion that the 'up-and-in' approach *is the simple one. Because remember, sometimes you're dealing with people who will never be involved in the singing.*, but added that a different *technique ... can also ... help students*. Hence, Green is not devoted consistently to the 'up-and-in' approach. In this citation, although not explicitly worded, Green's explication is reminiscent of the views of White and Manga regarding diaphragmatic breathing being multi-directional.

Gold, trying to *make it as simple as possible*, explicated:

Well, then the diaphragm... you can't tell them lift your diaphragm; it doesn't work. In this [good postural] position your diaphragm is lifted already. And then, all that I said to my students is take it from here [demonstrated hands in front middle of her body]. When you're standing like that [demonstrate optimum aligned posture], all you have to do is you pretend that this is a balloon, and you inflate the balloon [demonstrated in-breath inflating abdominal area]. And there you go. You immediately have the diaphragm lifted; you have support. To further guide students with the concept of resistance, she added, if you have your hand in front and say 'let the lift go down' [demonstrated left hand up and right hand moving down] ... think that you push the air down ... or feel that this is a cushion [demonstrated hands away from the middle of her body] and you just open up the space so that you sit on that cushion. It's a simple example but it works.

Gold's instruction to keep the *diaphragm lifted* or continually expanded designates her breath support preference as a 'down-and-out' approach. The expanded balloon idea is congruent with that of Manga, Green and White, as it relates to the concept of multi-directional or 360-degree breathing.

For Yellow, using an 'up-and-in' or a 'down-an-out' approach depends on the *context of music*. He compared African 'Istibili' choral music, where choristers not only sing but also dance, with the demands of classical Western music. In his words:

'Istibili'... [T]hat upright singing gives you that [demonstrated rhythmic song and dance movement, arms held high] ... the breath becomes accurate in terms of giving the rhythms their ability to actually come alive. And therefore, the breathing becomes the

way it becomes. And when you look at Western or Eurocentric music ... [sang 'shall be exalted' from Handel's Messiah] ... [with the same 'Istibili' way of breathing] my throat closes up. Because I'm taking it too quickly and then intonation can suffer. And I will probably take five more breaths if I have to use the same kind of breathing that I'm thinking for the first one.

Yellow, similar to Gold, uses imagery to guide students in understanding the concept of breath support:

I think of a tyre... A tube. When you breathe, when you're like filling up your tyre with air. It doesn't fill forward; it doesn't fill back; it doesn't fill sides; it fills up. So that's how I'm thinking when I'm breathing [demonstrated] ... the body becomes big, like, you know what I mean? Not an explosion, but it doesn't feel [demonstrated quick inhalation towards upper body] here on the chest. But everything is happening around me.

Thus, the students of Green, Manga, Yellow and Gold are taught to expand the diaphragm muscle multi-directionally.

Pink indicated that different techniques work for different people. In his words:

I would keep my muscles out, and as I would sing, I would concentrate on keeping the muscles out, resisting the muscles to collapse back in. And after a while, I was taught differently. And I found that it was easier for me to cognitively think that when I breathe, and when I sing, my muscles go in, so the opposite of down and out and staying out. I think down and out and back in again and controlling the stomach muscles to come in. And that very much helps me with breath management ... there's a very big distinction between breath support and breath management. He added, it's important that I have that cognitive sense of the stomach muscles coming in. And I find that if I'm towards the end of the phrase, and I feel like I'm running out of air, if I concentrate on the stomach muscles coming in on that last part of the line, then usually I'll get through the line ... if I just think I need to get to the end of the phrase, but I'm not specifically thinking that my stomach muscles need to really help me there, then I usually run out of air.

His way of working with breath support is an initial engagement with the ‘down-and-out’ approach and then a controlled ‘in’ process, which relates to the concept of breath management.

As a non-SingEd research participant, Manga listened to my explanation of the two breath support approaches. She viewed the ‘down-and-out’ approach as *the natural one ... because that’s how the diaphragm actually moves when you’re expanding your lungs*. She called the ‘up-and-in’ approach *bizarre ... if you think about the biomechanics of what’s happening to the diaphragm*. The other non-SingEd research participant, Dobrin, is very pragmatic in his view. Listing several breathing exercises (see Addendum D1), he explicated that all breathwork approaches assist in creating awareness of how all the bodily systems *work together*. Thus, it is appropriate to be aware of different kinds of breathing exercises to become breath fit and to fine-tune the use of breathwork to suit the individual.

In summary, there are different, seemingly flexible approaches to breath sufficiency and breath support. Within a SingEd context, in order to sustain a musical phrase, a continuous air supply is needed. Both breath sufficiency and breath control assist with this requirement. First, a sufficient amount of air is inhaled when the optimal capacity of the lungs is engaged. This is achieved by focusing on breathing lower into the body. Second, after a low inhalation, the breath exhalation is then controlled by resisting the natural recoil of the diaphragm muscle. The answers that emerged from this interview question regarding intake sufficiency accentuate SingEd modality-specific themes and subthemes:

Synopsis

Theme: breath sufficiency, breath support

Exclusive Subthemes: breath resistance, multi-directional diaphragmatic breathing,
flexible teaching approach

Inclusive Subthemes: breath continuity, breath management, non-tension

5.3.4 Question 4: The principle of breath continuity

Why would breath continuity or legato singing be preferred by singers?

How do you theoretically and practically focus on legato singing?

This research question yielded brief yet passionate answers. Green accentuated that legato singing *makes music or sound beautiful ... There's nothing more. When you sing like you encourage legato, it means you're asking for beautiful singing*. Gold also emphasised that breath continuity is *the secret of good singing ... if breathing is not there, there is nothing. For me it is absolutely 'uber al'*. White remarked that the opposite of legato singing, staccato singing, *is difficult for people to sing*. From a non-SingEd perspective, Manga commented that, consciously or unconsciously, breath continuity supports whatever activity an individual may be engaged in. Dobrin agreed with Manga but added: *You're supposed to influence everything else with breathing, but breathing should not be influenced with something else*. From a SingEd perspective, Purple's statement aligns with those of Manga and Dobrin. She expounded about breath continuity and legato singing:

It's sustainable. It's really what the breath wants to do. Even in speaking it's continuous. There's just one small stream of air and whatever it is we say, we think, and it comes out of our mouths ... it's actually organically what the body wants to do. It does not want things to be choppy [said the latter sentence in a stuttering, choppy way]. It wants to be bind; it wants to be breathed.

Why then is breath continuity of importance to SingEd lecturers? From these semi-structured interviews, it could be surmised that breath continuity is essential to several aspects of sound management: phonation (Purple, Gold, Pink), managing legato lines (Purple, Gold, Green, White, Pink, Yellow), communicating the text and emotional essence of a song (Gold), and vocal health (Purple). On the latter, Purple remarked that as a singer, *you want your voice to last* and that *fullness of air* contributes to singing *every day without tiring and fatiguing*. Within the SingEd milieu, the requirement of a continuous flow of air that makes singing possible is in alignment with the statement of the RSM expert research participant Dobrin that *breathing must never be disrupted by whatever you do*.

How do SingEd lectures guide students to grasp this principle? The research participants shared unique practices within their distinctive contexts of being conductors, opera singers and education specialists. However, it seems that most practices have in common that they make students aware of connecting vowels while singing; thus, realising continuity of sound.

Purple demonstrated singing an ascending and descending arpeggio, each time changing the vowel, accentuating the importance of connecting vowels while singing a musical phrase. To assist students in achieving this connected sound, she will, as an example, say: *Can you sing a whole spaghetti as opposed to chopped spaghetti?* Instead of focusing on the pitch, singing *high and low*, students are guided to concentrate on allowing vowels to ...

just [fall] onto that stream of air, onto the train tracks ... the car is the breath and all the vowels must jump into the car. And you know then the breath is just the car that just rides smoothly on the road.

Yellow also underlined *vowel alignment*. He first of all guides students to become aware of their natural breathing rhythm, the ...

process of thinking of how it feels to breathe in and breathe out. And then from there, maybe perhaps they know the song very well, you take the consonants out, and we do that vowel alignment and then you [sang 'a, e, i, o, u' on a single pitch], so that then when they start to try to get through the line, or single legato lines, they're able to put the consonants as supporting to text without actually losing the phrases or the line.

Pink concurred with Purple and Yellow in saying *legato is ... how we connect the notes to each other. And specifically connecting vowels*. He emphasised the necessity for a *continuous flow of breath*. Pink mentioned *jaw interference* as a stumbling block to legato singing. To overcome this challenge, he again referred to the first principle of inhalation. He encourages students to ...

breathe through the mouth and create that open cavity ... so that the jaw doesn't chew on the words and you disrupt that legato line. In that way, your airflow stays consistent and you won't get in the way of disrupting the airflow either.

Green, to facilitate legato awareness, says: *choose two, three preparation exercises prior to applying the concept to actual songs. As an example, he demonstrated singing be-la-sig-no-ra and it's ea-sy on ascending and descending arpeggiated note patterns. In his words: They don't have to cut it; they have to take it legato and then we apply that in singing.*

White thought that *the cognitive way of knowing how the piece is and therefore knowing where you can breathe again can contribute to a good free sound.* Particularly in the realm of choral singing, she mentioned that a conductor's gestures can assist choristers with singing long legato lines and with when to breathe. Choristers themselves need to be aware of *staggered breathing*. In White's words:

I teach my choristers: who can breathe, who's able to do, say sometimes you get eight bars, and it's a slow tempo, then they really struggle. Then I say, 'ok who is able to go to bar four or five or whatever'. I literally sort them out like that. We say, ok you listen to your neighbour. If you can hear, sometimes you can often hear, okay but this one's going out of breath, you know, so then you must take a breath, but don't take a short, shallow breath. They must really be tuned in and that takes time.

White commented that staggered breathing still requires other breathing principles to be intact: *breathe on the pitch*, i.e., breath management and a *proper deep, low breath*, i.e., breath sufficiency.

Gold explicated passionately that *legato lines, carries the text, it carries the emotion, it carries the sound. What more do you want?* To clarify her comment on legato lines and emotion, she shared, *if you say ooh [sang single pitch with a particular emotion] and you say ooh [sang same pitch with a different emotion], it makes a difference. And as soon as you break that line, you break that quality.*

In summary, all research participants agreed that the principle of breath continuity is crucial to SingEd. Different teaching methods are employed to instil legato singing awareness. Particular emphasis is on vowel connection and continuous air supply. The answers that emerged from this interview question regarding breath continuity yielded several subthemes:

Synopsis

Theme: breath continuity, legato singing

Exclusive Subthemes: connecting vowels, score preparation,
flexible teaching approach: preparation and application

Inclusive Subthemes: well-being, non-tension, breath leading, breath sufficiency

5.3.5 Question 5: The principle of the pendulum

*What would the role and value of breath holding be in singing education? Why?
How do you theoretically and practically impart this knowledge?*

In contrast with the previous four interview questions, the six SASingEdL had little contribution to make to this particular discourse. However, the views of the non-SingEd research participants were noteworthy. After asking the research question to Green, there was a long silence. He eventually said, *It's a difficult one this, I think. I'm trying to think of something.* He understood the concept of breath holding to hold well-being benefits. Green explained:

Because when you hold your breath, you give yourself more time to both absorb oxygen and also to produce carbon dioxide. ... It can also increase the amount of carbon dioxide in your cells ... another thing, benefit of holding breath is what? Improving longevity. It improves lung function, you know.

However, after moments of contemplation, he replied that within a singing framework, breath holding would *be accompanied by irritability*. Yellow's first reaction was a perplexed *Sho*. Referring to a traditional African singing style, he expounded:

even in call and response. We don't even do that. Like I'm thinking now we don't go 'Shosholoza' [sang initial phrases of the song] and then people are holding breath. It's not something that is happening, holding breath for four seconds, or whatever between the spaces ... I don't want to lie about that one so much.

All that Gold had to contribute to this conversation was, *I wouldn't use the word hold. That can create tension ... Sustain the breath, but not say 'hold'*. In Pink's experience, when he sings, there is a *very small fraction of a second* suspension of the inhalation prior to phonation or singing. However, he commented, *I want to caution you that I*

don't call it holding, because that implies you've got to hold the air. That would disrupt breath continuity. Hence, the remarks of both Gold and Pink alluded to the principles of breath continuity. White agreed with Gold and Pink and commented that *you're not gonna sing like that ... the whole time ... you want a free [sound]*. However, White mentioned that the choral conductor's hand gestures can be likened to a pendulum, assisting choristers with a free flow of air, indicating the required tempo, and reflecting diaphragmatic breathing. Although not sure how breath holding can be employed during singing, White demonstrated an open mind by saying, *Expose the children to it and singers*. For her, the concept of breath holding can serve as a breath awareness tool during the warm-up phase of rehearsals.

Purple also could not pinpoint the direct value of breath holding to SingEd. However, she mentioned that exercises where ...

you ... breathe in for five. And you sustain or you keep for five, and then you breathe out five, and then you breathe in six, and then you hold for six, and then you breathe out six can possibly assist in teaching a certain kind of support.

Purple added, *But it's where you're holding ... It's holding in ... the lower proximities of your body*. This explication is reminiscent of the research question regarding breath support and sufficiency.

I questioned the use of the principle of pendulum within a SingEd context. However, Dobrin, a non-SingEd research participant, said: *Another term would be a rhythm of breathing, because the pendulum creates, that creates a specific rhythm ... you will refer to specific rhythm*. I remarked on the mostly irregular breathing rhythm imposed by each particular song. However, Dobrin still defended this principle by expounding that, within the context of singing, *your correct posture, your correct work of diaphragm* can compensate adequately to enable efficient breathing even if the breathing is irregular. From a well-being breathwork perspective, Manga was familiar with effects of inhalation, exhalation and breath holding on the nervous system. She remarked: *The pause after the exhalation has the same effect as the inhale, meaning that it activates the sympathetic nervous system*.

In summary, it is clear that ‘breath holding’ as a concept is a familiar non-SingEd practice. However, it was evident that SASingEdL were unaccustomed to this concept even though Purple alluded to ‘breath support’ (see 5.3.3) as a kind of holding. The answers that emerged from this interview question regarding the pendulum principle accentuated a non-SingEd modality-specific breathwork consideration:

Synopsis
<i>Theme:</i> pendulum
<i>Exclusive Subthemes:</i> breathing rhythm, breath holding, breath awareness, natural breathing vs modality-specific breathing
<i>Inclusive Subthemes:</i> breath continuity, breathe sufficiency, well-being

5.3.6 Question 6: The principle of breath independence

How does singing and breath independence relate to each other? Why?

What theoretical and practical knowledge and skills would you impart in this regard?

Time spent on this research question, similar to that on question five, was minimal. Again, the non-SingEd research participants appeared to be more acquainted with the concept than the SASingEdL. The way in which each research participant understood the word ‘independence’ differed. The concept was thus contextualised disparately.

From a non-SingEd perspective, Manga defined breath independence as breathing *that support activity. Coordinating your breath ... with whatever activity you're engaged in, so that it works in harmony with it, that it's not opposing.* Dobrin further emphasised the requirement that this optimal relationship between breathing and activity becomes unconscious or automatic. The latter is the result of conscious preparation. He clarified: *It's got to be instinctual breathing... So [you're] ... not supposed to force and figure it out ... you're not supposed to consciously think about it.*

From a SingEd perspective, similar to Manga and Dobrin, Purple also considered breath independence as something that needs to be *organic*. She explained that ...

if you are working your breath in the best possible way, ... its optimum way, it is default that in whatever situation you're in, and what you do, you would engage breath obviously, in its best way. In the context of what works best in a particular situation, Purple further remarked, *probably the best way to breathe is through your nose. In actual situations, you breathe in through your mouth, and you can't now be out of character and go, Oh my gosh, I breathe in through my mouth, so I'm not gonna sing correctly, or I'm gonna be doing something wrong. And for me, this is it. It's like this thing about posture. Some people have this rigidity in teaching posture, like the feet need to be 30 centimetres apart, or the one foot in front of the other. And so now when you deviate from that, you go, Oh, my gosh, I can't sing. And that's not the case. Your breath, it's such an organic thing, it is an independent thing.* She mentioned different ways of breathing for different emotions and that these are not predetermined, or wrong but just organic.

Although Purple understood independence as what worked best in a specific situation, on the wording of this RSM principle of breath independence, she commented, *I think maybe breath independence is vague. And maybe there is some kind of further explanation that it would need to provide. A greater clarity, understanding of it.* After a long period of silence, on hearing the research question, Gold echoed Purple's sentiments. She said, *No, I don't understand. Maybe it's a description problem. I don't think its applicable for what we want to use it for.* Pink reiterated Gold's comment, *look you can't phonate without having the breath come back up again. It's impossible.* On being prompted about whether he thinks that this principle is of significance to SingEd, Pink replied: *I can't think of anything.* White also questioned the direct application of this principle to SingEd. She commented that if such a principle were to be adopted, *everything that we've said [thus far during the interview], it's going to be knocked.* Considering the research question, Yellow raised the topic of staggered breathing within choral singing, and commented that independent breathing in this context could be *very detrimental*. If choristers were to breathe at *natural* places, i.e., at the end of musical phrases, the desired outcome of *longer lines* would collapse.

Green did not dismiss the independence concept outright, and commented that because *we are different*, perhaps as part of warm-ups, viewing breathing from a different angle can enhance breath cognisance for *some people*. White agreed with Green that *for a warm-up session* there is perhaps no harm for choristers to try

different ways. She reiterated that the way different people, within a choral context, perceive and experience *the same thing* makes using various strategies indispensable. She said, *It doesn't work for singing, per se. But I think for breathing awareness it definitely, it does work*. Despite these positive comments, neither Green and White nor the other research participants shared how they go about imparting the concept to students. It is my perception that most of the SingEd participants were encountering and contemplating this concept for the first time. The answers that emerged from this interview question regarding breath independence displayed subjective grasp and interpretation of this particular theme.

Synopsis

Theme: breath independence

Exclusive Subthemes: breath awareness,
natural/organic/instinctual breathing, modality-specific breathing

5.3.7 Question 7: The principle of non-tension

What kind of posture do you profess? Why?

How do you theoretically and practically guide students to align their bodies?

More than any of the six breathing principles discussed thus far, the non-SingEd breath specialists and the six SingEd lecturers are in accord that *breathing and posture ... work hand in hand* (Purple). SingEd lecturers especially spent a substantial portion of the interview time on this theme. Manga states: *We're not going to get the full benefit of a breathing practice if you do so with holding tension in your body*. Dobrin agreed that it is all about *efficiency*. He explicated: *You can't waste energy ... everything supposed to be efficient, economical, everything supposed to be done with a greater, almost, with a minimum input and a greater outcome*.

Within the realm of SingEd, Green said about a good posture, *it's paramount, you know ... to balance the body so that they can be able to sing ... if you're not a well standing, you can't sing well*. In answer to the research question, White said, *when I think of non-tension, it's relaxation*. This relaxation is vital for a sound that is not strained (Yellow). Gold stated: *Well, for good health, for a start, a good posture is very*

important. And for singing it's of utmost importance. Green and Yellow also shared Gold's viewpoint on health. On teaching singing, Pink remarked:

My first lesson with a student, the first thing I always do with them is talk about posture and breathing ... I always tell my students: 'I don't want you to stand stiff like a soldier'. But that you need to have that feeling of elongation in the body, and connection through the feet into the ground.

White, rooted in her own athletic experience, draws on various modalities to create awareness about relaxation:

So, what I'm trying to say is, if I really don't know, and I see I can't help my singers, I go and I ask for help. And I will also often ask of my colleagues, do you have new relaxation exercises? you know, just to renew yourself and also make it more interesting for them for the singers and conductors.

For this reason, SingEd lectures seems to draw inspiration from non-SingEd modalities like Alexander Technique (Pink), yoga (Gold, White, Purple), Pilates (White), as well as from breathing celebrities like Wim Hoff (Purple).

The concept of relaxation was considered crucial by all SingEd lecturers. However, both Purple and Pink remarked that it is impossible for a singer, while singing, not to have some tension in the body. Pink commented,

I think when we speak about tension, you have to differentiate between good tension that's not going to block any kind of singing functioning. And bad tension that's going to get in the way of phonation or breathing or anything like that. Purple explicated, *So, on the topic of non-tension, yes, it's important in singing. But at the same time, it is where the tension is; we need tension in the body. But maybe the better terminology or the more positive English would be resistance.*

Here, Purple referred to the requirement of singers to support the breath or to resist the natural recoil of the diaphragm muscles that would minimise the air in the lungs and counteract sustaining a musical phrase. Pink reiterated *that feeling of low support is very important.* He further mentioned another example of good tension related to phonation. He said, *you have resistance from the vocal vocalis muscle with the breath*

that goes up. Hence, good tension in SingEd can be viewed as breath support and phonation. Bad tension *would be tension in the muscles that aren't conducive for vocal production.* (Purple)

SingEd research participants remarked about all the various body parts that need to be observed for possible tension. In addition, some participants contributed their practical tools for addressing possible tension. Manga shared that the first thing she makes sure her clients do is to *uncross their feet, place their feet on the floor.* From a SingEd perspective, Pink clarified his preference in this regard:

Put your feet next to each other, maybe one in front of the other. So that instead of shifting your weight from side to side, you can shift from front to back ... you don't want to feel like you're trapped, or that you are locked.

Pink, White and Yellow believed that it is essential to have knees unlocked. Pink teaches his students:

I show them sometimes how a rugby player or American football player would have a stance when they catch a ball and that they have that feeling of energy in their body. If you can imagine this feeling of I'm not totally stiff, but I'm ready to catch that ball. But there's not no tension in the body.

White employs an imaginary *skiing* exercise: *It's literally you* [demonstrated skiing action]. *That really works. The boys relax and they laugh and the moment you notice their laugh, also everything relaxes. It's a natural way of breathing, everything natural.*

Manga explained that when the feet are uncrossed, a *softening in the hips* will result. Pink indicated that he makes his students aware of a *pelvic tilt*. In his words, *you've got to tilt the pelvis slightly forward* [demonstrated] *and feel the elongation tall, so that the pelvis tilts slightly to the front, that way,* [demonstrated moving pelvis slightly forward] *when you're singing.* For Manga, the *softening in the hips* creates flexibility of the diaphragm because *the diaphragm is connected to the whole fascia fascial system ... when we can relax your whole body that also supports the diaphragm to move more openly and freely and to be more flexible.* This flexibility of the diaphragm is crucial for singers, so that they *can support well* (Green).

White, Green, Pink and Yellow all emphasised the importance of a posture that is *straight, elongating the spine*. However, this posture must be *just nice, upright, but obviously not tense* (White), therefore not *too much straight* (Green). Purple stated:

Alignment of the spine is incredible. It's super important ... Once you can feel the stacking of the discs in the spine, it immediately aligns you and opens you up to breathe. She added, I use yoga, as quite a good principle of posture. If you're sitting cross legged on the floor, yeah, you are aligned from your pelvis all the way up to your head, or vice versa. From the top of your head or from above your head, all the way down to the pelvis. And obviously, if that is the muscle memory you train in yourself and in your body, when you stand up, you will align to that organically and naturally.

Gold, at the start of choir practice, *or and even [during rehearsals] when I think they become tired and slacked*, engages choristers in posture correcting or posture awareness exercises (see Addendum D9).

Pink was the only research participant making mention of the chest. He said, *broadening the chest ... you never sing with a collapsed sternum ... the sternum is always broad, it's open*. Furthermore, research participants voiced that the shoulders, like the other body parts, need to be relaxed. However, this does not imply a *slagging* (White) position. Yellow shared an observation of his students. *There's this, I don't know what it's called. I call it 'the sigh'. Most of my choristers, they struggle with this [demonstrated sighing, slumping posture, drooping shoulders]. You know, ek kan nie meer nie [Translation; 'I can't anymore'] ... whenever you sing like [sang descending solfege pattern normally and repeated in ascending pattern, breathing and singing with tired, slumping disposition]. So already, that's creating tension because there's a, what do you call it, there is body action that is not allowing them to actually relax*. Manga, in her healthcare practice, encourages her clients to *relax the habitual tension* in the shoulders. Relaxed shoulders are also crucial to Pink. He tells his students *to roll their shoulders to the back and drop it*. Green shared a similar notion by telling his students *to take their shoulders up ... I don't like them to stand like this [demonstrated shoulders very high]. I like them to stand like this way [demonstrated shoulders natural height and slightly back] so that they can be able to sing out, you know*. White employs a pendulum, swinging of the arms physical exercise, *that relaxes the shoulders*.

For Pink, *having the neck in that tall swan-like feeling* is essential to ensure relaxation. This relaxation ensures that the *vocal cords* [do not] *tire* (Gold). Yellow agrees that you want *no muscle contractions by your neck*. Gold mentioned, *I find that in a lot of choirs that, especially tenors and sopranos, they'll have a tendency to stick the neck forward*, and this restricts breath management. Gold shared imaginary practical guidance that she practises with her choristers:

Pretend the inside of your face is a chicken egg, but you want an ostrich egg. This contributes to the relaxation of the jaw and creates resonance space. She added, and then even where your lips are, you can say that space, if you want to open up that space. You know, when you go to the dentist, and I put that little cotton wool there. It's that feeling ... you have immediately a huge oval space. And it's opened there [demonstrated space between lip and teeth]. And you're ready for singing.

Yellow and Green shared the same experience in observing students raising their chins when the pitch of a song rises. Green said that *transition is a problem* when students *approach high notes*. Yellow further explicated:

The reaching of notes [demonstrated chin up]. The higher it goes then we take our chin up ... I try to correct it by thinking the opposite direction ... if the scale is going up, the thinking, the imagination in their heads should be going downward. So, if I sing [sang 'be-la-sig-no-ra', ascending passage], sometimes I tried to make them bend [pointed down with hands, while singing higher]. An action against the one that's going up.

White said,

if I really don't know, and I see I can't help my singers, I go and I ask for help. She shared an experience, the one lady, she's an alto, she's got a very stiff jaw She's gotta a many stresses... she's a magistrate, but really very tense work. The physio said you can take your two thumbs, obviously when your hands are clean, and put it on the back of your wisdom teeth, at the back of your mouth. You put it on the inside. So, open up your mouth [demonstrated] and then you push it down, you literally push your thumbs down gently and slowly. So, what I'm trying to say is, if I really don't know, and I see I can't help my singers, I go and I ask for help.

Pink, Gold and Yellow all shared the same image. Pink mentioned, *having that feeling of length in the neck of pulling a string through the top of your head without any tension.*

Gold echoed this: *If you think that the head is too forward or whatever, you just say, 'feel that you are hanging on, like a puppet on the string' from where you're standing (Gold). Yellow also said the head ... it must feel like tall ... with a string holding from the back.*

In summary, the elucidations of research participants indicated a strong familiarity with the concept of non-tension and demonstrated a first-hand lived-world experience and application. Various real and imaginary strategies were mentioned to guide students to a *perfect posture* (Gold). It is clear from the answers to the research question, that the non-tension principle ranked significantly high on the priority list of BWTL considerations:

Synopsis

Theme: non-tension

Exclusive Subthemes: posture, relaxation, good tension vs bad tension

Inclusive subthemes: well-being, breath sufficiency

5.3.8 Question 8: The emotional dimension

What can the singer's breath contribute to emotional balance, managing anxiety, mental focus? Why?

How do you theoretically and practically relay aspects of emotional well-being related to breathing to your students?

From a non-SingEd perspective, Dobrin emphasised that *breathing is affecting the nervous system* and therefore affects *our psyche*. Manga agreed and further clarified: So,

breathing is an autonomic nervous system function. It is always happening in the background, regulated by the respiratory centre in the brain. And our unconscious breathing pattern reflects our internal state, our emotions, our physical posture, our tension patterns ... our breath is a language that reflects our physical, emotional state ... a lot of that breathing pattern is dysfunctional, or is not supporting our optimum well-being. Because we get stuck into these patterns that then impact further our mood, our emotional physical health.

SingEd research participants only briefly mentioned the value of breathing for emotional balance (Green, White, Gold, Pink), managing anxiety (Green, White), and mental focus (Green, White, Yellow, Pink).

First, Green, Gold and Pink expounded on invoking positive emotion consciously through singing and breathing. Green deliberately included laughing and talking about *topics that will make you feel free and relaxed* as part of the warm-up routine of choir rehearsals. Aside from the breathing per se, Green explained that *music is a beautiful feeling* which, in itself, *adds to stress management and promote relaxation*. Pink remarked about psychological well-being, *breathing is definitely a part of it*, but *it's more than just the breathing*. He emphasised the value of *positive emotions* that come through *interaction and connection with people* and *immersion in an activity*. White agreed with Pink that *socialising* induces emotional well-being. Gold expounded on the emotion conjured up by a particular piece of music:

the breathing ... is the foundation of the singing and of the legato lines. And it is in the legato singing where you experience the emotion. And when [choristers] had such an intense emotional experience, and they leave, you know... I know my members, they said, it doesn't matter what they've been through the day. Once they've been in that choir rehearsal, they feel safe. Purple also reiterated that it's more than breathing The social aspect ... the vibration that happens when you hear vibrations around you ... It's a form of safety and support.

The communal emotional experience within a familiar environment contributed to feelings of safety therefore, emotional well-being.

Green mentioned that with *stress being a constant presence in our life*, breathing exercises can assist students *to reduce stress and decompress*. Purple agreed with Green that *modernisation has affected how we breath*. Manga also echoed this sentiment by saying that *the influence of the environment, the clothes we wear, our chronic stress, adrenalised energy* influences our experience of life. She added that *adrenal life energy or sympathetic overdrive it leads to a lot of illness, inflammation*. Therefore, White postulated that *breathing relaxes you*. Dobrin, to get students to be *completely responsive* to his teachings, expounded:

[When] the guys, they had a long week, sometimes they stressed and they exhausted ... so I made them lie down on the floor, and I made them breathe ... with the tension. We do change in relaxation breathing. So almost by trying to, there's a saying in Russian 'wedging the wedge out' ... you're shoving another wedge to push the first wedge out.

Hence, tension is released from the body–mind by employing breathing consciously.

Second, SingEd lecturers responded to the concept of stress in the context of stage fright or performance anxiety. Green said that working with the breath can *regulate performance* and consequently, can *bring better results*. Purple believes that, for singers,

stage fright or performance anxiety, ... they're tangible. It is a huge reality for all of us. There's, you know, standing in the wings and just feeling like you have no air and then you're gonna pass out and that you can't perform. If you are able to channel the low, the deep, the relaxed breathing, it puts you in a much better space. Most of it is just reducing the amount of adrenaline that is released and slowing down the heart rate, which only deep breathing can do. Green suggested, you can place the tip of your tongue on the gum ... just behind your top front teeth ... you slowly inhale through your nose, for three, two or more, maybe two to four seconds ... then you hold your breath for five seconds Then after that, the breath out is outlet ... you repeat this breathing up to five times.

Therefore, performance anxiety is regulated through breathing exercises applied consciously.

Aside from employing massage techniques and the shaking of limbs to *release anxious energy in your body*, Yellow also addresses *singing anxiety* through

breath exercises like maybe the counting (sing 1 121 12321 1234321 12345...) ... Or maybe we do the one like when we sing the scale up with one we try to hold the breath, just to give breath a chance ... The breath reminds us that, oh, calm down. And that helps the body just to relax while you are keeping that intensity of there's a competition or maybe you're about to be on stage.

White combines physical exercise with breathing to induce relaxation prior to rehearsals and performances:

I ... always first start with ... types of relaxations. And with that all comes breathing. ... when you do stretching, ... you still do, obviously, a form of breathing. I make sure it's absolutely silent for the first five minutes, so that everybody can just decompose of what the day was, and just get into just, I'll almost say breathe within their own body. Just reconnect again ... count your breaths.

Third, research participants responded that *relaxation of thinking* (Yellow) can get you in *the right frame of mind* (Green). Pink said:

So, with singing, we are breathing low all the time ... the benefits of mindfulness and all of those other activities that focus on low breathing, we would, obviously, then we would then have those benefits as well, because we are breathing low.

The connection between low breathing and mental focus was also implied by more SingEd lecturers. Purple explicated that, in modern times,

We don't have to walk; we don't have to play outside We don't have to carry big containers of water. And then ... we'd be engaged with the big muscles in our body ... we breathe to those muscles and from those muscles. ... we're not using the muscles... muscles support and breathe, you know, work hand in hand ... we now have this very shallow clavicular breathing, which is not able to sustain the body. So how can it sustain the mind? Purple added, When you starve your body of air and then you breathe in, you reoxygenate more of your blood, which actually I feel improves your intellect. Because if you have all of your cells, all of your blood, oxygenated, you have the energy and the impetus to learn. When you are starved of oxygen, you're yawning and tired, you can't take anything in.

Manga, from a non-SingEd perspective, in her capacity as breathing and well-being specialist, shared valuable exercises that can be employed in the school classroom for children to navigate their emotions. For mental clarity and optimal absorption of new information, she recommended ...

coherent ... paced breathing ... that is simply inhaling slowly for five seconds, exhaling slowly for five seconds through the nose with no gaps or pauses between the breaths for at least five to 20 minutes. So at least five minutes up to 20 minutes at a time.

In a situation where there is emotional turmoil within a classroom situation she suggested...

warrior breath ... you get everybody to stand maybe in a circle at their desk, and stand with their feet hip width apart, your knees are soft, and you connected to your core. And you're going to stretch your arms out in front of you or above you [demonstrated], your fingers outstretched as you inhale. And as you exhale, you're going to sharply bring your fist at your waist, and you're going to say 'ha!' okay, and we do that 10 times. And that is an amazing way to discharge energy. It calms everybody down, and they're ready to go.

It was evident that the SingEd research participants had general ideas about the research question but held no comprehensive cognisance. Why and how questions invoked general comments but minimal detailed replies. The answers that emerged from this interview question revealed emotional well-being only marginally deliberated within the South African SingEdBWTL tableau:

Synopsis
<i>Theme: emotional well-being</i>
<i>Exclusive Subtheme: anxiety management, mental clarity</i>
<i>Inclusive Subtheme: non-tension</i>

5.3.9 Question 9: The physical dimension

What can the singer's breath contribute to respiratory health? Why?
How do you theoretically and practically pass on aspects of physical well-being related to breathing to your students?

For Manga, *when we start to work with the breath more consciously, and we start to change the rate, the rhythm, the depth, and we work with specific breathing practices,* it can affect our physical well-being. She added, *even when we speak about physical,*

emotional, spiritual, we speak about them in terms of separate categories. But we know now that they actually are not separate. Hence, physical well-being influences our emotional and spiritual well-being as well. SingEd lecturers' contribution to this research question was marginal.

Hearing the research question, Yellow replied, *Honestly speaking, I haven't thought of it. But maybe the whole concept of what we were talking about, with lower breaths, taking those longer breathing, the inhaling and exhaling could aid respiratory health.* In this regard, Pink commented that, through singing training, *your breathing mechanism is healthier, you do breathe lower.* Consequently, *when students connect and breathe optimally. They ... feel healthier.* Also, Green believes that engaging with diaphragmatic breathing *can also help the singer ... to fully exploit the capacity of their lungs.* Gold went further in saying, *you help [choristers], every time ... you help them to correct their posture, as part of your breathing. So just to bring them into a good posture and align all the nerves and muscles and vertebrates, align the spine.* This argument linked the research question to the breathwork principle of non-tension (see 5.4.7).

White shared that an asthmatic chorister of hers uses *a little pump thing where you blow* developed by a pharmacist to aid patients affected by the COVID pandemic. Somehow this instrument *forces you to breathe correctly from low. So, I've told my choir to get one. Each and every one Her breathing and singing is so much better since she's been using that little instrument.*

In summary, SingEd lecturers are invested in breathing techniques that produce optimum sound quality. However, they seem not necessarily to consider the physiological well-being qualities thereof. The answers that emerged from this interview question revealed physical well-being to be an insubstantial SASingEdL consideration:

Synopsis

Theme: physical well-being

Inclusive Subtheme: breath sufficiency

5.3.10 Question 10: The spiritual dimension

What can the singer's breath contribute to spiritual elevation? Why?

How do you theoretically and practically impart aspects of spiritual well-being related to breathing to your students?

Manga, as a breathwork practitioner, utilises breathing in consciousness-altering practices. She explained:

transformational practices ... have the intention of changing one's state of consciousness ... it allows access into cellular memory and into the subconscious mind. And into places that the body often stores trauma, and unconscious patterns at a subconscious level. And those could be patterns from our in-utero life to our birth experience to inherited trauma, collective trauma; so, everything that the body holds, and these are specific practices that create neurological changes and changes in the brain activity to allow access to those subconscious patterns.

SASingEdL had mixed responses to this research question.

White commented to this research question that there is nothing *that I know of*. In contrast, Yellow expounded that it is a *common thing* for African choristers to enter a *trance mode* while singing religious or spiritual songs, especially when the music is repetitive and singers are *doing the same thing over and over*. He added:

through breathing we can we bring them back to earth. After a moment when they're going through that, there'll be two learners, we'll go to the person and maybe the one will be rubbing the hands and the other will be doing an internal breathing with the person. Also, breathing is the afterthought, not necessarily what's happening when the singing is actually taking place.

White made no remarks in this regard, and Yellow shared, not personal but witnessed experience. Both Purple and Gold shared more personal perspectives on spirituality and music making. Purple commented, *I feel like if you are connected to the source ... this place of transcendency ... it feeds you; it feeds everyone else*. Gold said,

Can I just say something there, that of my most wonderful moments in choir rehearsals or performances? Where they've been doing these breathing exercises. And they then

sang long lines. And they just breathe together. There's something magic that happens amongst those singers that you can't explain. ... They've joined their souls together.

Gold's comment resonates with research indicating that choristers' heartbeats synchronise when breathing together (see 3.4.2).

The answers that emerged from this interview question revealed spiritual well-being as a by-product of SingEdBWTL; however, a conscious elective within the realm of non-SingEd breathwork practices:

Synopsis
<i>Theme: spiritual well-being</i>
<i>Exclusive Subtheme: connectedness</i>

5.3.11 Summary

The 10 interview questions yielded multiple answers. This multiplicity demonstrated the distinctive lived-world experience of the research participants. Each a priori code manifested itself differently within the particular context, experience and need of the research participants. The six SASingEdL responded to questions one to seven on breathing mechanics with confidence since breathwork is a major component of teaching singing technique. However, questions 8 to 10 on well-being seemed to have taken some of them by surprise. They voiced their opinions on the matter spontaneously, but it seemed, from my perspective, not rooted in comprehensive knowledge. For example, there is mention of deep breathing that brings calm before a performance, but seemingly no innate understanding of why this is this case. In contrast, the non-SingEd participants Manga and Dobrin demonstrated a comprehensive understanding of the breathwork and well-being connection by sharing comprehensive accounts of the function of bodily systems.

Nestled within each of the 10 a priori themes were significant subthemes. Some of these subthemes inferred one of the other a priori codes, labelled 'inclusive subthemes', highlighting the interdependence of the various breathwork delineators. However, there were also subthemes specific to each main a priori theme, labelled

‘exclusive subthemes’. Table 5.1 presents a summary of the themes and subthemes that emerged from the interview data analysis.

Table 5.1 Semi-structured interviews: Themes and subthemes.

	Theme	Exclusive Subthemes	Inclusive Subtheme
1	inhalation preferences: nose inhalation or mouth inhalation	natural breathing vs modality-specific breathing	breath sufficiency, breath leading, breath continuity, well-being
2	breath leading, breath control, breath management	breath efficiency, score preparation, breath awareness	breath sufficiency, well-being
3	breath sufficiency, breath support	breath resistance, multi-directional diaphragmatic breathing, flexible teaching approach	breath continuity, breath management, non-tension
4	breath continuity, legato singing	connecting vowels, score preparation, flexible teaching approach: preparation and application	well-being, non-tension, breath leading, breath sufficiency
5	pendulum	breathing rhythm, breath holding, breath awareness, natural breathing vs modality-specific breathing	breath continuity, breath sufficiency, well-being
6	breath independence	breath awareness, natural/organic/instinctual breathing, modality-specific breathing	
7	non-tension	posture, relaxation, good tension vs bad tension	well-being, breath sufficiency
8	emotional well-being	anxiety management, mental clarity	non-tension
9	physical well-being		breath sufficiency
10	spiritual well-being	connectedness	

The themes, exclusive subthemes and inclusive subthemes displayed in Table 5.1 played a major role in contemplating an emergent SingEdBWTL framework. Aside from the 10 themes, silent data (see 5.5) necessitated considering an additional breathwork principle. Two of the discussed themes, independence and spiritual well-

being, were not contextualised by the research sample in terms of the other major a priori codes. Also, the discussion on physical well-being did not yield a specific exclusive subtheme.

5.4 DATA REPORT AND ANALYSIS: DOCUMENTS

Prior to and during the orientational and semi-structured interviews, all nine research participants were requested to share applicable documents to substantiate the primary data collected through interviews. I received only three documents of varying nature. Green sent me a document reflecting the music education syllabus of University D. Manga shared her training document highlighting key breathwork considerations. Dobrin shared a typed-up list of 25 reason why nasal breathing is paramount.

5.4.1 Green's syllabus

Green shared a 33-page document entitled *Singing and Choral Technique*. Owing to the ethical consideration of anonymity (see 4.7.3) this document is not listed in the reference list. This document is an exposé of the course requirements of student teachers at University D, i.e., a study guide. This music education course aims to *introduce the student to all the aspects of choral music education and equip the student with basic choral conducting technique*. The document comprises regulations on attendance, communication, assignments, examinations and prescribed reading. It also outlines the course objectives, which are divided into 12 modules. Module topics include, among others, choral music education philosophy, auditions process, score study and choral discipline. However, only Module 5, *The Choral Warm-up*, contained brief data on breathwork. Green's assignment to students in Module 5 is to find answers to 10 questions. Questions relating to SingEd BWTL are, for example, *Is the action of the diaphragm voluntary or involuntary? Explain and Create your own warm-up exercises that can be successfully used based on the following technical aspects: posture, resonance, breath support, focusing the mind*. The latter four concepts allude to Green's highlighting four breathwork considerations in his BWTL. These are non-tension (see 2.10), breath leading (see 2.5), breath sufficiency (see 2.6), and well-being (see 3.2.3). Hence, it is evident that Green find it necessary to highlight the role of breathing in training future school choral conductors.

Synopsis

Themes: breath leading, breath sufficiency, non-tension, well-being

5.4.2 Manga's breath quotient

Manga shared a document entitled *Breath quotient: Observations of breath intelligence* (Manga & Edward 2020). This document is a guideline for breathwork in observing and addressing a client's breathing behaviour for well-being trainers and trainees. Dr Manga and a Venezuelan Psychotherapist Viola Edward compiled 10 parameters, labelled breath quotient, to be observed during sessions with clients. In their words,

Breath intelligence (BQ) is an experiential set of breathing parameters that we can observe and track in ourselves. It also serves as a guideline for mentors, coaches, therapists and health practitioners in the assessment and monitoring of the breathing characteristics of people they are working with and supporting. They add: Any technique or set of breathing exercises that are being practised should ultimately serve Breath intelligence. [However] These parameters should not be seen in isolation, but rather in the context of all the other parameters.

The colourful and professionally designed 10-page electronic brochure starts with brief notes on breathing (two pages), special considerations (one page), and 10 observable breathing parameters (five pages). The first page is a title page, and the last contains a brief introduction to the two international breathwork authorities.

While reading through the 10 breath quotient parameters, I observed that these items all reflect the breathwork principles embedded within the RSMSPB theoretical framework. I present here in table form a brief 'marriage' of the two theoretical frameworks. In the left column of Table 5.2, the seven principles itemised by Vladimir Vasiliev (Vasiliev & Meredith 2020:54-64) are listed in order of their appearance. These are then matched in the right column with one of the 10 breath parameters listed in order of appearance by Manga and Edwards (2020:5-9).

Table 5.2 Comparison of the RSMSBP and Manga's breath quotient (Potgieter 2023).

Russian Systema Method seven principles of breathing (Vasiliev & Meredith 2020:54-64)	Breath Quotient: 10 observations of breath intelligence (Manga & Edward 2020:5-9)
1. The principle of nose inhalation and mouth exhalation (see 2.4)	2. Nostril breathing at rest
2. The principle of breath leading (see 2.5)	6. Speech 7. Physical exercise
3. The principle of intake sufficiency (see 2.6)	1. Resting respiratory rate 3. Abdominal expansion on the inhale
4. The principle of breath continuity (see 2.7)	8. Responsive breathing
5. The principle of pendulum (see 2.8)	9. CO ² tolerance
6. The principle of breath independence (see 2.9)	10. Yawns and sighs
7. The principle of non-tension (see 2.10)	4. Abdominal vs chest breathing 5. Posture that supports breathing

No single item in the Breath Quotient of Manga and Edwards did not also concur with the Russian Systema breathwork principles. However, these breathwork practitioners focus on breathing as a tool for managing human well-being. They explain:

Breathing is far more than the exchange of air. It is a language. It is a reflection of the quality-of-life force as it is expressed through the body, mind and heart. Every breath that we take mirrors our conscious and unconscious thoughts, the emotions, feelings and sensations that we experience in every moment. The breath can also be a reflection of deeply held emotional trauma, of habitual patterns of tension that have been carried from the moment of conception, or the experience of birth and the conditioning imprinted by family, culture and the journey of life.

This statement is in alignment with the extensive literature consulted on psychological well-being (see 3.2).

Whereas the Russian Systema Method expresses a preference for nose inhalation and mouth exhalation, this document states:

Breathing through the nostrils during everyday activities and when at rest is a natural choice. There are also situations when it is very natural to breathe through the mouth, such as when yawning, sighing and when we require more oxygen during singing and exercise. Habitual mouth breathing while at rest, leads to what some call 'over-breathing'. This can fuel the stress response and impact cellular respiration and metabolic function. Habitual breathing through the mouth may indicate an underlying medical condition such as chronic sinusitis or nasal septum deviation. It may also occur as result of a breathing habit that has developed over time.

From this brief description, Manga seems to agree with the RSM principle on nose inhalation but might not necessarily agree on the latter part of mouth exhalation as a *natural choice*.

The second RSM principle (see 2.5) emphasises the importance of activity that is led by the breath and not breath that is led by activity. This document affirms the same thought:

A good indicator of Breath intelligence is when we can unconsciously and consciously coordinate our movement with our breathing and can engage our breath in strategic ways to guide or support a physical action. It also says: We can learn to use the breath to power and modulate the rhythm and tone of our voice. The ability to maintain the strength and volume of our voice, even at the end of a breath and the capacity of speaking long sentences on a single breath are signs of Breath intelligence.

These words affirm SingEd BWTL practices (see 5.4.2) which employ breathing to navigate the demands of song execution.

Compared with the third RSM breathing concept (see 2.6), this research document concerns two separate items: resting respiratory rate and abdominal expansion on the inhale. Regarding the respiratory rate, the document states:

In general, a resting respiratory rate between 8 to 14 breaths/minute while seated indicates that the body's autonomic nervous system is in balance. The higher the resting respiratory rate, the more likely it is that one is in a state of sympathetic overdrive. The RR naturally diminishes when lying down or when being observed. The objective is to get a picture of the person's habitual breathing patterns during everyday activities.

The correct use of the diaphragm muscle is also accentuated:

as we inhale and the lungs inflate, the abdomen will bulge out. As we exhale and the lungs deflate, the abdomen should naturally retract. If this pattern is reversed, with the abdomen being sucked in on an active inhale and pushed out on the exhale, it may indicate a compromised diaphragm function or pattern of stress that causes the inhibition of full lung expansion. This can be corrected with training belly breathing.

Thus, breathwork practitioners observe the breathing rate and diaphragm action to address breath sufficiency during sessions.

The RSM advocates continuous, uninterrupted breathing (see 2.7). Within the context of this discussion, this concept finds a partner in the breath quotient parameter of responsive breathing. It is written in the document:

A sign of high BQ – Breath intelligence is when the breath feels free and is flexible and adaptable, rather than maladaptive and reactive. A reactive pattern would be when we stop breathing when we're listening, concentrating, texting or holding an emotion. Responsive breathing adapts and flows in a way that serves whatever activity we are engaged in without holding the breath.

In this regard, holding or halting the breath is viewed as a natural reactive pattern but it is not conducive to long-term use, i.e., becoming an everyday habit. Regular breathing should be free and continuous.

The pendulum principle (see 2.8) invites contemplation of the breathing rhythm and highlights the benefits of conscious and voluntary breath holdings between the in-breath and out-breath. This document reads that

Good tolerance to carbon dioxide in the blood will prevent over-breathing and will support calm breathing at rest, resulting in improved cellular respiration... A good BQ – Breath intelligence indicator is the ability to hold a comfortable pause of 20 seconds after a normal exhalation. The longer we are able to hold the pause, the greater our tolerance to carbon dioxide and the more efficient cellular respiration will be.

Therefore, not only inhalation and exhalation but also breath holding is measured by breathwork practitioners during sessions with clients.

The RSM highlights that breathing should be independent (see 2.9). In this regard, the research document points to the two instinctive human reactions of yawning and sighing. It explicates:

Both yawns and sighs are natural 'recovery loops'. They are inbuilt physiological reflexes that boost parasympathetic activity (relaxation response) and are part of the body's natural way of maintaining homeostasis. The expanded inhalation of the yawns and the one that precedes a sigh maintains the integrity of lung expansion. These reflexes can also be used consciously as a technique to aid relaxation and release tension.

Hence, breathwork practitioners not only observe these instinctive reactions in clients but also employ them consciously in aiding the release of stress in the body–mind complex.

Lastly, this research document contains two entries concurring with the seventh RSM breathing principle of non-tension (see 2.10): abdominal vs chest breathing and posture that supports breathing. We read:

A common suboptimal breathing pattern is the overuse of smaller and less efficient accessory muscles in the neck and shoulders. These muscles are designed to support the diaphragm when there is an increased demand for oxygen. If there is a pattern of chronic tension in these muscles or the diaphragm is weak, the accessory muscles become chronically overused. Furthermore, we observe the neck and shoulder muscles tensing, with the shoulders moving up towards the ears, or we notice the chest moving more than the belly when we breathe. Chest breathing results in a high effort to energy ratio. In other words, too much effort is being used to breathe with a poor energy yield and this leads to fatigue.

Regarding posture, the document states:

Postural habits from prolonged sitting, injuries, certain illnesses, negative thinking patterns, chronic stress, addictive habits and psychological trauma can have a big

impact on the way we breathe. Patterns of tension and contraction build-up in the fascia restricting breathing and the free flow of energy through the energetic pathways of the body. It is important to become aware of how these postural mannerisms are related to our breathing patterns and to learn how to release them through postural training bodywork combined with breathing practices.

It seems then that breathwork practitioners make clients aware of and address pathological postural habits that might constrict the natural, free flow of the breath.

In summary, this research document has a high correspondence with the Russian breathwork principles. However, whereas the RSMSPB are in service of endurance training, Manga and Edwards (2020) designed their breath quotient with human well-being in mind. Thus, the same BWTL concepts are shaped creatively for different outcomes.

Synopsis

Themes: nasal breathing, breath leading, breath sufficiency, breath continuity, breath holding, independent breathing, well-being

5.4.3 Dobrin's 25 reasons for nasal breathing

Dobrin shared a typed-up, one-page document entitled, *Here are 25 reasons that you should be a nasal breather!* (Dobrin 2022). Most of the items listed touch on the theme of well-being. Predominantly, physical well-being (see 3.3) is discussed (19 instances). However, there are references to emotional well-being (see 3.2.2) (five instances), and to spiritual well-being (see 3.4) (one instance).

In two of the 25 entries, Dobrin quoted authors Fulford and Stone (1997) and also Peg Jordan (1999), the former being alternative medicine practitioners and the latter a well-published fitness coach celebrity. Fulford and Stone are cited by Dobrin:

Remember: always try to breathe through your nostrils, and not through your mouth, because air must contact olfactory nerves to stimulate your brain and put it into its natural rhythm. If you don't breathe through your nose, in a sense you're only half alive.

This statement is congruent with the data derived from the research interviews (see 5.3.1). Jordan, cited by Dobrin, stated:

Breathing through the mouth tends to inflate only the upper lobes of the lungs, which are connected to sympathetic nerve fibres, the branch of the nervous system that activates the fight or flight response... When you switch to nose breathing, you inflate the entire lungs, including the lower lobes, which are connected to the parasympathetic branch of the nervous system, the branch that calms the body, slows the heart rate, relaxes and soothes. Through proper nose breathing, you employ both branches of the nervous system. At times the foot is on the brake, at times it is on the gas. The back-and-forth fluctuation is a balancing act that your body intrinsically knows how to do and that your mind appreciates.

The balance of the entries has no credentials, but the information concurs with data gathered during the literature review research process (see 2.4).

Regarding spiritual well-being, it is mentioned that nose breathing *facilitates deep meditation*. This mention is the first entry on the list of 25 and, although concise, the entry aligns with the literature review data on spiritual well-being (see 3.4). On matters concerning emotional well-being, it is mentioned that nose breathing [nourishes] ...

the central nervous system and consequently, reduces anxiety, brings your attention to the present moment, and keeps energy levels balanced and centred. Also, nose breathing increases our sense of smell, linking it to the limbic system, which is the seat of our emotional boy,. our 'gut feel'. We can then make more choices on how we feel about things. Smell is a very important environmental factor for our survival.

Nose breathing can thus impact our emotional and mental state, i.e., how we are present and how we function in the world. This data concurs with the psychological well-being literature reviewed (see 3.2).

The majority of the research document concerns itself with physiology. The natural design of the nasal passageway *warms, moisturises, sterilises, and filters the air during inhalation*. These nasal functions aid to *strengthen [the] immune system* and regulate *body temperature, sleeping patterns, and balance of the Ph of the blood*.

These items highlight the natural purpose and functions of the nose within the human body.

None of the 25 listed items are discussed in depth. Instead, the document seems to inform Dobrin's students briefly as to why he professes nose inhalation, i.e., to create awareness.

Synopsis
<i>Themes:</i> nasal breathing, breath awareness, well-being

5.4.4 Summary

The three documents reviewed, all in varying contexts, create awareness of the breathwork concept. Green's purpose is to train student teachers to become aware of the role of breathing in singing. Manga created a breath quotient to assist healthcare breathwork practitioners in aiding their clients to attain wellness. Dobrin emphasises the natural purpose and design of nasal breathing to aid his martial arts students in the appreciation and implementation of the first RSM principle. No conflicting or additional data were noticed in analysing these documents. The same principles discussed in the research interviews (see Addendum A) were framed within modality-specific contexts. Nine themes emerged from the analysed documents:

Table 5.3 Document analysis: Themes (Potgieter 2023).

	Theme
1	nasal breathing
2	breath sufficiency
3	breath leading
4	breath continuity
5	breath holding
6	independent breathing
7	Well-being
8	non-tension
9	breath awareness

Of significance is that the last item on the list in Table 5.3, breath awareness, was also a much-deliberated concept during the interviews. However, deliberating this specific concept was not part of the original interview schedule (see Addendum A). Hence, silent data emerged from the fieldwork research process. I discuss this silent data in the script that follows.

5.5 SILENT DATA: BREATH AWARENESS

Touring the research landscape generated several comments on silent but essential data. A few arguments emerged under the umbrella theme of breath awareness that can also be labelled breath education. Manga stated *I don't think we can do any conscious breathing until we do breath awareness. So, breath awareness is the foundation*. Hence, an unasked question concerns breath awareness or breath education. I labelled it Question 11, in addition to the 10 questions in the original interview schedule (see Addendum A).

5.5.1 Question 11: Breath awareness

What do you consider the key elements of creating breath awareness, i.e., breath education?

Breathing is an involuntary activity that we engage in numerous times throughout our day. We do not think about it; therefore, this autonomous action should be functioning optimally. Dobrin made the statement that *the breathing system is so intelligent on itself*. By making unconscious pathological breathing habits conscious, we can, through conscious awareness, make healthy breathing habits unconscious. Therefore, Dobrin argued that sound breathing habits *should get to the point where you ... do it subconsciously. Completely automatically*. However, to get this point, you should *teach your brain ... prior to create an optimum familiar pattern*. Manga agreed that the goal of breathwork practices is *bringing conscious attention ... to what is an unconscious function*. Yellow remarked that his educational task is to assist learners to *rethink what they think is right*. Green stated that students need to learn to engage consciously in the *automatic* aspects of breathing. These statements point to the necessity of creating awareness to bring about optimum breathing habits.

Research participants mentioned several attributes of the respiratory, cardiovascular, immune, neurological, and nervous systems. Creating awareness of the attributes of these systems is important to engage successfully in optimum breathing practices. Manga stated: *the breath is like the golden thread that weaves through all these dimensions of who you are* and therefore basic knowledge can assist us in *restructuring how we are breathing unconsciously*. Dobrin said, *everything that you learn; it's based on breathing*. Hence, breathing is *not just a separate skill* but *underpins everything that we are doing*. From a SingEd perspective, Pink, Green and Yellow also alluded to physiological considerations. Conversations about breathing concepts thus need to include basic anatomical bodily awareness.

Dobrin, Manga, Purple, Pink, Yellow and White acknowledge the unique physique and temperament of individuals and therefore advised a flexible teaching approach that is not *regimental* (Dobrin) but *flexible and that has creative licence* (Manga). Awareness of the basic principle is paramount; however, Dobrin allows students to *figure it out themselves* in applying these principles. He *encourage[s] them to ... find a sort of way* to make breathing principles their own. Manga agreed with Dobrin in saying *rather than sticking to a rule of what is right ... you actually are more aware of the basic principles and you are harnessing those principles*. Purple stated: *We all perceive things, and understand things and experience things in very different ways; therefore, I teach breath very individualistically*. Also, Pink mentioned:

my philosophy is that if you have a certain technique that works for you, and you sing well, and you produce singers that sing well, ..., good ... Then stick with that. He added, *You really have to listen what are the issues that I have to address with this specific singer*. Yellow explained: *I don't think there's one model that works for everyone, especially when we try to teach the whole concept of singing properly*.

White stated: *As long as they ... understand the concept* there is room for differences in breathing concept applications, because, as Green said, *We are different in things*. It is evident that, although there is consensus about the basic breathing principles, these principles are used flexibly to accommodate the particular individual and context.

Dobrin, Manga and all six SingEd research participants shared several breathing methods and exercises that students can learn, practise and apply for specific outcomes. For Manga, these different practices, *applied intentionally*, can play a vital role in *self-awareness, self-regulation, and transformation*. Manga added that breathing awareness practices can be made *fun ... practical ... alive* in order to *upskill young people*. In this regard, Dobrin employs a wide range of metaphorical imagery. He equates breathing in through the nose and out of the mouth to *the petrol engine ... it doesn't waste petrol*. To emphasise the value of experimenting with various breathing techniques, Dobrin mentioned *tuning in the radio* to find the ultimate *frequency*. Yellow's teaching strategy includes what he terms *experiential learning ... to learn from what they already know*, making use of everyday life experiences to animate concepts for learners. As an example, Yellow uses the image of *a tyre, a tube* to explain breath-sufficient low breathing. Gold, like Dobrin and Yellow, also employs imagery and added: *You must make it as simple as possible*. It is thus possible to teach and hone breathing concepts and skills in an appropriate educational way.

Similar to SingEd, classes in Russian martial arts training always have a warm-up phase prior to the performance exercise. For Dobrin, any physical exercise *can be turned in[to] a breathing exercise*. Most importantly, technical skills are honed in the warm-up phase that will later find application the actual performance phase. Dobrin said: *Warm up. It's an intricate build-up and it's quite important*. Dobrin aims to *broaden the horizons of the breathing system* during warm-ups for sound practical integration. He added: *It's almost the work supposed to be done prior, so much that sound breathing habits just flow how it wants to*. On this topic, Blue commented: *We promote ... to teachers ... you need to warm up the voice before you do any music or any singing*. For Purple, *breathing improves the exercise and exercise improves the breathing*. Green emphasised the necessity of *working on* breathing exercises in the preparation or warm-up phase prior to *applying it ... to the music*. Hence, it is important to focus on different breathing concepts in the warm-up phase to assist the sound integration thereof in the performance phase. It was evident that the martial arts, healing and SingEd modalities all have in common a preparation and an application phase.

Blue emphasised the value of *revision*, because if they *are not really forming a golden thread in the development, and it's just a series of loose-standing incidents, the synapses cannot form in the brain to be really beneficial to the learner*. In this regard, Pink emphasised that minding breathing is *not just a once-off but constantly built into the lessons*. Green also accentuated the necessity of *incorporating breathing exercises into our daily routine*. Gold agreed that *you can always remind them*. A natural outflow of warm-ups that integrate regular breathing practices is that students become *complete[ly] responsive* to teaching (Dobrin). Consequently, through practice and repetition, learners can become breath awareness fit.

In summary, the research sample of nine interviewees all allude to creating breath awareness in an optimum way through imparting concise anatomical body knowledge, being sensitive to individual human differences, making conscious the unconscious, and initiating regularly applied practical exercises to animate abstract concepts.

Synopsis <i>Theme:</i> breath awareness, breath education <i>Exclusive Subthemes:</i> learn, practice, apply, warm-up, repetition

5.6 DATA PRESENTATION

Following the initial data report (see 5.2) and subsequent data analysis (see 5.3, 5.4, 5.5), I pondered how to present the data. After the process of flying metaphorically over and driving past the data, it was now time to walk on foot and to calculate the research units. Metaphorically, while walking, the researcher used a spade to dig up the research landscape. During this ‘digging’ the frequency of each theme identified during the analysis research phase, was carefully observed and recorded (see Addendum E).

To the initial 10 interview questions, I added an 11th concept, that of breath awareness (see 5.5). Also, interview questions 8, 9 and 10 are fused under the umbrella term of well-being. The reason for this is that, aside from the substantial research participant contribution on breathing and well-being by Manga and some value added by Dobrin, the low SASingEdL well-being comment frequency does not

warrant three different entries in an emergent SingEdBWL framework. Manga also commented:

You know, even when we speak about physical, emotional, spiritual, we speak about them in terms of separate categories. But we know that they actually are not separate ... the body – mind are connected. And, in fact, are one system ... We are shifting our paradigm, even from saying that these are categories of mental, emotional, spiritual, and rather than this is the full human experience.

Thus, a total of nine main themes crystallised out of the research data. It was apparent that none of the nine breathwork concepts stands in isolation. Research participants mostly discussed themes by making reference to one or more of the other themes which I termed ‘inclusive subthemes’. However, there were also subthemes unique to each a priori theme, which I termed ‘exclusive subthemes’.

The essence of the themes and subthemes that emerged from the metaphorical data analysis process of flying over, driving past, and walking and digging in the research landscape, are summarised in Table 5.4.

Table 5.4 Data analysis integration (Potgieter 2023).

Themes	Subthemes
Intake sufficiency	• Natural resting respiratory rate • Diaphragmatic/abdominal/low/deep breathing ensures optimal energy/air/breath intake • SingEd: breath support/resistance employed to regulate outflow of the air
Breath leading	• Breathing comes before action • For efficient use of air/energy/breath, it is important how exhalation is managed/controlled/led • SingEd: Regulates sound production/phonation, pitch/intonation/register/intervals, dynamics/energy intensity, timbre/resonance/emotion, text/diction/consonants/vowels • SingEd: Score preparation and awareness is essential • Culture specific
Non-tension	• Form: aligned upright/straight posture/spine • Mobility/balance: feet, knees pelvis, chest, sternum, shoulders, neck, head, jaw • Relaxation: to get full benefit of breathwork practice benefits

Themes	Subthemes
Well-being	- Breathing affects nervous system - Conscious directed breath can contribute to: Respiratory health Release of negative emotion/stress/anxiety Attaining mental clarity/alertness/bring present/centring Managing energy levels: upregulate or downregulate Personal transformation/Experience of connectedness - SingEd; Stage fright/Performance anxiety management
Inhalation preferences	- Nasal respiration is natural and healthy: It is best for everyday use. - Modality-specific nose and/or mouth inhalation is employed for specific needs/outcomes/practices - During inhalation SingEd are concerned with 'raising' of the soft palate, i.e., inhalation placement, to regulate resonance: 'yawn space' - Age/culture/health need consideration
Breath continuity	- Responsive breathing that supports activity - Continued air flow not to be disrupted - SingEd: Legato: connecting notes, especially vowels, sing through the line - SingEd: Legato lines carry the sound, text and emotion
Awareness	- Natural vs modality-specific breathing - Conscious/voluntary vs unconscious/involuntary breathing - Preparation vs application Phase - Exercises: revision/repetition - Understand principle, but use creatively to suit individual needs
Pendulum	- Breathing rhythms for different outcomes/practices - Breath holding linked to well-being: optimum oxygenation of cells - SingEd: slight breath suspension possible, but breath holding during performance will restrict air flow and create discomfort. However, breath holding exercises can be incorporated in preparation/warm-up phase.
Independence	- Instinctual/organic breathing harmonious with activity - SingEd: singing is breath dependent - SingEd: choristers could take breath independently to ensure continuous sound, i.e., staggered breathing

Of the nine major themes identified and deliberated on during the course of the research fieldwork, the most emphasised themes were intake sufficiency, breath leading, non-tension and well-being, followed by inhalation preferences, breath continuity and breath awareness. The least discussed topics were pendulum and independence. Even though Question 11 was not an original research question, its prevalence was greater than that of pendulum and independence. Also, although not an independent item in the RSMSPB theoretical framework, the theme of well-being ranked significantly high.

What follows is a visual presentation of the nine themes that emerged from the empirical research. Thus, Figure 5.1 reflects the results of the breathwork research field exploration.



Figure 5.1: Breathwork delineators: Research fieldwork integrated outcomes (Potgieter 2023).

The cognisance of the theme frequency was significant in deliberating and motivating an emergent SingEdBWTL framework, as elaborated on in Chapter 6.

5.7 CONCLUDING REMARKS

Flying over (reporting), driving past (analysing), and walking through (presenting) the research landscape, yielded significant data that could assist in shaping an emergent SingEdBWTL framework. It is evident that the various breathwork concepts do not stand in isolation. From an educational perspective, every concept needs to be contemplated individually in order for it to be fused optimally into the whole. Although divergent voices entered the dialogue during the research field exploration, common threads are consistent with data gathered from the literary review. The unique lived-world sharing of the research participants affirms the essence of qualitative research (see 4.3): life manifests itself, not singularly, but in manifold richness.

CHAPTER 6:

RESEARCH REFLECTIONS – *BREATHING OUT*

6.1 INTRODUCTION

Chapter 5 portrayed the data collection process, including qualitative semi-structured interviews and document analysis. Three orientational expert interviews were conducted, highlighting breathwork in the divergent fields of martial arts, well-being and primary school education. Six qualitative semi-structured interviews were conducted with SASingEdL, focusing on how breathwork manifests specifically within SingEd. Document analysis consisted of teaching and learning material employed by various breathwork practitioners: a martial arts instructor, a breathwork and well-being specialist and a SingEd lecturer. The data was analysed in alignment with a priori codes derived from the RSMSPB theoretical framework and the literary exploration of breathing and well-being. Several significant themes emerged from the deductive data analysis approach.

This chapter amalgamates the information gathered by reviewing relevant literature and by exploring empirical data. The purpose of the study was to contemplate breathwork concepts that could be included in an emergent SingEdBWTL framework. Such a SingEdBWTL framework is meant to assist Life Skills educators in adhering to the CAPS breathwork requirements within South African schools. In this chapter, I am ***breathing out*** the accumulation of riches gained during this study by synthesising the data into a whole.

6.2 SUMMARY OF KEY FINDINGS

This part of Chapter 6 presents an overview of the findings from the transdisciplinary literary reviews (Chapters 2 and 3) and empirical research (Chapter 5).

6.2.1 Summary of literature reviews

Reviewing the CAPS and accompanying CAPS-compliant textbooks (see 2.2) revealed the low status of breathwork within South African schools. Random expressions of mechanical breathwork terminology have found their way into the CAPS school syllabus, and subsequently, there is a minimalist representation and even a misrepresentation of these terminologies within the ensuing textbooks. These are *Day-By-Day* (Brennan *et al.* 2019a; 2019b; 2019c), *Platinum* (Amato *et al.* 2020a; 2020b; 2020c) and *Spot On* (Carstens *et al.* 2020a; 2020b; 2020c). Although learner well-being is a focus area within the CAPS document, breathwork is mentioned nowhere nor is it utilised as a tool for this purpose.

The seven breathwork principles within the RSM theoretical framework (see 2.3) were used as guidelines to steer Chapter 2, the 'how to breathe' chapter. Hence, the seven principles became seven topics of discussion. I found that these seven principles manifest uniquely within both SingEd and non-SingEd modalities (see 2.4 to 2.10).

Although SingEd literature revealed that singers inhale both through their noses and mouths, sometimes only through their mouths, the non-SingEd literary narrative strongly emphasised the advantages of nose inhalation compared to the disadvantages of mouth inhalation (see 2.4). Also, similar accounts of and reasons for realising an optimised lung capacity were found in both non-SingEd and SingEd literature (see 2.6). However, SingEd breath sufficiency literature revealed a unique modality-specific focus on air outflow regulation, referred to as breath support (see 2.6.5).

How to manage exhalation has a strong focus in SingEd as the breath is vital in phonation, i.e., in producing sound, the basis of singing (see 2.5.2). Non-SingEd literature also had a breath management focus (see 2.5.1); however, these were aligned with different outcomes related to enhanced physical and mental endurance. Both non-SingEd and SingEd literature were in agreement about an optimum posture that enables the physical body to be in a relaxed state (see 2.10). Neither contracted musculature nor a nervous mental disposition should restrict the natural breath flow. Exhaustive practical guidelines and exercises to enhance posture and relaxation are abundant in the literature. Whereas non-SingEd literature views various disturbances

in the continuous flow of air as detrimental to well-being and optimal body–mind coherence, SingEd literature has a somewhat different take on the matter. Legato singing, i.e., connecting musical notes smoothly and efficiently, is professed to be the quintessential aim of technically proficient and beautiful singing (see 2.7).

As explained by the RSMSBP framework, breath independence as a concept only attracted a little attention in the non-SingEd literature (see 2.9). However, I had to ‘read between the lines’ to find parallels to the RSM principle in SingEd literature. Furthermore, different breathing rhythms supporting different outcomes were highlighted by non-SingEd literature. The concept of breath holding, a pause between the inhalation and exhalation respiration phases, was discussed; however, no substantial SingEd literary discourse was found reminiscent of the pendulum principle (see 2.8).

The literary exploration in Chapter 3 clarified the relationship between breathing and well-being from three distinct but interrelated foci: physiology (see 3.3), psychology (see 3.2), and spirituality (see 3.4). These three concepts were used as guidelines to steer the ‘why breathe’ chapter, thus manifesting into three distinct topics of discussion. I found the relationship of breathing to these three concepts poorly contemplated within SingEd literature (see 1.7.2). Where breathwork in singing was utilised in well-being research, it was undertaken by nursing or psychology practitioners (see 3.3.3), but not by SingEd specialists. In contrast, the well-being and breathing connection is extensively deliberated upon within non-SingEd scientific and ancient wisdom literature. The entire Chapter 3 bears witness to this connection.

Optimum breathing habits were found to enhance physical well-being in the domains of physical activity regulation (see 3.3.1), diet (see 3.3.2), dental health (see 3.3.4), optimum sleeping patterns (see 3.3.4), and respiratory health (see 3.3.3). Also, regulated breathing practices were found to enhance psychological well-being related to improving mental focus (see 3.2.3), managing emotions (see 3.2.2), and counteracting stress (see 3.2.1). Concerning spiritual well-being, conscious breathwork was found to enhance the transcendental experiences of union with the Divine (see 3.4.1), and oneness with all creation (see 3.4.2). It is also utilised as a tool for self-exploration (see 3.4.3).

6.2.2 Summary of empirical findings

The research participants (see 4.4.3) were purposefully sampled to explore BWTL concepts and practices. The participant narratives revealed congruent perspectives on breathwork concepts; however, demonstrating a diverse multiplicity of practice and implementation. These in-practice variances were aligned with each participant's concept comprehension and situated within the demands of contextual outcomes. The concepts and practices met in the research field were found to be unambiguously congruent with those in the literary reviews.

During the field exploration, participants expressed their opinions and demonstrated practical examples of inhalation preferences (see 5.3.1), how to manage exhalation (5.3.2), intake sufficiency (see 5.3.3), breath continuity (see 5.3.4), the various rhythms of breathing (see 5.3.5), breath independence (5.3.6), posture and relaxation (5.3.7), breath awareness (see 5.5) and well-being (see 5.3.8. to 5.3.10). I found that all research participants were well versed in mechanical breathwork aspects. However, the non-SingEd participants, Vadim Dobrin and Dr Ela Manga, had a superior grasp of breathwork for well-being concepts compared to their SingEd counterparts.

It is clear from the empirical data that a distinction should be made between guidelines for everyday optimum breathing and modality-specific breathing. The ideal is for good breathing habits to be habitual and automatic. To achieve this, both non-SingEd breathwork modalities and SingEd teaching strategies bring pathological breathing habits to conscious awareness and address them through regular breathwork awareness exercises. To this end, non-SingEd and SingEd have a preparation and performance phase in common (see 5.5). During the preparation phase, separate breathwork concepts are in the foreground and are engaged theoretically and practically. This specific focus on one aspect allows for a deepened awareness. These separate concepts are integrated and implemented during the performance phase for modality-specific outcomes. For example, both the SingEd and non-SingEd domains create awareness of diaphragmatic breathing. For the well-being profession, this requirement both aids breath sufficiency and triggers the parasympathetic nervous

system The latter is used as an antidote for shifting fear and anxiety from the body–mind complex. For the SingEd profession, diaphragmatic breathing also aids intake sufficiency; however, the requirement to control the outflow of the breath in order to sustain a musical singing line, is modality specific. Hence, breathwork efficiency underpins a successful outcome, both in non-SingEd and SingEd.

The empirical data collection afforded me insight into the BWTL paradigms from expert SingEd and non-SingEd perspectives. The contributions of research participants enriched my understanding of why breathwork is significant and how to engage practically with breathwork concepts. More importantly, it allowed me to contemplate and affirm key delineators to be included in a SingEdBWTL framework for use by Life Skills educators.

6.3 REFLECTING ON THE RESEARCH QUESTIONS

Here I reflect briefly on the three original research questions before stating conclusions and making recommendations.

- *What are the breathwork paradigms of South African Singing Education lecturers?*

The perspectives of the six SASingEdL research participants were rooted in practical lived-world experience. They all contributed richly to the breathwork topical conversation steered by the RSMSPB theoretical framework (see 2.3). SASingEdL perspectives were found mainly to be congruent with this framework, although SingEd modality-specific requirements underlined SingEd breathwork practices. Amongst SASingEdL, it can be said that breathwork concept perspectives were highly consistent; however, breathwork execution practices were rich, unique, and divergent. The six SASingEdL are all highly qualified and experienced educators and this was evident in the rich and detailed BWTL contributions regarding BWTL within the domain of SingEd (see 5.3.1 to 5.3.7, Addendum D4 to D9). Although the concept of well-being sparked some interest during the interviews with SASingEdL, the commentary was often superfluous and not rooted in grounded knowledge (see 5.3.8 to 5.3.10).

- *Why should breathwork concepts be included in a singing education breathwork teaching and learning framework?*

Breathing underpins singing. Without breathing, singing is not possible (see 1.1). Superior breathwork thus has a direct bearing on superior singing performance. SASingEdL not only affirmed the concepts embedded within the RSMSPB theoretical framework but also provided rich explanations and demonstrations thereof. Merely than just breathing, how to manage this breathing for optimum singing was expertly deliberated and demonstrated by the six SASingEdL (see 5.3, Addendum D4 to D9). Several significant breathwork concepts were contemplated that can, in my opinion, be included in an emergent SingEdBWTL framework (see 6.4.).

- *How is breathwork of significance to well-being?*

For most of our day, breathing is an autonomous bodily function. However, breathwork practices seek to enhance well-being by consciously taking control of this natural function. Therefore, breathwork modalities employ various stratagems towards diverse outcomes in the realms of physiology (see 3.3), psychology (see 3.2), and spirituality (see 3.4). Consequently, it is endeavoured to live life meaningfully through regulated breathing practices.

Being alive is dependent on breathing. The breath is what animates our physical bodies. Through conscious breathwork, it is possible to enhance well-being by creating awareness of superior breathing mechanics. Sound respiratory mechanics have a significant impact on peak performance in various fields. By taking breathing under voluntary control, we can upregulate or downregulate our energy levels, enhance mental alertness and discharge anxious and nervous tension. Underlying well-being is sound breathing mechanics. Underlying sound breathing mechanics is well-being. This is especially evident when contemplating diaphragmatic breathing (see 2.6.3). When consciously employed, this muscle not only aids optimised respiration and breath support (see 2.6.5) but also acts as a manager of emotion (see 3.2.2.2) owing to its entanglement with the parasympathetic and vagus nervous systems. It is then no wonder that Manga and Murray (2022b:27) refer to the diaphragm as “[t]he star of the show” and further explain: “The diaphragm is far more than the primary muscle of breathing. It acts as a stabiliser of the spine and emotional

processing unit for our life experience. The optimum functioning of this fascinating muscle is a fundamental pillar of health”.

6.4 CONCLUSIONS AND RECOMMENDATIONS

The findings consistently affirmed key delineators to consider when engaging in BWTL. Whether it be marital arts, healthcare, conventional school education, or any other modality like yoga or tai chi, breathwork manifests fairly similarly within these dimensions. This research endeavour highlighted what SASingEdL considered essential when engaging in breathwork for singing. Taking into account the findings from the literature review (Chapters 2,3), research fieldwork (Chapter 5), plus my own SingEd teaching experience, I recommend the use of an emergent **Singing Education Breathwork Quotient (SingEdBWQ)**.



Figure 6.1: Singing Education Breathwork Quotient (SingEdBWQ) (Potgieter 2023).

The visual depiction of a wheel (Figure 6.1), a vital component of forward motion, is analogous to a continuous breath cycle required for human life in general and SingEd specifically. Also, when one or more of the spokes of this wheel is not functioning optimally, it could potentially compromise the quality of the forward motion, i.e., the quality of the desired outcome. Akin to a person's IQ, the breathwork 'intelligence', degree, or quotient of an individual can be ascertained by utilising this framework as a guideline.

What then would be the ingredients of such an emergent SingEdBWQ?

- **Conclusion and recommendation 1: Awareness**

Creating awareness and reaping the benefits of sound breathing mechanics is at the heart of various non-SingEd and SingEd modalities. Offering brief but sufficient knowledge about essential human anatomical and physiological aspects can aid a deepened understanding and appreciation of various breathwork techniques. In this regard, accepted educational practices like focusing on separate items before integrating them into the whole, repetition and age appropriateness were mentioned by research participants. Becoming conscious of the autonomous respiration process also allows taking breathing under conscious control. Porges (2022:3) remarked that "when you can gain a sense of awareness, you have access to choice". Thus, breathing can be employed for various outcomes as illuminated by the vast non-SingEd and SingEd literature. Breathing awareness is key to unlocking the potential of breathwork for every individual, whether in non-SingEd modalities or within the domain of SingEd.

'Awareness' is the entry point to breathwork, and I recommend that the concept should be included in a SingEdBWQ.

- **Conclusion and recommendation 2: Purposeful inhalation**

The wording of the RSM 'principle of nose inhalation and mouth exhalation' suggests an inhalation and exhalation preference. The RSM expert reiterated that this preference is the most natural and healthy way of breathing (see Addendum D1).

However, the breathwork and well-being expert, a qualified medical doctor, strongly disagreed. She argued that normal and healthy ‘breathing at rest’ is primarily in and out through the nose (see Addendum D2). That being said, both agreed that a distinction could be made between normal, everyday breathing and modality-specific breathing. Breathing can be employed in various ways to aid a specific outcome. The SingEd lecturers differed in their preference for inhalation (see 5.3.1). One research participant only employs mouth inhalation for singing, while most agreed that a combination of nose and mouth inhalation for singing is the norm. The above arguments are consistent with reviewed literature (see 2.2). Nose inhalation is considered natural and contributes to our well-being for ample reasons. Curiously, literature discussing the advantages or disadvantages of either a nose or mouth exhalation preference is minimal. There is room for further scientific inquiry. Also, no SingEd research candidate referred to this aspect. It can be argued that mouth exhalation is a given when singing. In this regard, I found the wording of the latter part of the RSM principle redundant in contemplating the SingEdBWQ.

I recommend that, through breath awareness, i.e., breath education, we create awareness of the natural and well-being benefits of nose inhalation and the detrimental effects of mouth inhalation as an everyday subconscious habit. Instead of prescribing a specific way of respiration, it is preferable to allow room for modality-specific ways of breathing, like singing, I recommend further that we use the wording ‘purposeful inhalation’. In this way, a distinction is made between everyday breathing, which should be through the nose, and modality-specific breathing, which can be through the mouth or both through the nose and the mouth. ‘Purposeful inhalation’ thus makes allowance for flexibility and creativity.

- **Conclusion and recommendation 3: Non-tension**

Both non-SingEd and SingEd literary reviews (see 2.10) and empirical research (see 5.3.7) provided bounteous support and exposition of the RSM ‘principle of non-tension’. The basic premise is that energy must flow unobstructed throughout the body. Therefore, awareness is created regarding tensions that could possibly restrict airflow. Both physiological tensions, i.e., a maladjusted posture that causes contracted musculature, and psychological tensions, i.e., a distressed nervous system, can cause these obstructions. Therefore, relaxation is imperative. Within SingEd, the raising of

pitch is often associated with the rising of vocal tract tension owing to supporting breath delineators like posture, resistance, continuity and exhalation management being inefficient.

It is not difficult to recommend that ‘non-tension’ should be included as a vital component of an emergent SingEdBWQ. The term ‘relaxation’ could also be apt as a concept descriptor.

- **Conclusion and recommendation 4: Intake sufficiency**

Owing to gravity, most alveoli, the many oxygen–carbon dioxide exchange instruments, are situated in the lower and larger proximities of our lungs. Therefore, awareness of the physiology of the lungs is essential in understanding what it means to ‘take a full breath’. Non-SingEd and SingEd literature (see 2.6) were highly congruent with the fieldwork findings (see 5.3.3). A distinction was made between clavicular (high), chest (middle), and diaphragmatic (low) breathing. Low breathing is promoted for various reasons. It allows for prime gas exchange that leads to optimal energy uptake by the cells of the body; thus, contributing to physiological well-being. Also, within SingEd, sufficient air is needed to meet the high demands of singing a musical phrase.

Although ‘low breathing’ could be considered a term for inclusion in a SingEdBWQ, both the literature and empirical research revealed instances where different intake measures are required. Therefore, I recommend the ‘open-ended’ concept of ‘intake sufficiency’, as articulated in the RSMSPB theoretical framework, for inclusion in the SingEdBWQ.

- **Conclusion and recommendation 5: Resistance**

A primary requirement of singing is to resist the natural recoil of the diaphragm that drives the autonomous bodily function of exhaling. It is necessary to prolong this exhalatory phase to have sufficient energy to execute a musical phrase. Both the SingEd literary review (see 2.6.5) and research fieldwork (see 5.3.3) revealed different approaches to resistance, often termed ‘breath support’. Within non-SingEd modalities, the diaphragm is crucial to create support for physical activities. There is

no separate entry in the RSM theoretical framework for resistance or diaphragmatic support. However, the 'principle of the pendulum' alludes to the concept of breath holding (see 2.8). This principle makes provision for different rhythms of breathing for different purposes. The breath-holding concept, i.e., not breathing in or out but delaying the breathing process either at the end of exhalation or at the end of inhalation for a determined period, is utilised, amongst other reasons, to maximise the oxygen saturation of cells and to aid mental clarity and elevated energy levels. A common breath practice amongst non-SingEd modalities is 'square' or 'box' breathing. A person will breathe in for four counts, hold the breath for four counts, breathe out for four counts, hold the breath for counts and continue this regular breathing cycle for as long as deemed necessary. In other words, the rhythm of these exercises is as smooth and regular as that of a pendulum. However, the rhythm of singing is determined by the length of phrases and can therefore be said to be irregular, i.e., it does not adhere to the regular swing of a pendulum.

I prefer the use of the term 'resistance' rather than the RSM 'pendulum' and recommend that it should be included in a SingEdBWQ. Perhaps 'breath holding' would also be suitable.

- **Conclusion and recommendation 6: Exhalation management**

The RSM principle of 'breath leading' emphasises that all action follows breathing. In the RSM martial arts modality, breathing is consciously employed to 'lead' physical activity. In singing, it is indisputable that, in order to phonate, i.e., get the vocal cords to vibrate in order to produce sound, the breathing has to 'lead'. First, there is air supply, then follows the sound. The breath not only 'leads' the sound, but also transports the lyrics and emotions. In SingEd literature (see 2.5.2) and empirical research (see 5.3.2), the terms 'breath control' and 'breath management' are mainly used for this requirement to steer the breath consciously through the various musical demands of intonation, dynamics and timbre.

I recommend that the term 'exhalation management' clearly describes the requirement of conscious control of the outflowing energy. The term 'energy management' would also be suitable.

- **Conclusion and recommendation 7: Continuity**

Although both non-SingEd and SingEd modalities hail breath ‘continuity’ as important, the reason for doing so differs vastly. In the well-being modalities, breathing is considered to be a language. A practitioner can gauge the well-being status of a client by reading their breathing. For example, holding the breath, thus not having a continuous natural breath, can indicate unexpressed guilt, fear or shame. The practitioner then can guide a client to address and remedy this situation. In SingEd, breath continuity or legato singing, i.e., smoothly connecting musical sounds, is viewed as the ultimate quality of adept musicianship. This quality can only be realised when all other key breathwork delineators are cognitively and practically well integrated.

I recommend that the concept of ‘continuity’ should be included in a SingEdBWQ.

- **Conclusion and recommendation 8: Performance regulation**

Well-being as a concept is comprehensive (see 3.2). It speaks of peak performance in all aspects of our being. Although well-being as a concept is not listed as a separate item in the RSMSPB theoretical framework (see 2.3), having an interview with the RSM expert (see 5.2.1) made me realise that well-being underpins the entire RSMSPB framework. Interviewing the well-being and breathing expert further reinforced my awareness that peak performance is impossible when underscored by pathological breathing mechanics. Sound breathing mechanics and well-being are two sides of the same coin. How then does this apply to SingEd? I believe that, by addressing good breathing mechanics in SingEd, we, at the same time, influence well-being positively. That being said, it is possible to employ breathwork deliberately to influence performance intentionally. For example, stage fright or performance anxiety regulation tools can be included in a comprehensive SingEd curriculum. It is also possible to aid mental clarity and to adjust energy levels to aid peak performance.

I therefore wish to add ‘performance regulation’ as an entry in the emergent SingEdBWQ. As self-regulating breathwork skills can be incorporated effortlessly into

the broader schooling curricula, 'performance' here not only refers to artistic performance but also to general human performance.

The recommended SingEdBWQ can be advantageous in:

- Teacher training – assisting Higher Education Institution lecturers and Education Department subject advisors to ensure that the basic concepts and practices of breathwork are taught and studied.
- School education – assisting generalist teachers in schools to address the breathwork requirements in the school syllabus.
- Music education – assisting specialist music educators, choir masters, and singing coaches in guiding students, choristers, and singers through all the demands of SingEd.
- A standardised breathwork approach – enhancing communication between choir masters/choristers, singing lecturers/students, music educators/students with a common breathwork language.
- A skill for life – basic knowledge about breathwork could gift learners not just with enhanced singing abilities but also with valuable skills to navigate a meaningful life.
- Further scientific enquiry – each of the different aspects within this teaching and learning framework can stimulate further academic investigation. As Lalande *et al.* (2012:117) remarked, “no standardized breathwork approach exists for research purposes”.
- Interdisciplinary enrichment – how breathwork manifests within SingEd can enrich and contribute to understanding and investigating breathwork concepts and practices within alternative breathwork modalities.

Aside from the eight conclusions and recommendations towards an emergent SingEdBWQ, the following should also be considered:

- **Conclusion and recommendation 9: Rethinking singing education**

The interdisciplinary exploration of breathwork revealed that breathwork concepts are similar across disciplines. It is only in the application that breathwork practices are aligned to modality-specific outcomes. Therefore, I think that SingEd, traditionally a

subdiscipline of MusEd, can serve equally as a subdiscipline of well-being modalities. I recommended rethinking the role and value of SingEd within the larger educational tableau. Too often, this subject is dismissed and replaced with other ‘future profit-making’ subjects in an ever-crowded schooling programme. I believe the United Nation’s SDG3 can be addressed playfully and beautifully through SingEd, since “[s]inging is a human birth right” (Smith 2006:28). Scientific investigation can be undertaken to determine the ‘happiness index’ of schools with or without SingEd in their ranks.

- **Conclusion and recommendation 10: Rethinking breathwork education**

As outlined in the Life Skills CAPS document, BWTL can be addressed successfully by employing SingEd as a modality. However, in my opinion, the mentioned breathwork concepts within the CAPS are limited and allude inadequately to only two of the eight breathwork considerations embedded within the SingEdBWQ. It is in the best interests of Life Skills educators to gain a comprehensive understanding and appreciation of breathwork concepts and practices through expanding their personal breathwork consciousness. Therefore, I recommend that educators should explore breathwork by taking part in any breathwork modality, whether it be chi gong, RSM, mindfulness practices or SingEd. Also, valuable online breathwork information and videos are abundant in our modern, technologically interconnected society. It is also worthwhile to support our proudly South African foundation Breathwork Africa (see 5.2.2): The one-day ‘Breathing Buddies Workshop’ will empower educators with a toolkit on why, when, and how to teach breathwork to children aged 3 to 13. I believe the United Nation’s SDG3 and SDG4 (see 1.1) can be addressed effortlessly by gaining an enriched breathwork consciousness. In other words, quality breathwork education could play a valuable part in promoting and sustaining physiological, psychological and spiritual well-being.

- **Conclusion and recommendation 11: Rethinking Life Skills education**

The Life Skills teaching programme consists of many divergent components: personal and social well-being, physical education and creative arts (see 2.2). I believe breathwork is the common denominator, the golden thread that runs through these components. However, this is not outlined or made explicit in the CAPS document.

Breathwork is inexplicably and unpardonably not mentioned or utilised as a tool for personal or social well-being. I recommend including breathwork for well-being in the Life Skills CAPS. Hence, breathwork can be instrumental in making sense of uniting all these divergent components under the one umbrella of Life Skills.

6.5 THE FINAL OUT-BREATH

As a passionate music educator who presently navigates the pianoforte accompaniment of various school choirs, teaches individual singing students and writes books for generalist class music educators, I found this study enriching and meaningful. During rehearsals and lessons, it is my immense pleasure to witness the transformation of choristers and learners from having a tired, stressed and unfocused demeanour to having a joyful and focused disposition. I have always suspected that the breathwork embedded within SingEd contributes greatly to this transformation. However, I do acknowledge that other factors such as socialising, singing beautiful and inspiring music and lyrics, and vibrations in the body that are reminiscent of the safety within a mother's womb, also contribute to a sense of well-being.

My curiosity about the role of breathwork in well-being and singing inspired my interest in gaining the perspectives of SASingEdL regarding the key SingEd BWTL concepts and practices. These SingEd research participants generously contributed their perspectives and experiences. However, owing to the vast array of non-scientific SingEd literature, I deemed it necessary to have interviews with breathwork experts outside of the field of SingEd to cognise and to solidify key breathwork concepts. To my surprise, the way that breathwork finds manifestation within various non-SingEd modalities revealed a golden thread that runs through all of these modalities, including SingEd. There are far more correspondences than modality-specific variances. At the end of them all, there is well-being.

To gift not only those privileged enough to afford individual singing lessons or to be selected to sing in a choir but also the broader school community with the advantages of breathwork skills can be made possible by employing the recommended SingEdBWQ. Singing and its accompanying breathwork require no expensive equipment or intensive training. Breathwork only demands becoming conscious of an

everyday unconscious activity to reveal its magic. Let us, through SingEd, gift our young with a life skill that will assist them in navigating their lives in a meaningful and positive way. To sing is to breathe. Let them sing! Let them breathe! Sela.

“It’s clear that there is incredible benefit available to more fluency and expertise with our breath” (Moraveji 2014:07m:54s).

“First it was exercise on prescription, then it was arts on prescription, soon it could be singing on prescription” (Paddock 2010:1).

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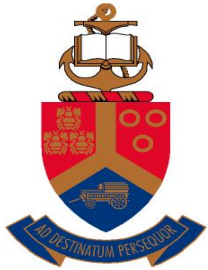
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8. ADDENDA

8.1 ADDENDUM A: INTERVIEW SCHEDULE



UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Dear Research Participant

The aim of these interview questions is to explore the breathwork paradigms of South African Singing Education Lecturers.

INTERVIEW SCHEDULE
BIOGRAPHICAL INFORMATION
* Contact Details (Cell/Email) * Gender/Ethnicity/Age * Position/Role/Status at Institution * Years of Service in this Position * Highest Qualifications (when achieved, where)
INSTITUTIONAL INFORMATION
* University *Faculty/Department/School *Positioning of Singing Education
Exploring the RSM SEVEN BREATHING PRINCIPLES
1. The Principle of Nose Inhalation and Mouth Exhalation
- What is your preference for inhalation? Mouth and/or nose? Why? - How do you theoretically and practically impart this preference?
2. The Principle of Breath Leading
- What do you consider the most important aspects of breath leading? (Pitch, Dynamics, Timbre) Why? - How do you theoretically and practically engage in teaching students to lead the breath through various musical demands?

3. The Principle of Intake Sufficiency
• Why is breath sufficiency important to singers?
• What is your preference for breath support? Diaphragm, Thorax and/or Clavicle? Why?
• How do you theoretically and practically guide students to breathe sufficiently?
4. The Principle of Breath Continuity
• Why would breath continuity or legato singing be preferred by singers?
• How do you theoretically and practically focus on legato singing?
5. The Principle of Pendulum (might not apply to singing)
• What would the role and value of breath holding be in singing education? Why?
• How do you theoretically and practically impart this knowledge?
6. The Principle of Breath Independence (might not apply to singing)
• How do singing and breath independence relate to each other? Why?
• What theoretical and practical knowledge and skills would you impart in this regard?
7. The Principle of Non-Tension
• What kind of posture to you profess? Why?
• How do you theoretically and practically guide students to align their bodies?
8. Other
• Further comments on the research question: “Why should breathwork concepts be included in a singing education breathwork teaching and learning framework?”
Exploring BREATHING AND WELL-BEING
9. The Emotional Dimension
• What can the singer’s breath contribute to emotional balance, managing anxiety, mental focus? Why?
• How do you theoretically and practically relay aspects of emotional well-being related to breathing to your students?
10. The Physical Dimension

• What can the singer's breath contribute to respiratory health? Why?
• How do you theoretically and practically pass on aspects of physical well-being related to breathing to your students?
11. The Spiritual Dimension
• What can the singer's breath contribute to spiritual elevation? Why?
• How do you theoretically and practically impart aspects of spiritual well-being related to breathing to your students?
12. Other
Further comments on the research question "How is breathwork of significance to well-being?"

8.2 ADDENDUM B: THE CONSENT FORM



Faculty of Education

Fakulteit Opvoedkunde
Lefapha la Thuto

Dear (Research Participant)

The title of my research study is *Exploring breathwork paradigms of South African Singing Education Lecturers*.

The purpose of the proposed research is to determine how and why key breath-management delineators can be taught. Potentially, this investigation could assist Life Skills educators in navigating and addressing the prescribed Curriculum and Assessment Policy Statement

(CAPS) breathing concepts of 'breathing awareness', 'breath control', and 'breathing exercises' within South African schools. The latter could also assist future research, as Lalande, *et al.* (2012:117) remark that "no standardised breathwork approach exists for research purposes".

To conduct the research, I require your consent and cooperation in

- Participating in a semi-structured online focus interview for about 60 minutes to discuss breath-management concepts;
- Sharing with me pre-recorded 'lecture room' session to clarify practical pedagogical stratagems; and
- Sharing with me copies of any documents and teaching materials you employ to convey breath-management concepts.

We also request your permission to use your data, confidentially and anonymously, for further research purposes, as the data sets are the intellectual property of the University of Pretoria. Further research may include secondary data analysis and

using the data for teaching purposes. The confidentiality and privacy applicable to this study will be binding on future research studies.

I have received permission from the Ethics Department of the University of Pretoria (Ethics Protocol No: EDU118/21) to conduct this study, and the following principles will therefore guide it:

- *Informed consent.* The fieldwork will not commence prior to receiving your 'Permission for Research' letter (attached). You will approve transcripts of the interviews prior to data processing.
- *Voluntary participation.* You may withdraw at any stage of the research process without any concerns of prejudice.
- *Protection from harm.* Interviews, observations and document collection will be done online (owing to the pandemic) and at a time that suits you and does not cause undue stress or discomfort.
- *Confidentiality.* All information and responses shared during the research process will be kept private, and the results will be presented anonymously to protect your identity. In transcripts, only your initials will be used and will be replaced by a pseudonym in the final research dissertation.

In confirming or departing from the theoretical model (Russian Systema Method Breathing Principles Model) by you, the research participant, a suitable framework for teaching singing breath management should emerge from this investigation. You might be able to use this new model to inform your personal teaching practices or to employ it as a research tool. If you have any questions about the research, you are welcome to contact me. If you agree to participate in the research it will be highly appreciated if you could please complete and return the permission slip.

Kind regards

Gert Potgieter (PhD student)
Department of Humanities Education
Faculty of Education
University of Pretoria
Mobile 084 581 2593
Email: potgieter.musiek@gmail.com

Dr Ronel De Villiers (Supervisor)
Department of Humanities Education
Faculty of Education
University of Pretoria
Mobile 073 707 7351
Email: ronel.devilliers@up.ac.za

PERMISSION FOR RESEARCH

Your participation in this research study is voluntary and confidential.

If you have any questions about this research study, you are welcome to call me,

Mr Gert Potgieter, at 084 581 2593 or potgieter.musiek@gmail.com

I....., lecturer at..... University,
hereby agree to participate in the study, entitled: *Investigating Breath-Management Practices of
South African Singing Education Lecturers.*

Signature of research participant Date

PERSONAL INFORMATION

Cellular number _____ Email address _____

Gender _____ Ethnicity _____ Age _____

Role/Position/Status at Institution _____

Years of service in this position _____

Highest qualifications (year achieved/institution)

Further comments? _____

8.3 ADDENDUM C: TRANSCRIPT AUTHENTICATION



AUTHENTICATION OF TRANSCRIPTS

Herewith I acknowledge that the interview transcript is an authentic reflection of the discussion between me and the researcher, Gert Potgieter.

(Research Participant) _____

Name and Surname _____

Signature _____

8.4 ADDENDUM D1: INTERVIEW REPORT - VADIM DOBRIN FROM RUSSIAN SYSTEMA METHOD

I felt it imperative to have an expert interview with someone schooled in the Russian Systema Method of breathing principles that is at the heart of this investigation. After an internet search, I found an RSM School in Johannesburg, South Africa. The native Russian instructor, Vadim Dobrin, agreed to share his understanding and views on the breathing principles with me. He has been the principal instructor of this South African RSM Warrior School for approximately 25 years.

Dobrin graduated in 1989 from the Chisinau Military School in Moldova when said country was still part of the larger USSR. He also obtained a sports coaching degree from the same school. Dobrin conducted his military service in an elite USSR airborne unit from 1989 to 1991. Other qualifications include being a Master of Sport in SAMBO and Judo, 1st Degree Black Belt in ITF Tae Kwon Do, 2nd Degree Black Belt in WTF Tae Kwon Do, 1st Degree Black Belt in Hap Ki Do, 3rd Degree Black Belt in Han Moo Sul and various certifications in Close Protection, Close Quarter Combat and Firearms.

Dobrin is not only the chief instructor of Systema South Africa but also the representative of Systema and the Association of Russian Native Combat Arts on the African Continent. He is also an active member of the Close Quarter Combat International Alliance. In addition, he is a sought-after consultant on endurance training. Dobrin not only assisted front-line health practitioners during the initial stages of the COVID pandemic to manage their mental health but was also called upon to assist first responders during the violent rioting in KwaZulu-Natal, a province of South Africa, in 2021. I consulted Dobrin regarding his perspectives on the RSMSPB theoretical framework. The goal of the interview was to engage the Russian Systema Method breathing principles from a primary expert source in order to evaluate and refine insights gained from the literary exploration.

I wanted to determine the origins of the RSM breathing principles. Dobrin explained that these principles originated from fourth-century Roman-Byzantine Hesychasm. Hesychasm refers to a specific kind of monastic life in which practitioners seek Divine quietness (Greek *hēsychia*). According to Dobrin, the monks connected to the Greek Orthodox Churches, during their long vows of silence, while engrossed in physical labour and prayer, came to realise and contemplate the significance of breathing. The monks noticed a link between specific ways of breathing and their physical performance abilities. Dobrin stated that this information was mainly passed down by word of mouth, although some original documents may be found in

Russian archives. The monks' breathwork observations were adopted as one of the four main pillars of the RSM. The four pillars of the RSM are breathing, relaxation, form, and mobility. This ancient Russian native martial art only in recent years became more organised and was branded Systema. Dobrin indicated that the terminology 'Systema' refers to the integration of the four pillars that affects all systems of human bodily functions. He explained that, if one of these pillars is compromised, the other three pillars can act as a support. For example, when breathing is temporarily impaired, like being submerged underwater or in a car accident, the other three pillars *"take over and by doing so they help one another"*. The RSM is thus focused on endurance training, which can be applied not only in combat but also in day-to-day living. That being said, Dobrin emphasised that *"everything that you learn"* in Systema *"it's based on breathing"*. I used this statement as a cue to steer the conversation towards a discussion on the seven breathing principles.

Touching on the Principle of Nose Inhalation and Mouth Exaltation, Dobrin indicated that humans breathe consciously or subconsciously in four different ways:

1. in and out through the nose,
2. in and out through the mouth,
3. in through the nose and out through the mouth and
4. in through the mouth and out through the nose.

However, for Dobrin, breathing in through the nose and breathing out through the mouth is the *"most productive way and most normal way ... most natural way"* for humans to breath. He attributes habits contrary to this way of breathing to poor education and *"picking up bad habits"*. Dobrin shared his understanding that even when a dog pants, it still breathes through its nose, *"So, if you actually come to the dog and close his nose while he's panting, he's not going to be happy"*. He also mentioned observing his baby daughter breathing while sleeping. *"First of all [my daughter] approaches everything completely relaxed. Secondly,[she] breathe in through the nose, out through the mouth"*. Being a Systema instructor schooled in breathing, Dobrin shared his distress at observing his daughter displaying pathological breathing habits as she grew older.

Dobrin further shared why nose inhalation is essential to him. He explained that there are nerve sensors in our noses connected to the brain. Nerve signals sent from the nose to the brain are vital to activate blood oxygenation. Dobrin emphasised that nose inhalation sends these signals to the brain faster than mouth inhalation does. As an RSM instructor, he is acutely aware of the heightened oxygen needs of the body during physical activity or physical strain. The nose also regulates the air temperature: *"So if it's too hot, it cools it down. If it's too cold, it warms it up"*. Another reason for preferred nose inhalation is that the hairs in our nose

“*cleanse the air*” and thus guard the lungs against unwanted intrusions. By contrast, mouth in-breathing leads to a “*dry throat*”, which can have “*undesirable side effects*” like a sore throat or coughing.

Nose inhalation “*it’s also portioning the amount of air that you take*”, resultantly creating an optimum balance between the amount of oxygen and carbon dioxide in the lungs, “*especially if the breathing is not forced*”. Dobrin said that excess oxygen in the lungs, a possible result of mouth in-breathing, closes the alveoli owing to the amount of carbon dioxide necessary to balance the compromised oxygen. “*And if they close, it means no oxygen goes into the bloodstream*”. He emphasised that this balancing process cannot be imposed consciously on the lungs but “*it has to work it out itself. It has to be spontaneously. So that’s why our breathing system is so complex, and so smart ... so intelligent in itself*”. Breathing through the nose thus optimises the body’s energy usage by ensuring this oxygen–carbon dioxide balance. Dobrin emphasised the connection between inhalation and relaxation to achieve this perfect balance, connecting the first breathing principle of nose inhalation and mouth exhalation with the seventh breathing principle of non-tension. He conveyed that “*even in times of complete stress and mayhem, you’re supposed to be calm, relaxed and you’re supposed to breathe comfortably. So as ironic as it may sound*”. Dobrin’s insistence on and reasons for nose inhalation are instrumental in contemplating a SEdBWTL framework for generalist Life Skills and specialised SingEd educators.

I then explored Dobrin’s insights on the principle of breath leading. According to him, most of his new students, some professional and well-known South African athletes and rugby players, approach this principle the wrong way around. Instead of actions that are the “*by-product of the breathing*”, these sportsmen first hone in on the desired physical action prior to employing or harnessing their breathing. For example, they will take a step forward and then breathe. However, Dobrin insists that it must be the other way around. First breath, and then step forward. “*So, whatever you do, breathing must come first.*” Although he focuses on teaching this principle at his Warrior School, it “*should get to the point where you should do it subconsciously, completely automatically*”. Focusing on this principle also highlights the necessity of breath leading within SingEd, though the SingEd literary exploration yielded further and different insights on this matter (see Chapter 2).

The third RSM breathing concept discussed with Dobrin was that of the principle of intake sufficiency. He opened up the topic by mentioning various types of breathing, saying that each type has “*various effects on our nervous system*”. In his endurance training, the role of the nervous system is paramount “*because you cannot be strong, brave and efficient if your nervous system is not perfectly harmonious with the rest of the body*”. Therefore, he employs

specific exercises, a combination of physical activity and breathwork, to improve the nervous system not only for physical but also for mental endurance. Dobrin combines these different breathing methods with specific physical exercises in a non-fixed, creative way “*because a simple push-up can be turned into a breathing exercise*”. He emphasised that these exercises should not be seen as a mere warm-up but rather as an integral part of breathing techniques to be employed and integrated with combat. He also believes that, although initially, a new trainee cannot appreciate the depth and value of these breathing exercises, it “*helps to broaden the horizons of our breathing system. If nothing else in the beginning that’s already quite a big step*”.

I prompted him to give more details and even to demonstrate the various types of breathing that he referred to:

1. *Circular breathing* is continuous, uninterrupted, unstrained respiration in through the nose and out through the mouth – the most common, natural, everyday way of breathing.
2. *Square breathing* is when you inhale, hold the breath, exhale and hold the breath for the same amount of counts. For Dobrin, it is imperative that the counts must be all of the same duration. For example, breathing in for four counts, holding the breath for four counts, breathing out for four counts, and holding the breath for four counts. According to Dobrin, the number four, is generally accepted because of American military research on the topic; however, owing to every human’s differing physique, the number is pliable.
3. *Triangle breathing* is similar to square breathing, but with the breath-hold only at the end of the exhalation. Thus, breathe in, breathe out and hold your breath.
4. *Inverted triangle breathing* is similar to triangle breathing, but with the breath-hold at the end of the inhalation. Thus, breathe in, hold the breath, breathe out.
5. *Burst breathing* also requires breathing in through the nose and out through the mouth. Inhale and exhale rapidly, without focusing on filling the lungs completely with air. This kind of rapid, short breathing aids with enduring physical pain and assists the body in recovering from extensive physical exercise or emotional distress. Dobrin shared that, in his experience, the more this way of breathing is employed for the purpose of recovery, the more the brain is able to recognise this exercise as a recovery method and therefore, over time, the recovery period gradually decreases.

Dobrin compared these exercises to tuning into a radio station to find the optimum frequency. The more trainees engage with these different ways of breathing, the more fine-tuned their breathing becomes. It also “*create a harmony*” between the nervous, cardiovascular, muscular

and other bodily systems. He shared his observations of great athletes who, not being familiar enough with the finer nuances of the breathing mechanism, work with the breath in counterproductive and uncomfortable ways; therefore, expending unnecessary energy. Dobrin emphasised a *“more natural and more comfortable”* approach. These different ways of breathing concluded Dobrin’s contribution toward discussing sufficient breathing.

Next, I raised the question of the principle of breath continuity. Dobrin immediately went to the heart of the matter, saying that the principle of breath continuity is a reminder *“to make sure that breathing must never be disrupted by whatever you do”*. The reason is that breathing is the fuel, the driving force, of all conscious or subconscious bodily functions and activities. It should, therefore, never be compromised. He explained that *“you’re supposed to influence everything else with breathing, but breathing should not be influenced with something else”*. This statement concluded the dialogue regarding breath continuity. This principle is crucial to SingEd as the sound of the singing voice depends on a continuous supply of air, of breath.

At this point in the interview, I shared with Dobrin my perplexity at translating the RSM principle of pendulum to a SingEd context owing to the contrast between a pendulum’s regular rhythm and the irregular respiration rhythm dictated by the phrasing of songs. I was also confused about how breath holding, metaphorically, represented by the outer phases of the pendulum’s swing, could be of any use to SingEd. Dobrin replied that, indeed, this principle implies rhythmic breathing *“because the pendulum creates a specific rhythm”*. On my remark that perhaps this does not apply to SingEd he replied, *“Yes and no”* and reminded me of our earlier conversation regarding the RSM four pillars of breathing, relaxation, form, and mobility. *“So, you can maybe not utilise it to the greatest ability, but you have to back it up with something else in other pillars ... They’re still working”*. Even though breathing in singing then exhibits an irregular rhythm, it is a rhythm nevertheless that can be enhanced with *“perfect form”*. For him, this refers to *“correct posture, your correct work of diaphragm”*. This statement highlights an interplay and codependency between the various breathing principles.

Dobrin steered the conversation in a curious direction by saying, *“even the time you don’t breathe, you kind of do ... even when you exhale, part of your exhale still causes oxygen intake. So, it doesn’t mean that only when we inhale, we intake oxygen, and only when we exhale, we give away the carbon dioxide and use unnecessary carbon dioxide.”* Thus, not only on the inhale, but even on the exhale *“we still take in oxygen”*. The opposite is also true for Dobrin. He said that on both the inhale and exhale, we get rid of carbon dioxide. *“So, the cycle is uninterrupted. So doesn’t matter if sometimes it’s not literal”*. This explanation left me with some food for thought apropos an emergent SEdBWTl framework.

With regard to perplexity at translating some RSM breathing principles to SingEd, I steered the conversation towards The principle of breath independence. Dobrin replied, *“It’s gotta be instinctual ... your breathing not supposed to be imposed, we’re not supposed to force ... figure it out ... you’re not supposed to consciously think about it... you just supposed to breathe”*. That being said, he immediately replied that much of correct breathing must be consciously taught prior to, with time and practice, reaching an unconscious automatic optimum breathing tableau. *“It’s almost the work supposed to be done prior so much, that by this ... point, ... you’re actually comfortable and free enough, and relaxed enough and confident enough ... to actually just flow how it want to.”*

The seventh and last RSM breathing principle discussed was the principle of non-tension. Referring to combat situations, Dobrin highlighted that breathing must be employed efficiently. *“You can’t waste energy. So, posture is crucially important because without correct posture, you’re squeezing something”*. He mentioned that even the smallest amount of tension somewhere in the body creates *“imperfection that will cause a chain effect somewhere else”*. Dobrin further commented on the importance of being comfortable in order for energy not to waste, *“everything supposed to be efficient, economical, ... with a minimum input and a greater outcome”*. In response to these remarks, I commented on the requirement of breath support for singers which necessitates some tension in the body, and also how there are two different schools of thought on how to approach breath support (see Chapter 2). Dobrin argued that he would favour the approach that causes the least tension in the body. He remarked that different ways of breathing affect our nervous system and that either positive or negative effects on the nervous system correspondingly influence the way we breathe.

Owing to Dobrin’s trainees coming to class with huge amounts of stress, before engaging in the RSM modality techniques and requirements, he gets his students to *“lie down on the floor, and I made them breathe, ... with the tension. So, we do change in relaxation breathing. There’s a saying in Russian “wedging the wedge out”. So, you’re shoving another wedge to push the first wedge out ... So ... with tension, you’re trying to get rid of the tension”*. For example, Dobrin described how, while students lie on the floor, he guides them swiftly to tense up their toes first and then slowly breathe in. Thereafter, they release the tension on the out-breath with a, sometimes forceful, “phu” exhalation. This cycle is repeated in an ascending fashion, from toes to head, covering respective muscle groups or body parts. For Dobrin, this is an excellent exercise to *“unlock to body”*, especially when he observes that his students come to the session with *“a lot of stress”*. He emphasised that he does this with his students not only when he visually observes physical signs of stress but also when he observes *“something is not okay, you almost not always can pinpoint”*. By being mindful of both the

physical and non-physical state of his students, and doing an exercise to release the tension, “*you actually ... get them to the point where they’re completely responsive*”. For Dobrin, only after this preparatory practice can he ensue his endeavour “*to make men out of men*” in a meaningful and focused manner.

This explorative interview was a highly positive experience, as Dobrin was very confident of all that he was saying and generously and enthusiastically expressed his experience and views. As per the interview schedule, time did not allow for formal, direct questions about breathing and well-being. However, throughout the dialogue, Dobrin linked well-being to sound breathing mechanisms

8.5 ADDENDUM D2: INTERVIEW REPORT - ELA MANGA FROM BREATHWORK AFRICA

Because of the exploration of breathwork, not only from a mechanistic breathing point of view but also focusing on the well-being aspect thereof, I considered having an expert interview with a breathwork for well-being specialist. My first meeting with Dr Ela Manga was through her book *Breathe: Strategising energy in the age of burnout* (2018), lent to me by a friend who believed that this book could assist me in my research. My second meeting with Manga was reading through 45 transcripts of 45 speakers, the result of an online Breathwork Summit that took place in the USA in February 2022. In my estimate, the most substantial of all these speeches/transcripts was that of Manga, and to my surprise, she was living in Johannesburg, South Africa. I decided to contact her for an interview, where I met her for the third time. I cannot end this paragraph and line of thought without mentioning that after this explorative interview, she invited me to an online forum on breathing which took place on the same day as the interview. This forum was conducted from New York and had online participants from all over the world. Every time a difficult question arose, it was referred back to Manga to answer. Subsequently, I attended a three-day online breathwork workshop with Dr Manga in June 2022.

Manga graduated as a medical doctor from the University of the Witwatersrand, Johannesburg, South Africa in 1998. She also holds respective Diplomas in Obstetrics and Child Health from the College of Medicine of SA. After concluding her internship and community service at the Charlotte Maxeke Hospital, she ran a General Practitioner practice where she mostly worked with young families. For Manga, working with her patients as partners in creating and sustaining wellness is paramount. This motivated her to practise medicine in a more individual, holistic, and heart-centred way. Therefore, she combines the principles of Eastern philosophy, yoga, mindfulness, with western medicine. She is particularly passionate about breathwork, which has played a significant role in refining her understanding of energy.

Manga is a qualified breathwork practitioner and trainer both locally and internationally. She is also the founder of Breathwork Africa, BreathCafe, and Pneumanity Foundation and co-creator of a BreathTech App. Her articles appear regularly in the *Longevity*, *Natural Medicine* and *Modern Wellness and Destiny* magazines. She also appeared on lifestyle TV shows, such as *Real Health* and is regularly heard on various radio stations across South Africa. Manga expressed her delight at someone doing research in breathwork teaching and learning (BWTL)

for use in South African schools since that is also something that her Breathwork Africa foundation is exploring.

My first inclination was to enquire *“Dr Manga, what is breathwork for you?”* I prompted her for some kind of definition. She first explained that, historically, breathwork was synonymous with *“conscious connected breathing, a very specific technique that has its roots in rebirthing”*. However, this term is often also used as an umbrella term for the international breathwork community. She shared that an Art of Breathwork Framework had subsequently been developed. Manga continued, *“but if you had to look at the definition of breathwork and what it is to me, it is the use of bringing conscious attention and intention to what is an unconscious function, making that conscious so that it can be applied intentionally for self-awareness, self-regulation, and transformation.”*

I prompted her about the mentioned Art of Breathwork Framework. According to her, this framework stands on three pillars, namely awareness, regulation and transformation. Manga reiterated that the purpose of awareness is to bring attention to an unconscious function. Manga explained in detail, *“So, breathing is an autonomic nervous system function. It is always happening in the background, regulated by the respiratory centre in the brain. And our unconscious breathing pattern reflects our internal state, our emotions, our physical posture, our tension patterns. Our breath is a language that reflects our physical, emotional state. And a lot of that breathing pattern is dysfunctional, or is not supporting our optimum well-being. Because we get stuck into these patterns, that then impacts further our mood, our emotional physical health. So, it doesn’t fully support the nourishment of our physical body and our mental emotional well-being. Breath awareness is bringing awareness to an unconscious function. And in doing so, bringing awareness to our thoughts, our physical body, our emotional life. Breath awareness is a tool for self-awareness. And it is an entry point into using specific breathing practices. It is the foundation of a mindfulness practice. And it is the foundation of any conscious breathing practice”*.

I further prompted Manga to speak about regulation, the second pillar of the mentioned Art of Breathwork Framework. She said that, when we employ the breath more consciously, we can change the rate, the rhythm and depth of our breathing. With specific breathing practices, changes in the autonomic nervous system can be manifested. *“So, when we work with breath intentionally, it is an entry point to shifting the autonomic nervous system in either direction. Either in terms of sympathetic nervous system, parasympathetic nervous system or creating balance. And so, this whole category of breath regulation works with all the available practices that are out there, and categorising it in terms of the impact that it has on our autonomic*

nervous system, so that we can use them with more skill and with specific intentions. So, there's a set of practices that we know when we do them, will take us more into that sympathetic state, certain practices that will drop us more into a parasympathetic state, and certain practices that will create balance." Manga emphasised that, with intentional breath regulation techniques, we can regulate *"our mental state, our emotional state and physical state"*. She further referred to the simplicity and accessibility of breath self-regulation tools *"that anybody can learn and practise"*. In this way, without yet asking directly, Manga touched on the research question of the RSM principle of breath leading.

I further encouraged Manga to communicate her understanding of transformation, the third pillar of the mentioned Art of Breathwork Framework. She said that transformational breathing practices have the intention of changing one's state of consciousness. They enable access into cellular memory, the subconscious mind, and into places where the body often stores trauma. Trauma *"could be patterns from our in-utero life to our birth experience to inherited trauma, collective trauma, so everything that the body holds"*. According to her, these transformational breathing practices create neurological changes and changes in brain activity to allow access to subconscious patterns.

Commenting on Manga's book where she states, *"the breath is the medicine"*, I steered the interview in the direction of the interview questions on physical, emotional and spiritual well-being. Manga commented, *"physical, emotional, spiritual, we speak about them in terms of separate categories. But we know now that they actually are not separate ... we are starting to unpack the mechanisms through which the body and mind are connected and, in fact, are one system"*. She gave an example of the vagus nerve, the longest nerve in the body, which is rich with networks throughout the body and constantly sending information from the body back to the brain. She then reiterated her previous statement by saying *"recognise that this is a whole person medicine. We are shifting our paradigm, even from saying that these are categories of mental, emotional, spiritual, ... rather ... this is the full human experience. You know, a whole person that encompasses all these dimensions of who we are, that are [in]extricable[y] connected. And the breath is like the golden thread that weaves through all these dimensions of who we are. And this is not just a spiritual, esoteric concept. This is now being backed by solid science"*.

Manga further emphasised that, although in the Art of Breathwork Framework there are different components, these specific practices *"are all there to serve, functional breathing"*. She went on to describe functional breathing as optimum unconscious breathing and that the goal of breathwork serves the purpose of *"repatterning"* unconscious suboptimal breathing patterns, thus contributing to optimised living and being. She attributed these unconscious

suboptimal breathing patterns to environmental influences, the clothing we wear, chronic stress and adrenalised energy. Manga emphasised that *“breathing underpins everything that we doing ... its woven into every aspect of our lives”* and is therefore not a *“separate skill”*. So, whether we are singing, engaging in sports, studying, communicating or eating, being conscious of our breathing can optimise these activities and experiences.

Bringing breath awareness and education to young people is essential to Manga. *“So, when we can start to bring awareness into young people around the way ... the breath should feel and the way that the breath supports us in every aspect of our lives, then that is already being imprinted into the evolving brain.”* She mentioned that the young brain is plastic and therefore the prefrontal cortex, the cortex and the neocortex are highly impressionable. She was further of the opinion that, within the school curriculum, breath education can be made fun, practical and alive and, in so doing, it *“becomes a life skill for the rest of their lives ... So, when we can teach or not even teach, maintain breath as that universal language and upskill young people, then we are creating the foundation for a whole new society and open-hearted conscious humanity”*.

Being observant of the time and topics still to be covered during the interview, I steered the interview in the direction of the seven RSM breathing principles. The first question was about the RSM principle of nose inhalation and mouth exhalation. Manga replied, *“I differ on that ... point. I don’t think that there is one specific right way to breathe consciously”*. She agreed that unconscious everyday breathing should be predominantly through the nose; however, remarked that, consciously, multiple ways of breathing can be employed for specific outcomes. *“So, I think where we are aware of how we can use different channels more skilfully, then we can apply it without this, just a standard, rigid idea of what is right and what is wrong. It is a form of art”*. She made me aware of the acronym, “ART” made up of the first letter of each of the terminology awareness, regulation and transformation within the Art of Breathwork Framework. Manga spoke of *“breathing being a form of art ... which is flexible and has creative licence”*. Referring to singing as an example, she proposed being aware of the basic principles and to harness them, rather than trying to implement them as a rigid rule.

I remarked that perhaps it is important to create awareness about the benefits of nasal inhalation, but at the same time acknowledge that there are modality-specific requirements. I referred to singing that often requires mouth inhalation to enable sustaining a musical phrase. Manga expounded that nasal inhalation is a key pillar of *“healthy breathing ... at rest”* but reminded me that in SingEd there are perhaps also other key factors such as diaphragmatic breathing that need to be taken into account. Mentioning diaphragmatic

breathing steered the interview in the direction of the third RSM breathing principle of intake sufficiency.

Manga stated that *“the diaphragm is absolutely key”* but at the same time voiced that there is a lot of misconception around what exactly belly breathing or diaphragmatic breathing entails. I prompted her to divulge her view. She said that instructors of yoga, Pilates and similar modalities often teach their students *“you need to feel your belly pushing out”*, but this instruction is misconceived. She further clarified *“we have to understand that the diaphragm is attached to the side ribs. Full diaphragmatic breathing is three dimensional. It’s very important that we feel the ribcage moving from side to side, right. And then the belly follows that. But I think a lot of people in attempt to push the belly out uses a lot of effort. Is not natural. It’s not a natural breath”*. Manga went on to demonstrate what she meant by placing her hands on either side of her ribcage, showing me how her ribcage extends when she breathes in. She also demonstrated what she viewed as an unnatural belly-forward push while inhaling. She felt that the concept of diaphragmatic breathing will be better comprehended *“when people [can] understand ... visualise ... feel it in their own body”*. This for me highlights the significance of breath education.

Linked to diaphragmatic breathing, I tried briefly to explain the unique SingEd breathing requirement of breath support to Manga in order to get her perspectives. I referred to and briefly explained the two approaches of “up and in” and “down and out”. Other than describing breath support as *“fascinating”* and *“bizarre”*, she had nothing further to contribute on this matter as SingEd is not a modality with which she is well acquainted.

Further regarding the principle of intake sufficiency, Manga expounded on what she called *“the resting respiratory rate”*. She explained *“our breath is part of the autonomic nervous system. And so often our respiratory rate will speak to our internal physiology and the state of being”*. As an example, she stated that when a person has a *“default baseline”* state of anxiety or adrenalised energy, the respiratory rate will reflect that. Also, when a person has a low tolerance to carbon dioxide and is therefore breath-unfit, it will reflect in his/her respiratory rate. Manga remarked that, when we have a sound carbon dioxide tolerance, we breathe through our noses and engage our diaphragms *“we will naturally take less breaths a minute because every breath is efficient ... that’s what we’re working towards. Every breath being as efficient as possible”*. Manga further articulated that the lower the resting respiratory rate is, the calmer we will feel at rest. In contrast, a faster resting respiratory rate sends a signal to the brain, activating the fight–flight mode and therefore *“feeds”* a state of stress and anxiety.

Talking about the resting respiratory rate reminded me of India, where to my knowledge, they are masters of respiratory rate manipulation. Perhaps I assumed that Dr Manga, being Indian herself, might be able to illumine the distinction that these sages make between oxygen intake and prana intake. Manga admitted that in western science, breathing is studied in the context of biochemistry, specifically how oxygen is delivered to the mitochondria. She acknowledged that, not only in the East, but also in all indigenous wisdom systems, reference is made to life-force energy. She gave a few examples. The 'ntu' part of the word Ubuntu, a familiar African term translated as "I am because we are", refers, according to Manga, to *"this idea of consciousness, this interconnectedness of all that is"*. She also mentioned the terminology 'ruach' from the Jewish tradition and 'prana'/'qi' from the Eastern traditions being similar to 'ntu'. In the words of Manga, *"I believe that there is a mysterious key that lies within the mitochondria within every single cell. And if we look at the mitochondria, this is the place where a breath is metabolised, okay. So, if we look at oxygen and glucose, [it] is taken to the mitochondria, it is transformed. And ATP, which is the molecule of energy, is released, and with carbon dioxide. But if we look at the structure of the mitochondria, we'll see that it has its own set of DNA that is separate from the DNA within the nucleus. And this DNA in the mitochondria is only inherited from the maternal line. And can be traced back to a mythical woman who lived in Africa. That's a mitochondrial Eve. We can trace this maternal line back to our common ancestor. And I just have a sense that somehow the mitochondria is the link between this idea of oxygen and prana"*. Manga's view is unique and different from any literature that I have encountered on the topic; however, my knowledge of biology is limited. Asking Manga about the fourth RSM breathing principle of breath continuity, she divulged what she terms *"responsive breathing"*. *"To me, responsive breathing is an unconscious pattern of breathing, or conscious pattern of breathing that supports whatever activity you may be engaged in. So, rather than, for example, your breath reacting to when you are scrolling on your cell phone, and we have these apnoeic episodes, or when we're concentrating of something we use, we tend to hold the breath. And if we hold the breath, unconsciously, you know what is happening at the brain level, because we know that when we are inhaling, we tend to take in information. When we exhale, we prepare for action. You know, this is what is actually happening on when we do nasal breathing, for example. And so, responsive breathing is harnessing that. So, your conscious breath is constantly supporting whatever activity you're doing"*. I understood from this that the way we unconsciously or consciously breathe, stimulates the nervous system. I asked Manga whether my understanding is correct that the in-breath activates the sympathetic nervous system and the that out-breath stimulates the parasympathetic nervous system. Answering "yes", she went on to emphasise that breath regulation practices are based on this fact because *"when we focus more on the inhale and*

use specific techniques to inhale, we can manipulate the sympathetic system; when we focus more on long exhalations, we can support the parasympathetic system”.

Referring to singing and speaking as activities that often involve mouth inhalation or extended exhalations, Manga re-emphasised the importance of engaging the diaphragm muscle in a way to curb the outflow of carbon dioxide. Without the diaphragm brake there will be a larger amount of carbon dioxide release which, in turn, affects the absorption of oxygen by the body. Manga used the medical term ‘hypocapnia’ to describe the less than desired carbon dioxide levels in the bloodstream.

Next, I explored the fifth RSM breathing principle of pendulum. Manga explained that our natural breathing rhythm is to inhale, exhale and pause. However, we can also apply breath pauses consciously for specific outcomes. In her own words, *“So, if we, example, doing box breathing, and we are holding a pause after the inhale, the pause after the inhale has the same effect as the exhale, meaning that it activates the parasympathetic nervous system. The pause after the exhalation has the same effect as the inhale, meaning that it activates the sympathetic nervous system”.* She had no further thoughts on the pendulum concept.

The sixth RSM breathing principle of breath independence was the next topic of discussion. Manga understood this principle as a natural, instinctive way of breathing. Reflecting on the RSM context, she understood this principle as one that supports movement and activity. *“Coordinating your breath, what with whatever activity you’re engaged in, so that it works in harmony with it, that it’s not opposing”.*

In the context of the seventh RSM breathing principle of non-tension, Manga explained how she approaches her breathwork clients. *“So, I always tell people before ... starting the breathing practice, to relax the habitual tension at the back of the neck and the shoulders and the jaw, in the feet, you know, getting people to kind of uncross their feet, place their feet on the floor, that creates a softening in the hips, that allows the flexibility of the diaphragm because, you know, the diaphragm is connected to the whole fascia, fascial system.”* She emphasised that, when we can relax the entire body, it improves the diaphragm’s flexibility and resultant mobility.

Since most of the interview questions had been touched upon and some time was still left of the hour dedicated to the interview, I asked some questions about her foundation Breathwork Africa. Manga indicated that, owing to her own positive encounters with breathwork, she was inspired *“to simplify the field of conscious breathing, to make this more accessible to anybody, regardless of the educational status, or socioeconomic status, or language, or whatever.”* In

the process, she developed several foundational and advanced courses to empower people with this valuable life skill. She expressed her passion to bring breathwork *“into schools”*. On that note, I prompted her to share with me practical breathing tools that could assist learners in the areas of mental blurriness or releasing stress.

For mental focus and concentration, Manga suggested a coherent breathing technique. *“And that is simply inhaling slowly for five seconds, exhaling slowly for five seconds through the nose with no gaps or pauses between the breaths for at least five to 20 minutes. So at least five minutes up to 20 minutes at a time”*. She also explained box or square breathing for the same purpose. *“This is working with the four dimensions of the inhale, a pause after the inhale, the exhale and the pause after the exhale and equalising the time spent on each parts. So, inhaling for the count of four, hold for the count of four, exhale for the count of four, hold for the count of four”*. She mentioned that the number four can be adjusted upwards or downwards to suit a person’s age and lung capacity.

To assist learners to release or discharge pent-up energy, Manga suggested what she termed the warrior breath. *“Okay, so you get everybody to stand maybe in a circle at their desk, and stand with their feet hip width apart, your knees are soft, and you connected to your core. And you’re going to stretch your arms out in front of you or above you (demonstrates), your fingers outstretched as you inhale. And as you exhale, you’re going to sharply bring your fist at your waist, and you’re going to say “ha!” okay, and we do that 10 times. And that is an amazing way to discharge energy, it calms everybody down, and they’re ready to go”*.

Manga’s medical background and extensive experience as a breathwork practitioner and instructor made a valuable and authoritative contribution towards, not only my understanding of breathwork and well-being, but also of breathwork mechanics and practices in general.

8.6 ADDENDUM D3: INTERVIEW REPORT - BLUE FROM GAUTENG

DEPARTMENT OF EDUCATION

This research, conducted through the lens of a Life Skills educator, explored ways to make manifest in the classroom the concepts of 'breathing awareness', 'breathing exercises' and 'breath control', as documented in the South African Life Skills CAPS. Therefore, I contacted a representative of the Education Department to explore the nature and depth of breathwork training in South African schools. Several seemingly suitable research candidates were approached; however, they either did not reply, or kept referring me to someone else. This raised the question: Were the very people handling decision-making and training in the Education Department unwilling or unable to have a conversation about a topic implicit in the syllabus? I do not have a clear answer to this question. I do acknowledge that breathwork is but one expectation amongst a large bulk of expectations within the Life Skills programme. I was fortunate to find one candidate who was willing to engage in an interview with me. She requested to remain anonymous, owing to work politics. I labelled her Blue, as she "sang the blues" regarding her perceived weak status and the state of Life Skills education.

Blue is a Deputy Chief Education Specialist in the Gauteng Department of Education (GDE). Gauteng is one of the nine provinces of South Africa and each of these provinces has its own Department of Education. The GDE has 15 districts and one head office. Blue is stationed at the head office, and she is responsible for the Foundation Phase Life Skills in Gauteng. Blue holds a senior position in both curriculum and assessment matters in the GDE. She is the holder of an Honours Education Degree from the University of Johannesburg, South Africa.

I raised the matter of breathwork teaching and learning being part of the Life Skills CAPS requirements also in the Foundation Phase. Consequently, Blue, who needed no encouragement to talk, proceeded with a conversation touching on various aspects of her "*constant fight for survival*" regarding the Life Skills programme. Blue shared that the Creative Arts within the CAPS are allocated two hours of teaching time per week. Creative Arts is subdivided into performing arts (dance, drama, music) and visual arts, and both of these strands receive one hour of teaching time per week. Blue shared how, during the COVID pandemic, owing to reduced teaching time, a national directive demanded that Life Skills not be taught during 2020. The focus was on ensuring that key skills in "*languages and mathematics as core subjects*" were sufficiently addressed. Blue expressed her disagreement regarding what are considered core subjects and indicated that, what she terms "*soft skills*", are being neglected. Despite this directive, she encouraged subject advisors to ensure continued teaching of Life Skills "*even if it is at a very reduced and limited time*". She further

expressed her dismay at Life Skills being “*put on the backburner*” and that nationally, developing the subject is a low priority. In her opinion, not all requirements in the Life Skills Foundation Phase CAPS are age appropriate or even designed by specialists in the various fields and therefore they beg attention. She said, “*[I]f they are writing things that are not really forming a golden thread in the development, and it’s just a series of loose-standing incidents, the synapses cannot form in the brain to really be beneficial for the learner*”.

Blue further shared that two new subjects are being slowly introduced into schools, Coding and Robotics, and therefore the time allocated to Life Skills might be reduced. However, this is still a matter of dispute between Teachers’ Unions and the National Department of Education.

Blue then touched on teacher training. In her view, owing to the emphasis on languages and mathematics, the “*soft skills*” are not well addressed during tertiary teacher training. “*So, the teachers are walking in and they like a blank canvas that we are working with*”. To address this problem, “*we will do some limited training*”. She mentioned as an example that, in 2018, 300 of the 3000 Gauteng Foundation Phase teachers had a 40-hour performing arts training session; however, owing to a lack of funds and various political factors training sessions of this kind are very limited. To stimulate teachers into action, she also arranges provincial competitions. “*We have, on a rotational basis, a competition, where I will then select one of the elements in Life Skills. And for that year, we run a competition Grade one, two and three. Grade one and two at school level, Grade two will move up to cluster level, Grade three will go up to provincial level, where we make a big hoo-ha of the thing with an awards function, and hand over a little certificate. So, the learners are coming and the teachers are coming. The learners will showcase what they’ve done.*” She emphasised that, under the guise of a competition, she is trying “*get them to do the work that they are supposed to do*”. Blue dedicates this competition annually to one of the four major strands of the Life Skills subject – performing arts, visual arts, physical education, beginning knowledge.

I endeavoured to steer the conversation back in the direction of BWTL. I asked Blue whether, in her view and experience, the CAPS demands for BWTL are finding application in Gauteng classrooms. She answered, “*To a minimal extent, yes*”. She reminded me of the many aspects and demands of the Life Skills programme and that only a limited period of time is allocated to each aspect. Regarding breathing, she mentioned the use of balloons in the classroom. “*I think, at this stage, is just to make them aware that you need to breathe, you need to control your breath. And if you blow hard, then the balloon will move further, if you blow soft, the balloon won’t move a lot, you know. And because the balloon is light, it’s very easy for them to see.*” So, in essence, the learners blow up a balloon and try to manipulate the balloon in

the air by using their breath. No further ideas or knowledge regarding BWTL transpired from this interview.

Blue used the opportunity to request that I would give a workshop to the provincial subject advisors. I agreed, and the 'Spotlight on Breathing Education' session took place via the Microsoft Teams online platform in May 2022. Although an in-depth interview about breathwork concepts did not transpire from making contact with the Department of Education, I was grateful for the opportunity not only to meet Blue but also her full team of subject advisors. It affirmed my personal observance of the minimalist state and nature of breathwork teaching and learning in South Africa.

8.7 ADDENDUM D4: INTERVIEW REPORT – PURPLE FROM UNIVERSITY A

My first question to Purple was about brief biographical and institutional information. *Who is [Purple] and what are you doing at the university?* The answer was not as straightforward as I had anticipated. She replied *“I’m just a human being, living as much of an ordinary life as possible. And trying to, in my best way, improve myself. And to really listen to others, and to people around me, so as to know how I can help those I need to help. I feel like listening and looking at others, allows me to really see what they need. I’m also self-reflective by nature and always interested in how can I do things differently. And how can I do it better? How can I be more efficient, in what it is I’m doing and so, yeah, breath has had a role to play with that”*. She further mentioned that, aside from being a voice lecturer at the university, she is an active performer of all genres of music and singing, from opera to musical theatre and jazz.

Without my prompting, Purple moved directly into the topic of breathing. I allowed her to speak. *“I find that, really, if you’re trying to grow your instrument naturally, you know, in terms of resonance, volume and support, breath plays a huge role in that. The other role breath plays is in terms of this kind of adrenaline rush that one receives. There are many terms for this. Stage fright, performance, anxiety, etc, etc, etc. Finding a grounded breath helps alleviate that. There’s so much that breath allows us to do, with sport, with exercising, that’s twofold you know, breathing improves the exercise and exercise improves the breathing.”* After this spontaneous introduction to breathing, I drew her attention to the RSMSPB theoretical framework.

The first principle addressed was that of non-tension. Purple agreed that *“yes, it’s important in singing”*, but immediately added that *“we need tension in the body”* and that, instead of tension, the word *“resistance”* could perhaps be used. *“There has to be a certain kind of resistance that allows us to position ourselves ... breathing and posture ... work hand in hand”*. She referred to yoga to make mention of good postural alignment, *“you are aligned from your pelvis all the way up to your head, or vice versa. From the top of your head or from above your head, all the way down to the pelvis. And obviously, if that is the muscle memory you train in yourself and in your body, when you stand up, you will align to that organically and naturally.”* Also referring to sitting on an exercise ball and the requirement to use appropriate muscles to stay on this ball, Purple tried to make clear her point that *“You have to use tension, but it’s a resistance; you need to have resistance in the core muscles, which is really where, posture-wise, we have to position ourselves.”* She emphasised that alignment of the spine is *“super important”*, because it *“opens you up to breathe”*. For her, the word ‘tension’ rather refers in singing to clavicular breathing which she terms *“the breath of exhaustion”*, which is the cause

of muscle tension in the upper torso. Tension in these muscles *“aren’t conducive for vocal production.”*

As a remedy to tension or insufficient clavicular breathing, Purple uses a combination of yogic and breathwork from celebrity Wim Hof’s teachings. She elaborated on an online tutorial video where Wim Hof demonstrates how he fills up the body with breath. *“He fills up the breath in the upper passage (demonstrates), and the head resonance and then filling up the chest and the rib area and then the abdominal lower area, the abdomen and the back.”* Breathing sufficiently is important because *“then the tension or the resistance in the body are in the muscles that can handle it, the bigger, the lower deeper muscles”*. Purple’s allusion to the link between non-tension and breathing sufficiency paved the way for a discussion on the RSM breathing principle of intake sufficiency.

I shared with Purple a research survey articulating two distinct breath-support preferences of American voice teachers and asked her the reasons for her preference in this regard. She responded that this is best demonstrated in a *“default, organic way ... if you starve yourself of breath, if you breathe out all of your air and you only breathed in when you absolutely needed to. What happens? Is it in or is it out?”*. She alluded to how the body naturally reacts after this breath starvation to be the best understanding of how breath support aids breath sufficiency. She reiterated that the *“best breath, the relaxed breath”* is *“the lowest point of the diaphragm”*. She further echoed ideas of well-known opera singers, Pavarotti, Sutherland, and Nielson, and referred to their silent way of breathing. *“And for me, this is the breath that we breathe when we sleep. When we’re sleeping and you don’t have a cold, you’re breathing, your mouth is closed because your nose isn’t blocked, but you’re breathing in through your nose. It’s the calmest way to breathe, but you fill up all of your head resonance with air. And so, you fill up your head and it comes all the way down your spine and down your back. And it’s strange because you feel like breath should be hard, you should work for it. But it’s such a calm way of breathing, it’s almost like you’re not breathing”*. It is clear that, for Purple, balancing the principles of non-tension and breath sufficiency are important. Referring to nasal breathing acted as a stimulus for discussing the RSM principle of nose inhalation and mouth exhalation.

Purple shared her first-hand experience of the detrimental effects of mouth breathing. Her own son was not only asthmatic but also had to receive extensive dental orthodontic care. She is a strong advocate for nasal breathing, also in SingEd. One of the advantages of nasal breathing for a singer is that it *“connects you to your diaphragm”*. She also added that breathing through the nose *“warms the air, it cleans the air, and it leads down to the back of the throat. So, it naturally opens up the back of the throat”*. She mentioned that there is often

a misunderstanding that breathing through the mouth will assist singers with the feeling of an open throat; however, the tongue “locks over the throat space”. At the same time, she acknowledged that, during a performance, it is not possible one hundred per cent of the time to focus on breathing through the nose because “*there’s so much going [on]. It could be what you’re singing, you’re trying to interpret the text, so you will breathe in through your mouth or through your nose*”. This echoes some of the SingEd literature, which suggests a distinction between natural and modality-specific breathing. At this point, Purple’s mind went back to the principle of breath sufficiency and breath support and she briefly added “*it’s not about how much air you take in; it’s how you manage the air*”. I took this as a cue to move on to a discussion of the RSM principle of breath leading.

In SingEd, breath leading is more commonly referred to as breath management or breath control. Purple expressed her dislike for the term breath control owing to its being “*suggestive of something ... aggressive*”. However, breath management is acceptable and, on hearing the term breath leading for the first time during this interview, she indicated that it appealed to her. Purple wanted to demonstrate to me what she meant by less aggressive. She exhibited an exercise that she uses. She teaches a traditional diaphragmatic exercise, repeated utterances of tss, tss, pff, pff, tss, tss, pff, pff, in a less aggressive way, by encouraging students to do it much faster and lighter. With this breath-management exercise “*lower and deeper*” diaphragmatic breathing muscles are strengthened. Purple went further to pinpoint that lower and deeper diaphragmatic singing affects not only timbre but also correct pitching, owing to there being no push or force of air. The breath support, the diaphragm, therefore supports “*just the right balance; it’s like a clutch control*”.

Purple further touched on breath leading by discussing dynamics, specifically the challenge of soft singing. She mentioned the use of semi-occluded vocal tract exercises to assist soft singing training. Demonstrating by singing a short melodic passage on the consonants ‘v’ or ‘f’, she indicated that this exercise creates softer sounds owing to the sounds being produced in a more “*forward place*”. She added that ‘v’ or ‘f’ can be replaced by lip trills or tongue trills for the same purpose of practising soft singing. Not only does the placement of the sound affect volume or dynamics but also the amount of air intake. Here Purple commented, “*they recommend singing through a straw*” using the “*smallest amount of air*”. Wondering about how these practices could influence the flow of air, I steered the conversation towards the RSM breathing principle of breath continuity.

Purple commented about breath continuity that it is simple. “*It’s really what the breath wants to do. Even in speaking, it’s continuous. There’s just one small stream of air and whatever it is we say, we think, and it comes out of our mouths. So, it’s actually organically what the body*

wants to do. It does not want things to be choppy (said this sentence in a stuttering, choppy way). It wants to be bind; it wants to be breathed". She shared a simple teaching tool and that is to ask students, "[C]an you sing a whole spaghetti as opposed to chopped spaghetti?" In order to achieve sustainability, "fullness of air" is paramount. "That sustainability allows you to sing legato; it allows you to sing longer, it allows you to stay on the breath the whole time. That means it's supported. It means that you can do that every day without tiring and fatiguing your voice". She further commented on the need for a constant air supply for phonation or singing. "There's a student of mine who said the car is the breath and all the vowels must jump into the car. And you know then the breath is just the car that just rides smoothly on the road". Focusing on this continuous breath supply is instrumental for singers to achieve a legato singing line. Purple had nothing further to add regarding this principle.

I briefly sketched my understanding of the RSM principle of breath independence and also expressed my hesitation about including it in an emergent SEdBWTL framework. Purple immediately referred back to the principle of nose inhalation and the need for singers sometimes to employ mouth inhalation. "We know that probably the best way to breathe is through your nose. In actual situations, you breathe in through your mouth, and you can't now be out of character and go, Oh my gosh, I breathe in through my mouth, so I'm not gonna sing correctly, or I'm gonna be doing something wrong. And for me, this is it." In the same breath, she referred to rigidity in teaching posture and that, although there are optimum postures that allow for the greatest flow of energy, in performance situations, this cannot be abided by one hundred per cent. Adopting dogmatic ideas of perfect inhalation and perfect posture could affect performance abilities negatively and create unnecessary tension or stress. Therefore, she stated, "Your breath, it's such an organic thing; it is an independent thing ... So, if you are working your breath in the best possible way, in the way that is its optimum way, it is default that in whatever situation you're in, and what you do, you would engage breath obviously, in its best way". Using the example of her own fear of cockroaches where she, as a voice expert, might not use her voice well momentarily, i.e., "screech", Purple pointed out that "there are those extreme situations where obviously you're not going to be using your breath optimally. But it's not going to hurt you, that very small incidents". She further remarked, "We breathe differently for different emotions. And maybe breath independence is also this organic way of using the breath. That there is no wrong way of ... if you are upset and you breathe in, you breathe in. If you're happy and you breathe in, you breathe in in that way. It's just organic". Purple's view on breath independence certainly gave me a fresh perspective on how it could also be understood in a SingEd context. However, she commented that perhaps the term 'breath independence' is vague and that some further explanation would need to be provided for greater clarity and understanding.

Next, we touched on the RSM principle of pendulum. Purple cited examples of how Wim Hof works with holding the breath. She referred to the value of breath holding in her singing studio to assist students with panic attacks. *"In my studio with people who have had panic attacks and, and use Wim Hof, sometimes they're not able to or they don't want to because the breath holding gives them this feeling that they will have a panic attack. But for those people who have had panic attacks and work past that holding phase, they realise that they can survive the holding. And there is breath and life after holding the breath"*. She also referred to the historic phenomenon of castrati singers and alluded to a breathing technique coming from that era. According to Purple, it was also a measured kind of breathing, *"breathe in for five. And you sustain or you keep for five, and then you breathe out five, and then you breathe in six, and then you hold for six, and then you breathe out six. So, it's a staggered kind of breathing. And the hold teaches a certain kind of support"*. Commenting on holding the breath, Purple said that it is also important where in the body you are holding the breath. *"But it's where you're holding. If you're holding here in your throat, you breathing in and you hold here in your throat, then obviously that's not going to be successful. It's holding in, you know, the lower proximities of your body"*. Purple once again touched on the value of directing and working with the breath in the deeper and lower proximities of the body. At this point, the seven RSM breathing principles had all been discussed and I guided the conversation to breathing and well-being, the last three items on the interview schedule.

Purple felt strongly that good breathing habits cultivated in the singing studio can affect the physical health of students in a positive way. *"I feel modernisation has affected how we breathe so much. We don't have to walk, we don't have to play outside, we don't have to build, we don't have to carry bricks, we don't have to carry stones. We don't have to carry big containers of water. And then we would have, we'd be engaged with the big muscles in our body. And so, we breathe to those muscles and from those muscles. We don't climb trees any longer. So, we're not using the muscles and then the breath obviously, they work hand in hand; muscles support and breath, you know, work hand in hand. So, we now have this very shallow clavicular breathing, which is not able to sustain the body. So, how can it sustain the mind? ... Our mind and body and breath is huge"*. This latter statement also opened up the conversation to mental and emotional health.

Purple referred to stage fright and performance anxiety that is *"a huge reality"* and *"if you are able to channel the low, the deep, the relaxed breathing, it puts you in a much better space. Most of it is just reducing the amount of adrenaline that is released and slowing down the heart rate, which only deep breathing can do"*. She further commented on the value of breath holding. *"When you starve your body of air and then you breathe in, you reoxygenate more of*

your blood, which actually I feel improves your intellect. Because if you have all of your cells, all of your blood, oxygenated, you have the energy and the impetus to learn". Noticing that we had spent the hour allocated for the interview, I hastened also to get Purple to comment on spiritual well-being. Purple stated, *"I feel like if you are connected to the source, and there is no other way to be connected to, you know, the source of all things, that this place of transcendency that is a deep, deep, relaxed place. And to make music from that place is just ... it feeds you; it feeds everyone else. But at the same time, it is not meant to be used to feed. It's not meant to give. It's just being connected to that, that the result is to give, is to serve. You're serving music".*

For me this interview ended the way it started, by my being in awe of Purple, who reflected on her life and her occupation in a unique and profound way. It was an enriching encounter.

8.8 ADDENDUM D5: INTERVIEW REPORT – PINK FROM UNIVERSITY B

Participant Pink, from the outset, felt it necessary to emphasise that he views breathing through the lens of classical singing. He emphasised that other breathwork modalities, like mindfulness or yoga, might be different from his own views. I thanked him for his participation and immediately launched into addressing the questions in the interview schedule. I thought the RSM principle of non-tension a good place to start, since a substantial amount of SingEd literature touches on this subject.

Pink indicated that his very first lesson with any student is on posture and breathing. He usually starts by creating an awareness of their feet. In his experience, sometimes students come from a choral tradition *“where they would stand with both feet next to each other and I often see lots of swaying from side to side. And I try to explain to them that what we want is, any movement that you make with your body must be a conscious decision in order to promote the meaning of the music. So, anything that has become habitual, like swaying from side to side, we want to stop that from happening. When I speak about posture, I work from the feet up. So, I’d usually tell them, put your feet next to each other, maybe one in front of the other, so that instead of shifting your weight from side to side, you can shift from front to back, especially [if] you feel like you want to approach a high note or something like that”*. Pink emphasised that the posture should not be *“trapped”* or *“locked”*. He therefore teaches students to shift their weight to their back foot when approaching a difficult passage or high note to assist them in letting go of bad tension in the neck muscles. *“Then a lot of the tension, or a lot of the that weight is displaced, or that tension is displaced into the bum into the ground. And they really have the connections into the ground a lot more”*.

After talking about feet, Pink addressed the topic of knees with his students. His instruction to them is *“never locking the knees”*; rather, they must always be flexible. He demonstrates to his students how a rugby player or American football player would have their stance when catching the ball *“and that they have that feeling of energy in their body. So, if you can imagine this feeling of I’m not totally stiff, but I’m ready to catch that ball. But there’s not no tension in the body”*. Pink reasoned that a distinction should be made between good tension *“that’s not going to block any kind of singing functioning”* and bad tension *“that’s going to get in the way of phonation or breathing”*. Locked knees are, for him, an example of bad tension.

After discussing feet and knees with students, he makes them aware of the pelvis and explains the pelvic tilt. Also, here flexibility is necessary. He teaches students to tilt their pelvises slightly forward, in conjunction with an elongated spine. Then other postural considerations follow, like elongating the spine, broadening the chest and relaxing the shoulders. *“I’ll usually tell*

them to roll their shoulders to the back and drop it". In Pink's experience, it is also necessary to create neck posture awareness, since many students have a tendency to stick their necks forward, which results in unwanted tension. Pink told of his cello teacher schooled in Alexander Technique who constantly adjusted his body and his neck and that he adopted this habit with his students. *"So, especially in the neck, and having that feeling of length in the neck of pulling a string through the top of your head without any tension... that tall swan-like feeling ... So, just to reinforce again, I always tell my students, ... I don't want you to stand stiff like a soldier. But that you need to have that feeling of elongation in the body, and connection through the feet into the ground"*. This was the second time that Pink made mention of being grounded and I decided to ask him why it is important to him.

Pink indicated that being grounded is being connected and that opera singing *"is all about that connected sound"*. Also, when you have resistance from the *"vocalis muscle with the breath that goes up"*, a feeling of low support is very important. *"So, I always emphasise that they really need to keep their feet into the ground. And if you want to get a little bit, what's the word I'm looking for,? esoteric maybe, I think there is an energy that we can draw from the earth from the ground. And, and so I think there is energy that we can tap into"*. He emphasised that all these postural considerations are not taught once-off but constantly built into the lessons. I thought Pink's mentioning resistance and low support an ideal opportunity to bring the RSM principle of intake sufficiency into the conversation.

I shared with Pink a research paper in which a survey of breath-support preferences of American voice lectures were spotlighted. I asked him about his breath-support preference. He mentioned that initially he was taught a certain way but after receiving further training, he changed his breathing technique. *"And my philosophy is that if you have a certain technique that works for you, and you sing well, and you produce singers that sing well, if it's different to the way I teach them, good for you"*. In fact, Pink personally combines aspects of the both the *"down-and-out"* and *"up-and-in"* breath-support approach. *"I think down and out and back in again and controlling the stomach muscles to come in"*. He emphasised the difference between breath support being *"resistance to air"* and breath management being *"control [of] airflow in order to sing a line"*. In terms of breath sufficiency, Pink is of the opinion that *"what's more important than inhaling a lot of air, is where you feel that inhalation process"*. He emphasises that, with classical singing, the inhale is situated low in the body, below the ribcage. This allows for sufficient air intake that enables long musical phrases to be sung. He said, *"to sing long phrases, it's all about controlling the abdominal muscles"*. Pink also shared how he employs the stomach muscles to assist him when he is running out of air while singing. *"I find that if I'm towards the end of the phrase, and I feel like I'm running out of air, if I*

concentrate on the stomach muscles coming in on that last part of the line, then usually I'll get through the line". Pink also shared with me a singing technique with its origins in Italy. He called it "*inalare la voce*", meaning "to inhale the voice". In practice, it implies imagining inhaling the sound while singing. According to Pink, "*that way you've got lots of air to work with because you're able to manage the sound much more*". It seems this technique assists with breath sufficiency as the outflow of air is contained in a way. Pink further divulged that when the stomach muscles "*go in*" it can assist singers in executing big intervals. He did not share more thoughts on breath sufficiency and the conversation was steered toward the RSM principle of nose inhalation and mouth exhalation.

In his observation of famous opera singers, Pink's experience is that they either breathe through the nose or breathe through both the nose and the mouth. "*I've never seen an opera singer breathe through their mouth without breathing through their nose*". He expressed his annoyance at students coming to his class trying to breathe only through their noses. He went on to discuss the advantage of both kinds of inhalation practices. According to him, breathing through the nose assists his students "*to feel that low area ... where you're supposed to breathe*" and, at the same time, assists with relieving nervous tension. When breathing through the mouth "*the feeling that you need to get is, the feeling of the start of a yawn. So, if you breathe through your mouth and you find that yawn space, what happens is that the soft palate rises and the extrinsic laryngeal muscles on the side here (demonstrated) relax. And that's very important for singing because, for resonance, you want to make sure that your instrument, so the mouth and the pharynx, that they are in the optimal position for resonance. So, if you don't breathe through the mouth, you cannot create that feeling of a yawn position. And you cannot create those resonance cavities because your biggest resonator is your pharynx followed by your mouth*". Mouth inhalation thus has the advantage of creating resonance space. Pink emphasised that the yawn sensation that enables an open throat position is to be maintained throughout the singing process. He further clarified that in classical singing "*the larynx is in a lower position*" and that "*you get that when you breathe with the low breath. And with the yawn breath as well, that feeling of the yawn. So, what happens is, as I mentioned, the soft palate goes up and these muscles on the side here (demonstrated), the extrinsic laryngeal muscles will help stabilise the larynx lower*".

On speaking about the low breath once again, I remarked that perhaps the "down and out" breath-support method helps to keep things low and that a too rigid "up-and-in" approach could add to larynx tension. Pink agreed and referred to another RSM breathing principle, the principle of pendulum, using blood pressure as an example to explain hypo functioning "*meaning it's too little*" and hyperfunctioning "*meaning it's too much*". "*So, in singing, it's the*

same way. *If you have an onset, you want to always strive for the middle of the pendulum so that it's never too little or too harsh. It's the same thing with breathing with the muscles moving in. You never want to have it too little or too harsh*". He suggested that when a student has a breathy onset it would be wise to take them a little beyond the middle of the pendulum *"to have them feel what it feels like to have a cleaner, a proper onset"*. After they have mastered this aspect, students can be guided back towards finding the middle of the pendulum. Pink emphasised that each individual student has unique vocal challenges and cautioned against teaching *"a blanket technique of singing"*. The metaphor of the pendulum can thus be used for varying aspects and a vocal teacher guides a student towards gaining a unique balance.

Next, I raised questions around the RSM principle of breath leading, more commonly referred to as breath management, in singing. Pink immediately linked breath management to breath sufficiency by saying, *"if I expel too much air in the beginning of the phrase, I'm not going to have enough air towards the end"*. Therefore, it is important that *"you know how long the phrase is, and where is the high note in that phrase, where is the crescendo in that phrase, where's the phrase going to"*. The challenge for the singer is *"not using so much air without the voice losing connection"*. Breath management is therefore important in order to utilise breath efficiently. Pink further commented that *"you can't do any kind of colouring or emotional response without the breath working efficiently"*. However, he immediately added that different kinds of singing tone colour are not just dependant on the breath but also on diction, resonance and register. As an example, he mentioned that focusing on using more of a *"chest sound"* or *"head sound"* affects tone colour. Also, you could perhaps expel more air when you are trying to be very dramatic. In terms of dynamics, he discussed the challenge of soft singing. *"I think singing piano is hard because when younger singers, and even older singers, try to sing piano, they relax the abdominal support. And it's not about relaxing the muscles. You still actually have to work even harder to control the sound"*. He mentioned that one of his American teachers views soft singing not as a music element of dynamics, but rather as one of timbre. *"And so, instead of having breathy piano sound singing (demonstrated singing 'i' breathy tone), you think of it as a different kind of colour to be slightly darker, so it would be (demonstrated singing a darker 'i' tone). So, there's more connection, more focus to the sound. It's not necessarily softer in dynamic, but it's a different colour"*. Pink also acknowledged the challenge for younger singers who, to the command of soft singing, go into their falsetto voice, losing *"that proper connected sound"*. I used this choice of wording to guide the conversation to the RSM principle of breath continuity.

Pink indicated that breath continuity, called legato singing in music, is *"how we connect the notes to each other. And specifically connecting vowels"*. He mentioned *"jaw interference"* and

students “*chewing on words*” as a challenge to the continuous flow of breath. He reiterated the benefit of breathing in through the mouth, to enable an open throat cavity to maximise air flow.

Next we discussed the RSM principle of breath independence. I explained my understanding of how the RSM work with this principle, not to link habitual actions either the in or the out-breath. Pink replied, “*Look, you can’t phonate without having the breath come back up again. It’s impossible, but I have been in master classes or seen people teach, where singers, maybe takes too much air in and causes tension. And then the teacher will say, breathe out, and they breathe out. And then she’ll say, okay, sing the phrase now. So, they’ll breathe out, and they’ll still obviously have to inhale to sing. But all that extra breath capacity that they fold up with, they’ve just let go of it a little bit. And then immediately, they’ll start singing. But obviously, when you start singing, you need to inhale and exhale, for that to happen*”. Pink indicated that perhaps this is not a principle useful for SingEd. Although earlier, of his own volition, he touched on the principle of pendulum, I still wanted to ascertain his views on it, more specially about breath holding.

Pink suggested that perhaps the term breath holding, which implies that you hold the air, is not suitable and that instead “*suspension*” could be used. For him “*hold implies that there’s no action that’s going to follow but suspending something means that there is an action that’s happening after that*”. He shared how he teaches his students to suspend the inhalation briefly prior to the onset of sound. “*If you breathe in and there is a very small fraction of a second or a very small amount of time, we’ve got that suspension of inhalation, right as you begin the onset (demonstrated). So, if you’re breathing in (demonstrated), the suspension needs to happen, so that when you start phonating, you can continue with the inhalation of the voice feeling*”. He re-explained the utilisation of “*inalare la voce*” in this context. Being aware that all seven RSM principles have been touched upon and also being conscious of the interview time limit of one hour, I directed the interview to questions regarding breathing and well-being.

Pink indicated that he is busy with postgraduate studies in positive psychology which focus on well-being. For him, positive psychology is promoting “*things that make us function well and feel good*” and which “*brings meaning to one’s life*”. Although breathing can be a contributing factor in feeling good, for Pink, when you sing or make music, it generates positive emotions. In turn, positive emotions affects all other areas of your life. “*When you sing in a choir, you might feel good, because of these emotions, but it also brings meaning to your life because you enjoy that interaction and connection with people in the choir with you. So, that feeling of connection of choir makes choirs meaningful to me, it adds meaning to my life*”. He also divulged his understanding of flow theory; however, I choose not to include this part of the

interview as it in no way contributes to answering the interview questions. I redirected the conversation and asked whether he had ever noticed that breathing contributing to his students' respiratory health, emotional well-being or spiritual elevation. Pink reacted, *"I can see that when students connect and breathe optimally, they feel healthier"* He contributed this observation to the fact that students are trained to breath lower in the body. He did not offer a deeper explanation on why health and low breath are connected other than referring to *"mindfulness exercises or stuff"* that focus on the importance of low breath for optimal well-being. *"So, with singing, we are breathing low all the time. So, the benefits of mindfulness and all of those other activities that focus on low breathing, we would, obviously have those benefits as well, because we are breathing low"*. What *"those benefits"* are, he did not elaborate on.

The interview lasted one hour and eight minutes. I found Pink to be very kind and generous in the sharing of his knowledge and experience. He was the first research participant who immediately responded positively to my initial emailed research invitation and he also assisted me in contacting and finding one of the other research participants.

8.9 ADDENDUM D6: INTERVIEW REPORT –YELLOW FROM UNIVERSITY C

Yellow was involved in training future teachers at University B in how to teach a music course, i.e., music education methodology. However, currently he is responsible for teaching a “Fun with Choir” choir methodology programme at University C aimed at future Life Skills educators. After briefing him about the background to my study and about the RSMSBP, we tended to the interview schedule. I asked him about his inhalation preferences in the context of the RSM principle of nose inhalation and mouth exhalation.

Yellow shared that, in his experience, youngsters “*are prone to know how to breathe with their nose, and therefore they use that*”; however, when you’re older “*you would like to breathe with your nose and your mouth*”. The latter ensures that “*the expansion [is] happening from both sides*”. He demonstrated the mouth in-breath with a quick “ha!” yawn-like action and saying “yes!” on the out-breath. For him, the yawn space created by mouth inhalation enhances abdominal expansion, the soft pallet opens up and “*you’re able to just carry the sound out*”. For Yellow, this way of breathing solves a lot of singing problems because it contributes towards “*phrases to be shaped better; it also helps with the intonation to improve because now there’s more space for the sounds to come out or to place it as well*”. He reiterated that perhaps different ways of breathing are related to different age groups and that “*what is natural*” is “*debatable*”. Therefore, he stated, “*I don’t think there’s one model that works for everyone, especially when we try to teach the whole concept of singing properly*”.

After making the last statement, Yellow delved further into his observations about why different race groups in South Africa might perhaps breathe differently. He said that, culturally, “*we can’t just breath in the same way*”. He alluded to parents of different cultures having different expectations of how their children should or shouldn’t behave and how these expectations are communicated by the parents to their children. He gave examples of his own upbringing and experiences where he noticed his white Afrikaans friends being admonished with commands (I translated these all from Afrikaans to English) like “*you’re not allowed to laugh so loudly*”, “*people are looking at you*”, “*oh siss, man, why do you talk so loudly?*” and “*why do the people make such a noise?*”. In contrast to this inhibited way that white children are raised, he demonstrated the louder, uninhibited way, sometimes perceived by white people as shouting, in which black children use their voices. Yellow added, “*The action that comes from the shouting out, breathing has played a certain role to ensure that this kind of onset, how can I say, maybe the release of what you take out as you do it*”. He mentioned that, while adjudicating Eisteddfodau, he cannot help but notice the sometimes thin breathy sound, especially of young white girls that he thinks is the result of their upbringing around inhibiting

expression, inhibiting the breath. I found this observation congruent with my own experience of teaching young white girls. I used this argument as an instrument to introduce the RSM principle of breath leading into the conversation.

Keeping close the topic of racial and language differences, Yellow remarked that in his culture, where even speaking to your mom “*you must actually sound like you’re shouting*”, managing the breath to sing softly can pose challenges. He equates the concept of breath leading with the ability not to “*lose the energy ... in order for you to finish the phrase*”. Losing energy, i.e., “*not carrying through*”, affects “*the energy intensity required for the text to come out*” and can affect detrimentally the intonation of “*phrases towards the end*”. He reiterated the importance of maintaining energy intensity while singing softly with sharing a story from his upbringing. This story he relays to his choral students at University C. While attending church with his parents, “*growing up, you tend to be naughty. And then you play around ... in church ... my mom, for instance, when she would say to me, I need to stop, she wouldn’t say “stop it” (demonstrated very soft, without energy, utterance, “stop it”). Instead, she say “stop it!” (demonstrated utterance with energy and intention)*”. He mentioned that, as an educationalist, he loves to teach in a way that shares experiences that children are already familiar with. He termed this kind of learning “*experiential learning*”.

The RSM principle of intake sufficiency was next on the interview schedule. I briefly shared with Yellow a scientific survey of American lecturers in which two common breath-support choices, “up and in” and “down and out” (see 2.4.4.5) were discussed. Yellow was of the opinion that the choice of breath support probably “*depends on [the] context of [the] music*”. He made mention of “*istibili*” singing. “*Istibili, it’s music that black choirs use to sing and dance*”. He explained that this kind of “*step music*” required that “*the breath becomes accurate in terms of giving the rhythms their ability to actually come alive. And therefore, the breathing becomes the way it becomes*”. From this, I understood that the breath is not just used as energy to sing, but also to execute the movements; therefore, breaths are taken more quickly and are consequently shallow. Yellow contrasted this way of singing with singing a western Eurocentric Handel aria with extensive runs, which requires optimum breath supply. With this he reiterated that there should “*never [be a] crystallised notion of what is the correct way of breathing*”.

Yellow mentioned that he does use the image of a tyre to explain the concept of breath support. “*A tyre. A tube. When you breathe, when you’re like filling up your tyre with air, it doesn’t fills forward, it doesn’t fills back, it doesn’t fills sides, it fills up.... So, the body becomes big,... Not an explosion, but it doesn’t feel (breathe quick in-breath towards upper body) here on the chest. But everything is happening around me*”. He indicated this filling up of the tyre

is “a fill up and a release ... in and out ...activity” that is managed continuously by a singer. Yellow reiterated that singing a Handel aria with extensive melisma requires breath support that ensures a continued flow of air. I used the conversational emphasis on continuity to lead the conversation to the RSM principle of breath continuity.

Yellow indicated that to demonstrate to his students and to reinforce “*legato singing*” or to “*sing through the line*”, he draws their attention to the “*process of thinking of how it feels to breathe in and breathe out*”. He would make them breathe in, moving the hands/arms towards the body and breathing out moving the hands/arms away from the body. Another teaching strategy is, at a point when they are very familiar with a new song, “*you take the consonants out, and we do that vowel alignment*”. This idea he also replicates in a warm-up exercise which he demonstrated, singing the vowels in order of “a, e, i, o, u” on a single pitch. He indicated that, once vowel alignment is understood, the consonants which give meaning to the text will not disturb “*the phrase or the line*”. Yellow offered no further comments on breath continuity.

Next, we discussed the RSM principle of non-tension. Yellow initially gave a brief summarised understanding of a good posture in singing. He mentioned relaxed neck muscles, an elongated spine and lower limbs that should not be locked. I asked him why the lower limbs should not be locked. He answered that when the legs become locked it results in tension, which limits and constrains the ability to sing in a relaxed way. Yellow also shared noticing the body language of his students sometimes reflecting their being burdened by life. He mentioned noticing them sighing, accompanied by a slumping body posture and body language that indicates “I can’t anymore”. He also stated that this posture is detrimental to a free and relaxed flow of sound. Next, he indicated that students, in trying to reach higher notes, often make the mistake of lifting their chins up, which contributes to tension. To this he added that, perhaps this mistake is unintentionally a reflection of a conductor’s conducting style “*if the hands are too high and you say the kids must look at you, the kids are bound to look up*”. In order to address the incorrect habit of raising the chin while pitch rises, Yellow encouraged students to think in “*the opposite direction. So, if the scale is going up, the thinking, the imagination in their heads should be going downward*”. He tries to make this opposite thinking visual and tangible by encouraging students at times to lower their hands or to bend their knees while raising the pitch. In this way, he tries to get students to rethink and come to a new realisation of what “*is working for their voice*”.

I briefly mentioned to Yellow my view that the five RSM breathing principles covered thus far in the interview are easily understood within a SingEd context, but that perhaps the following two principles might be more challenging. I asked his opinion on the RSM principle of breath independence. Yellow reminded me of the requirement of staggered breathing in choral

singing that assists in creating uninterrupted and long musical lines. *"There's continuity of sound, especially when you're trying to create longer lines ... with songs that may require that"*. When all choristers breathe at the most natural point in a text, i.e., at a comma or full stop, they would mostly breathe at the same time; hence, interrupting the desired prolonged sound. In this context, breath independence is required where every chorister breathes at a point where no other chorister is breathing. The RSM principle of pendulum was next in line. Yellow indicated that breath holding is not something that he is familiar with.

Since all seven RSM principles of breathing had been touched on thus far in the interview, it was time to shift the focus to aspects of well-being. I raised the topic of respiratory health and Yellow replied, *"Honestly speaking, I haven't thought of it. I haven't thought so far but, especially now that you mention COVID. (long silence) Yeah. I guess maybe the whole concept of what we were talking about, with lower breaths, taking those longer breathing, the inhaling and exhaling, without that upright voice has really helped choirs"*. I briefly shared some educational research articles on the positive contributions that breathing has made for learners in the areas of mental focus, emotional release and energy management. I prompted Yellow to share his personal experience in this regard. He mentioned that he personally never experiences stage fright, but that he does notice that his students experience stage fright. The way he addresses it is to get students to massage each other or to shake their limbs. He added *"Or maybe we do the one like when we sing the scale up, with one we try to hold the breath, just to give breath a chance, because now this thing requires to be on time. The breath reminds us that, oh, calm down. And that helps the body just to relax while you are keeping that intensity of there's a competition or maybe you're about to be onstage. Sometimes, when you sing too late and you're quiet, sometimes it's too tired because they put too late in the programme. You need those kinds of things"*.

Next, I raised the matter of spirituality and suggested that we use the less loaded term of "transcendence". Yellow's response surprised me. *"It's quite a common thing. It's, and it's interesting that you don't want us to call or to put it in a religious or in a spirituality. It's for me, it is the thing that that is still happens to some of my students, maybe because they are affiliated with religion or with spirituality. Certain songs, when they hear them give them that, put them in that trance mode, like you saying that the higher level of that mode, and it happens a lot. It's something that is part of like choir rehearsal most of the time. ... With us, it feels like it's an after effect of the trance mode, that trance that is happening. The choir will be singing a song in four parts. And then the students or the learners at that time will just get into this space. Because I don't know if you know what, African music, we have these repetitive things that keep going on and they keep doing the same thing over and over and over and over until"*

the person gets into that trance mode. And it's through breathing we can we bring them back to earth. After a moment, when they're going through that, there'll be two learners will go to the person and maybe the one will be rubbing the hands and the other will be doing an internal/entire breathing with the person so that's there's a sense of channel between the watch the other one who is here is doing with the one who's out, and that channelling of just breathing is the afterthought, not necessarily what's happening when the singing is actually taking place". Yellow emphasised that it is the music and the words of the music "*that really drive my learners to that space*". This African custom is foreign to my own Eurocentric choral experience.

Yellow's reflections from his own lived experience as a black African added a unique flavour to this study. Also, it was evident to me that Yellow is an educator at heart, as he continuously gave consideration to how to make theoretical concepts vivid and practical for learners.

8.10 ADDENDUM D7: INTERVIEW REPORT – GREEN FROM UNIVERSITY D

I started the interview by asking participant Green to affirm the biographical and institutional information that he had provided on return of the consent form. Green affirmed that he is working in a School of Education at University D and that he is responsible for training future teachers in the field of music education. He indicated that a significant part of the music education programme revolves around “*singing and choral techniques*”. This signalled to me that Green would be a suitable candidate to assist me in answering my interview questions. I made reference to the RSMSPB theoretical framework being the core ingredient of the research schedule and immediately launched into enquiring about Green’s views on the RSM breathing principle of non-tension.

Green began by saying that, during rehearsals, his students mostly sit down; however, once they are familiar with the work, he makes them stand up in order for them to support and control their breathing better. He indicated that “*I like them to stand straight, not too much straight, but to take their shoulder up you know, just to balance the body, so that they can be able to sing*”. The reason he gave for this posture is for students to “*control their breathing and maintain their health and accuracy of their voices*”. He further remarked on vocal health and the need for students to keep their voices “*strong and healthy... therefore, it is essential for them to practise, for artists. So, that when they sing long times and professional, it can be good, you know? Working on breath, exercise and technique, you know, it also helps to control the vocal*”. I wondered what he meant with “*take their shoulder up*” and asked him to demonstrate it to me. At first, he pulled his shoulders up and indicated that this posture is not desired. He then returned his shoulders to its natural height but then shifted them slightly backwards. He reiterated that “*if you’re not a well standing, you can’t sing well. I experienced that; you know. Where you’re going to approach high notes, transition is a problem. You need to feel comfortable before you start singing*”. Green’s remark on “*high notes*” emphasised for me the link between the principles of non-tension and breath leading. He also mentioned the ability to “*control*” the breath, which is linked to the principle of sufficiency. We launched into a discussion of the RSM breath principle of intake sufficiency.

Green emphasised that “*without breath control ... you can’t sing well*”. He indicated that, in his experience, students who do not have a good command of breath control experience intonation problems and struggle with singing higher pitches. He reiterated, “*if you can’t control it, your breath, it’s a problem*”. According to him, breath control “*improve the lung capacity and power for the high notes without losing too much that breath on the notes*”. I mentioned the research article where a survey was made amongst American voice lecturers expressing their

breath-support preference as either “down and out” or “up and in”. Green was of the opinion that the “up-and-in” approach is simple, controllable and easy to understand for his students. *“So, this is the best one, the upper one. But there are sometimes more breathing exercise and technique, which can also try to help students practise when they are at home”*. I enquired about his mentioned “more breathing exercises”. He demonstrated, singing an ascending and descending arpeggio on the text “*bella signora*” while pulling the abdominal muscles together. He further shared physical exercises, students lifting their arms up and down for 5 to 10 minutes and *“pretend like they are running ... so that they can be flexible and ready to exercise”*. This sounded valuable to me in terms of getting the body flexible and ready for action, but I could not quite grasp its value for breath support. Green went on to share an exercise that he uses to demonstrate to students that diaphragmatic breathing *“involves belly rather than the chest”*: *“sometimes you can try to lie on the floor and relax and breath normally,... So, you should notice how you breathe in, your stomach and ribcage also rise, you know. And also, when you breathe, you must get smaller again and deflate.... This can also help you to feel the back of the diaphragm, you know. As you feel resistance against the flow, you know, it can also help you to produce a good, very good sound, you know ... So, when you take a breath, make sure that you breathe in such a manner that your stomach rises”*.

I talked about the RSM breathing principle of nose inhalation and mouth exhalation. I asked Green to comment on his inhalation preference. He answered, *“Both of them they good, but me I prefer the nose one”*. Green indicated that he intentionally observes and teaches his students to inhale through their noses. I asked him to explain why he prefers nose inhalation. He replied *“Because you won’t lose a lot of pressure. You will be able to control it with the nose. With the mouth you can’t because you will be saying (demonstrated exaggerated mouth inhalation) then that air is gone already, you know”*. He indicated that nose inhalation is more *“simple than mouth”* in assisting singers not *“running out of breath before they end off the phrase”* and in assisting *“the vocal cords and the larynx ... being used correctly”*. He indicated being well acquainted with the musical score and knowing beforehand where to breathe, will further assist breath sufficiency and enhance musical performance. Green further remarked on nose inhalation, *“sometimes you can even check where the music can allow you to stop. And you use your nose to breathe. It won’t sound bad; it’s going to sound good. It’s a matter of working on it and try different tricks that are working. Because singing is a very tricky thing”*.

Next, we discussed the RSM breathing principle of breath continuity. I asked why legato singing is preferred by singers. Green replied, *“Because it makes music or sound beautiful ... There’s nothing more. When you sing like you encourage legato, it means you’re asking for*

beautiful singing". He indicated that he practises legato singing with his students by employing short melodic passages and focusing on the concept. *"You are trying to put everything into legato. That's where you are applying it, same in the music, you will see the difference"*. He reiterated that preparation exercises are valuable to focus attention on singing principles which will be used later in performing songs optimally. Thinking of musical elements that can be incorporated in preparation exercises, this guided the conversation to the RSM breathing principle of breath leading.

Green re-emphasised the importance of being well acquainted with the musical ideas and demands of a particular piece of music. *"Then, after you understand those musical ideas, that's where you can start playing"*. To execute the musical demands of singing softly, loudly or crescendo, *"the breath can also play an important role there"*. He went on to remark on the difficulty of soft singing. *"Soft singing is not easy. Not everyone can sing soft. You need to work on it many times, many times and also you need paying attention on how we breathe often, you know, to overlook because it's completely automatic"*. Regarding timbre or dramatic variances in the voice, Green shared the use of a laughing technique, *"like you are laughing and singing"*.

On prompting Green about the RSM principle of pendulum and the possible value of breath holding for singers, he replied, *"Let me think of something ... it's a difficult one this, I think ... (long silence) ... I think it can be accompanied by irritability or something and I don't know how I can put it to you ... Because when you hold your breath, you give yourself more time to both absorb oxygen and also to produce carbon dioxide. But it can work well for some. You know, we are different cultures. It can work well for some, you know. It can also increase the amount of carbon dioxide in your cells, to be lifesaver"*. He also mentioned breath holding being beneficial for improved longevity, lung expansion capacity and strengthening the diaphragm.

Next, I drew his attention to the RSM principle of breath independence. Within the RSM context, Green could appreciate the value of this principle *"to improve their physical performances"*. However, he offered no insights on how this principle could be understood in a SingEd context.

On my asking Green about breathing and well-being, he displayed a keen interest and awareness of how breathing can assist students to control anger or stress, improve sleep, manage cravings and improve overall performance. *"We need to be able to be aware of incorporating breathing exercise into our daily routine. And you know, you have to have many benefits including promoting why focusing, increasing focus, performing your best, you know,*

it's a difficult thing to do, you know. Several times or several times a day taking breath can help you to refresh your energy, you know. It can increase focus, you know; it can let go of destruction, you know. Breath is very important ... I'm saying this, because with the stress being a constant presence in our life, you know. Taking time to process your emotions, it also decompress, you know, and it can get into the right frame of your mind, to absolutely be crucial, you know". Green shared a breathing exercise for assisting students, *"you can place the tip of your tongue on the gum, you know, put just behind your top front teeth, you know, you slowly inhale through your nose, for as three, two or more, maybe two to four second, you know, then you hold your breath for five seconds, we'll see what happens. Then after that, the breath out is outlet, your mouth for 8 or 10 [minutes], you know, you repeat this breathing up to five times".* He is of the opinion that all singers could benefit from including breathing exercises linked to well-being into their routines. He also shared that having light-hearted conversations with his students also assists them to *"feel free and relaxed"* and helps to *"reduce stress"*. Finally, Green remarked that *"without music, we are nothing, I'm telling you"* and remarked how beautiful music in itself promotes relaxation and can reduce stress and frustration. I further prompted Green to share experiences of spiritual elevation that either he or his students experienced but he made no contribution this topic. That brought the interview to a close.

Although Green was very keen to assist me and I am very grateful for his willingness to participate in this research, this particular interview was challenged by a language barrier. Both the research participant and researcher conducted this dialogue in their second tongue. Green mostly did not grasp the essence of the questions at first, but on further explication contributed with enthusiasm communicating in English that at times left me perplexed. I tried to ask enough questions that related to his comments to address and manage this challenge.

8.11 ADDENDUM D8: INTERVIEW REPORT - WHITE FROM UNIVERSITY E

Participant White shared that, as a postgraduate student, she had the privilege of being part of an international cultural exchange programme. Under the tutelage of two overseas lecturers, she completed a master's degree in choral conducting. At present, she is responsible for both undergraduate and postgraduate choral conducting methodology in both the School of Music and the School of Education at University E. She also teaches voice, *"the correct way of singing"* to future Life Skills educators in the School of Education.

After briefly sharing with White the motivation and purpose of my study, I mentioned the RMSMPB theoretical framework to her and launched into asking why and how she considered the RSM breathing principle of non-tension to be of significance within the realm of SingEd. White interpreted non-tension as *"relaxation"* and remarked that it is crucial to both singers and conductors. As a former athlete, she incorporates physical stretches, akin to those in yoga and Pilates, into choir rehearsals. She also consults specialist help when the need arises. *"If I really don't know, and I see I can't help my singers, I go and I ask for help. And I will also often ask of my colleagues, do you have new relaxation exercises, you know, just to renew yourself and also make it more interesting for them for the singers and conductors"*. She used the example of a magistrate singing in one of her adult choirs, who, owing to work stress, had an exceptionally stiff jaw that troubled her while she was singing. White consulted a professional physiotherapist who recommended an exercise relayed as *"you can take your two thumbs, obviously when your hands are clean, and put it on the back of your wisdom teeth, at the back of your mouth. You put it on the inside. So, open up your mouth (demonstrated) and then you push it down, you literally push your thumbs down gently and slowly"*. She further commented on what she considered to be good posture. Posture and shoulders should be upright but not tense. She shared two exercises that she had gained from her cultural exchange postgraduate studies. The first is a pendulum-like exercise where you swing the arms from side to side. Although this exercise is in preparation for learning how to conduct, it *"relaxes the shoulders and the abdomen and everything"*. The second exercise is doing a skiing action, with arms moving forward and backwards, at the same time bending the knees as if skiing in the ice. White mentioned that this exercise often evokes laughter in rehearsals, which also aids relaxation.

Next, we discussed the RSM breathing principle of intake sufficiency. I shared with White an American survey among voice lecturers dividing them into two camps, either being pro a "down and out" or pro an "up-and-in" breath-support approach. White remarked that *"these things are debatable"* and *"depends on person to person, because we are all put together differently"*.

For her, what is more important than a fixed approach to breath support is to “*understand the concept*”. She made mention of the very different personalities and sensibilities in her choirs, with some students being more “*scientific*” and others being more “*practical*”. She is therefore of the opinion that their understanding and application of the same concept will be different. That being said, she remarked “*I definitely don’t do ‘up and in’ because with ‘down and out’ you do get sort of an ‘in’.* Obviously, both of them are, in a ‘scientifically sense’ (shows italics with fingers), *correct*. [However] *if you say, ‘up and in’, everybody will do this* (demonstrated raising of shoulders). *So, I prefer the resistance way. I try to say, you know, expand as far as you can* (demonstrates movement away from the body, both back and front, as well as sideways). *And when you exhale* (demonstrates resistance)”. She preferred an approach that created “*no tension in the vocal cords*”.

White further remarked on a singer having to inhale a sufficient quantity of air to initiate sound, maintain long phrases, and aid intonation. She shared a practical application to maintain a good pitch. “*I always had my singers, you know, breathe on the pitch, because when you breathe you must hear the pitch. If you only hear the pitch, when you exhale, then it is too late, then you’re flat. So, breathe on the pitch*”. White also mentioned that staggered breathing can be employed in choral singing to sustain extra-long phrases. She further remarked that a “*good breath*” is the result of breathing in “*as low as possible* (demonstrates pointing fingers to above hips)”. She enjoys making things tactile and using imagery in endeavouring to get students to understand the concept of low breath. She would make them lift up the front part of their feet and say, “*your legs are like straws*”, breathe the air in through your feet. Alternatively, she will encourage them to lie on the floor with a book on their stomachs. “*And remember, when you breathe, the books must go up. Obviously, as you know, this is a skill and it takes time*”. The latter exercise also helps students to experience “*the resistance ... on the outside*”. White also makes choristers lay their hands on each other’s stomachs to form a different perspective, “*feel how that goes*”.

The RSM breathing principle of nose inhalation and mouth exhalation was changed into a question and I asked her whether she taught nose or mouth inhalation to her students and choristers. White stated that, although singers employ “*a bit of both*” nose inhalation and mouth inhalation, she prefers, when time allows, nose inhalation. The reason for that is “*if you breathe through the nose, then your soft palate lifts*”. On prompting about why a lifted soft palate is important to a singer, White replied “*Obviously [the] soft pallet ... helps with resonance, because there’s good airflow. There’s no blockage. The air can flow through and there’s no tension, and with a good breathing and a good support, obviously, all of these things together will come out. Good intonation. Good sound*”. White suggested that, perhaps with nose

inhalation a lower breath is more easily achieved than with mouth inhalation. She further remarked that, owing to health matters such as congestion or asthma, choristers and students sometimes have no other choice than to breathe only through their mouths.

I probed White for her views on the RSM principle of breath continuity, and the preference of legato lines in singing. She remarked that singing is all about good “*airflow*” and “*free sound*”. She remarked that the challenge for a singer is to sustain a long phrase; therefore, they have to be mindful of the length of a musical phrase and “*don’t blow everything out at once*”. She added that a choir conductor can aid choristers to sing legato through particular conducting gestures. “*I will paint, paint, paint, paint* (showed conducting gestures) *all the way, with my hand gestures, paint all the way and try to, sometimes you go forward. You know, like that* (demonstrated moving hand forward with fingers hanging down). *Or paint sideways* (showed sideways ‘painting’)”. Linking the principle of breath continuity to the principle of intake sufficiency, White again remarked on staggered breathing. “*I teach my choristers: who can breathe ... eight bars, and it’s a slow tempo, then they really struggle. Then I say, ok who is able to go to bar four or five or whatever. I literally sort them out like that. We say, ok you listen to your neighbour ... They must really be tuned in and that takes time*”. Students thus know beforehand where they will breathe within a phrase. Also, when engaging staggered breathing, White reminds students about taking low breaths and breathing in on the pitch.

After White’s explanation of breath continuity, the RSM principle of breath leading, often referred to as breath management or breath control within a SingEd context, was deliberated. White shared that breath control is something that needs to be practised owing to choristers wanting “*to let the breath go out*” too soon. She shared an exercise that she often utilises during rehearsals. The exercise starts by choristers blowing out all air in their lungs on a ‘pfff’ sound. Always using eight counts or beats, choristers start by breathing in for four counts, holding the breath for some time and, on instruction of the conductor, they exhale slowly for four counts. The number of eight is then subdivided differently in order to shorten the inhale and lengthen the exhale, i.e., breathe in for three counts, hold the breath, breathe out for five counts. Thereafter, breathe in for two counts, hold the breath, breathe out for six counts. Lastly, breathe in for one count, hold the breath, breathe out for seven counts. This exercise can be done in creative ways by, for example, slowing down or accelerating the tempo. White shared that when she notices during rehearsal that breath control is faltering, she employs this exercise as a remedy in between songs. She remarked that her choristers are used to the fact that when she introduces this exercise during rehearsals, the purpose is to improve their breath control. In her view, the RSM term ‘breath leading’ is appropriate to describe how a conductor leads the choristers through the various musical demands of dynamics, timbre, and

pitch. *"I like the 'breath leading' ... it's more subtle than control"*. She remarked that these breath-leading factors are also dependant on feeling. White said, *"The moment they feel it, they can apply it"*. In other words, when they think it, they can affect the necessary musical elements within a particular piece of music.

Next, we discussed the RSM breath principle of pendulum. Not commenting on breathing, but rather on choral conducting gestures, White indicated that the pendulum action in the arms, is crucial to indicate the tempo of a song. Also, when the pendulum gesture is closer to the diaphragm, it will reflect subliminally to the choristers to sing from the lower support of their bodies. She often gets her students to use pendulum conducting gestures in a tactile way to grasp and feel *"free breathing and relaxed breathing"*. Along the same line of thought, while focusing on breathing, they play imaginary violins to encourage freedom of breath movement. I seemed to me that the RSM principle of pendulum was expounded from a conductor's perspective, but I was not sure that it addressed breathing per se. These exercises would fit better under the principle of breath continuity. I tried to steer the topic to breath holding. White did not go into any detail, but merely reflected on the concept saying that *"for breathing techniques that can help. But ... you're not gonna sing like that because you want a free [flow of air]"*. She thought it a good idea to *"expose the children to it, and singers"*. Her breath-control exercise in the previous paragraph is perhaps an example of how she engages in this principle.

I steered the interview in the direction of the RSM principle of breath independence. White remarked that if this principle were a SingEd principle *"then everything that we've said it's going to be knocked"*. However, she felt that any kind of exercise, SingEd-related or not, can be introduced during a warm-up session. She said that, having new and different experiences and doing it all together *"at the same time, the same moment"* as a group evokes different *"fantastic ... feelings"* and is conducive to enhancing social cohesion within a choir. *"So, I won't throw it out. It doesn't work for singing, per se. But I think for breathing awareness it definitely, it does work"*. I mentioned social cohesion and good feelings as a cue to raise the matter of breathing and well-being.

White indicated that she starts off rehearsals with five minutes of quiet time *"so that everybody can just decompose of what the day was, and just get into just, I'll almost say breathe within their own body. Just reconnect again"*. She combines different kinds of physio stretches with breathing to help them to unwind. She remarked that *"breathing really relaxes you"*. On the topic of respiratory health, she shared that an asthmatic chorister used a little medical pump that trained her to breath lower down in the body and, as a result, *"her breathing and singing is so much better since she's been using that little instrument So, I've told my choir to get*

one". Since she did not offer more on the topic of respiratory health, I enquired about possible personal and witnessed experiences of spiritual elevation connected to breathing. She replied "*No, not that I know of*".

Participant White's unique perspectives on breathing principles were not only grounded in her practical and tactile choral conducting experience, but also coloured by her overseas postgraduate training. As a result, White gave unique flesh to the RSMSPB skeletal framework, and offered much to be contemplated in designing an emergent SEdBWL framework.

8.12 ADDENDUM D9: INTERVIEW REPORT – GOLD FROM UNIVERSITY E

Participant Gold is a recently retired choral conducting methodology lecturer from University E. She was not only influential at the university as a choral conducting lecturer and conductor of the university choir, but also initiated and managed outreach programmes and choral conducting training sessions for African community choirs in the entire province.

After briefly informing Gold of the motivation and purpose of my study, I made mention of the RMSSPB theoretical framework and went on to investigate her views on the RSM breathing principle of non-tension. Gold replied *"Well, for good health, for a start, a good posture is very important. And for singing it's of utmost importance"*. She stated that good singing relies on three things: posture, diaphragm and head space. Gold mentioned that, in her choir training experience, it is of *"no use to bombard [choristers] with a lot of facts and, you know, technicalities. You must make it as simple as possible"*. She reiterated *"You see, I can't dwell on the theoretical because I had to be practical"*. She would therefore not give direct instructions for choristers to *"stand up straight"* but would rather employ a physical exercise combined with breathing at the start of or during rehearsals to address weak posture. She instructs choristers on how to bend their bodies down forward to the floor or stretch their arms out to the front and *"let all the stale air go out"*. Then they stretch up, breathe in, with their arms high up above their heads while standing on their toes and giving their bodies a good stretch. They then slowly lower their arms, slightly *"a little bit behind (demonstrated)"*. By the time they have lowered their arms, the choristers will have attained, according to Gold, a *"perfect posture"*. She regards a perfect posture as the starting point of *"whatever"* and especially singing. The value of a good posture in singing is that *"[i]n this position, your diaphragm is lifted already"*. She explained that when the diaphragm is lifted, *"all you have to do is you pretend that this is a balloon, and you inflate the balloon"* and breath support will be in place. Parallel to the image of the balloon, she also shared the image of a cushion. She would instruct choristers to *"just open up the space so that you sit on that cushion. It's a simple example but it works"*. Gold further mentioned that sometimes when she notices choristers' heads *"too forward"*, she would say to them *"feel that you are hanging ... like a puppet on the string"* and then add to that *"pretend the inside of your face is a chicken egg, but you want an ostrich egg"*. She reiterated the importance of these *"three things, the posture, the balloon, the ostrich egg"*. To further encourage an open head space, *"a huge oval space"*, she uses the image of going to a dentist and him/her putting cotton wool in the space between the lip and the teeth. She said that an open head space ensures that choristers' vocal cords do not tire and also that it *"makes a huge difference to the resonance"*. According to Gold, when you

have posture, an open diaphragm and open head space in place *“you’re ready for singing. It’s as simple as that”*. Finally, Gold added that good posture assists choristers to *“let go of the air”* and that, to avoid the tension of a *“glottal stop”*, she says to choristers, *“pretend that there’s a slide inside this egg and you sit on the slide and you just give it a push from the top of the slide, and there it goes”*.

Following the why and how discussion on non-tension, I guided the conversation towards the RSM breath principle of intake sufficiency. I briefly referred to the two distinct breath--support options of ‘down and out’ and ‘up and in’, and inquired about Gold’s personal preference. She said she seldom mentions the word ‘support’ to her choristers. Instead, when *“they’ve taken the breath correctly, and they inflated this balloon”*, good support will be intact automatically. Gold demonstrated how she shows choristers to put an arm over the *“mid rift of the body ... so that they can feel where the support should be ... And if they keep this inflated, this is lifted automatically. You don’t have to think about it. And if you take that deep, good, good deep breath, you think that you push the air down”*. She shared a practical teaching method in this regard. This is to instruct choristers to have both hands stretched out in front of them and, while breathing in, lowering the one hand and saying to them, *“let the lift go down (demonstrated)”* in order to experience and focus on the breath resistance. From this, I understood that she encourages a ‘down and out’ breath-support mode. Gold affirmed my understanding and said that an ‘up-and-in’ approach is less desirable owing to resultant high clavicular breathing and tension it causes in the vocal tract.

Next, we discussed the RSM breathing principle of nose inhalation and mouth exhalation. Gold said, *“normal everyday breathing and singing breathing is opposite”*. She emphasised strongly that *“I can never agree with just nose breathing”* because, in singing, breathing needs to be utilised for *“a specific outcome”*. She argued that choristers who have allergies or sinusitis will experience difficulty taking in the required amount of air through their noses. She referred back to her prerequisite that the head be an *“open, oval shape”* and that, by breathing in through the mouth, the *“soft palate is lifted ... And you know, you can’t tell anybody to lift your soft palate but in order to have a good quality sound, you have to do that”*. Gold further shared that *“it is wonderful when you start showing them the difference. When you start a note, and you have opened up and you start and you haven’t, it’s amazing the difference”*. She stated that this *“openness immediately puts your vowel position in an ‘Aah’*. So, you can just manipulate the inside and the lips to change to all the other vowels”*”*. It was clear that Gold not only prefers but insists on mouth inhalation for singing.

The RSM principle of breath continuity was next. I asked her why legato singing is preferred by singers. She replied *“For me, it’s the legato lines that carry the emotion. And obviously, it*

carries the sound, it carries the vowels. But that's for me the secret of good singing. It carries the text; it carries the emotion. It carries the sound. What more do you want?" I was intrigued by her saying "*carries the emotion*" and asked her to elaborate. She answered, "*Well, if you say 'ooh' (demonstrated singing on pitch) and you say 'ooh' (demonstrated singing same pitch with a different feel), it makes a difference. And as soon as you break that line, you break that quality*". She ended the discussion on breath continuity by clarifying "*After all my years with teaching and with the choir, I just came to the conclusion that yes, conducting is important. Yes, all these little exercises and whatever is important, but if the breathing is not there, there is nothing. For me it is absolutely 'uber al'*".

The SingEd literary review revealed breath management, also referred to as breath control, to be a major singing requirement. In this context, we discussed the RSM principle of breath leading. Gold reiterated her previous statement that, if posture, the diaphragm, and open head space is intact, "*they can do anything ... if you, for example, have a difficult interval. And you have to jump ..., you just show them ... Posture. Open up*". In this regard, she stated that choristers will mirror a conductor's posture. Gold further mentioned that she instructs choristers to "economise" their breath by saying "*know that your breath must go to the end of the phrase, and you must plan how you want to spend your breath and how you want to spend the dynamic level to reach a sustained phrase*". She replied again that, if posture, the diaphragm awareness, and an open head space harmonise, it is easy to keep "*that flow*" and therefore, to bridge any breath-management challenge, including singing softly.

After covering what I considered to be the easier RSM breathing principles to understand, also from a SingEd perspective, we touched on two, more difficult transposable principles. I asked Gold about her understanding of the RSM principle of breath independence. A long silence followed and she eventually replied "*I'm not so sure about that one ... Maybe it's a description problem. I don't think it's applicable for what we want to use it for*". We did not spend any further time exploring this principle.

Next, I raised the topic of the RSM breathing principle of pendulum and we deliberated on the concept of breath holding within SingEd. Gold replied, "*I wouldn't use the word hold. That can create tension ... Sustain the breath, but not say 'hold'*". Observing a quietness, perhaps owing to tiredness or to the participant feeling that the topic of breathing has reached saturation point or perhaps she had not come across the concept of breath holding before, I steered the conversation to breathing and well-being.

After I shared some findings on the value of breathing in the classroom from educational research articles, Gold replied "*Can I just say something there, that of my most wonderful*

moments in choir rehearsals or performances? Where they've been doing these breathing exercises? And they then sang long lines. And they just breathe together. There's something magic that happens amongst those singers that you can't explain ... sharing of the breathing". She remarked that the choristers leaving rehearsal happy and energised is due to *"the breathing, because that for me, as I say, is the foundation of the singing and of the legato lines. And it is in the legato singing where you experience the emotion. And when they've had such an intense emotional experience, and they leave, you know... I know my members, they said, it doesn't matter what they've been through the day. Once they've been in that choir rehearsal, they feel safe. They've joined their souls together ... it's such a personal and an interpersonal sharing. You can never compare it with sports in a way or even with orchestra. It's making music together but it's intensely physically personal"*. She further remarked, *"you can hear when a choir doesn't breathe together. You can hear there's never a uniform sound from the very go"*.

Gold further commented on the value of SingEd for respiratory health: *"Because you help them, every time they are there, you help them to correct their posture, as part of your breathing. And that's very important because they slouch and we all tend to slouch and you're not aware of your posture in the everyday... Now, you sit in front of the computer or on your phone or whatever. So, just to bring them into a good posture and align all the nerves and muscles and vertebrates, align the spine"*.

Next, I inquired about personal and observed experiences of transcendence or spiritual elevation relating to breathing and singing. She shared a personal memory: *"I had to conduct a new choir and quite a difficult work, which I was very worried about. And I really remember so well that I went into an almost a transcendental situation where I just calm myself down and calm down. And in the end, it was a magic performance. And everything just came together then"*. To be clear, I asked whether she thought breathing had anything to do with that. She replied, *"Absolutely"*. She reiterated how emotion is linked and transported by the breath. *"It's the sighing and the crying effect that brings the emotion in the sound. And if you do a little exercise with the kids, and you stand in front of them, and you start crying, and you just cry and cry. First, they laugh and then they start sharing your emotion. And if you laugh, you have the same result. So, if you say to them, in when you do that phrase (demonstrated flowing movement with arm), make that sound as if you are crying. You change the colour of that vowel. And that's where you carry the emotion and that's where that emotion is connecting to the audience. And that's when the audience can say, 'Oh, it just touched my heart'. And I think there is too little of that"*.

On reflecting on this interview, I think the descriptor 'Gold' quite fitting for this research participant. perhaps it is due to her mature age that she managed to synthesise the essence of choral singing, in my view, in a simple, effective and masterly way. The knowledge, skills and experience shared by her are worth their value in gold.