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The effectiveness of YouTube as a teaching aid for phonemic awareness and vocabulary in English second language pre-schoolers

By

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Declaration of Originality

I, the undersigned, declare that this thesis entitled '***The effectiveness of YouTube as a teaching aid for phonemic awareness and vocabulary in English second language pre-schoolers***', which I hereby submit for the degree Magister Education is at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Date: _12 October 2023_____

Signed: _____

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Abstract

This study explored how effective YouTube is as a teaching aid for English Additional Language (EAL) preschoolers aged four to six (n=8) and their teachers. Using connectivism and Neurocognitive Learning Theory (NLT), the study utilises a dual conceptual framework to examine the effectiveness of YouTube on language development in EAL preschoolers. The study employed a positivist approach and Solomon's four-group (quasi-experimental) research design. Non-probability techniques, namely convenience and purposive sampling, were used. Participants were randomly assigned, and intervention groups received 4-6 minutes of YouTube videos geared at phonemic identification and vocabulary. The Brigance Early Childhood Screen III was used to measure language development.

The findings indicated no significant differences between the treatment and control groups after the intervention. Qualitative observations suggested that YouTube videos substantially motivated EAL Preschoolers to learn foundational English language skills like phonemic awareness and vocabulary. Recommendations for future research involved conducting a longitudinal study on the effectiveness of YouTube videos on language development. Practice recommendations were consistent with previous literature that indicated that YouTube videos were a significant motivator for learning. Thus, the recommendation for practice was to utilise YouTube videos when teaching language concepts that are challenging to grasp.

Keywords:

Second language learning, language acquisition, YouTube videos, vocabulary, phonemic awareness, teaching and learning

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List of abbreviations

English as an Additional Language	EAL
English Second Language	ESL
The Department of Education Policy	LiEP
Language of Learning and Teaching	LoLT
Basic Interpersonal Communication Skills	BICS
Academic Language Proficiency	CALP
Statistical Package for the Social Sciences	SPSS
International Business Machines Corporation	IMB
Cognitive Academic Language Proficiency	CALP
Computer Assisted Language Learning	CALL
Neurocognitive Learning Theory	NLT

CHAPTER 1: BACKGROUND AND OVERVIEW OF THE STUDY

One language sets you in a corridor for life. Two languages open every door along the way – Frank Smith.

1.1. Outline of Chapter 1

The purpose of Chapter 1 is to provide a basis and initial framework for the study. The chapter includes an introduction, a rationale, a purpose, and the research questions that guide and lay the study's foundation, as depicted in Figure 1.1. The chapter also provides a brief overview of the research design, data collection methods, theoretical principles, and the ethical considerations taken within the study.

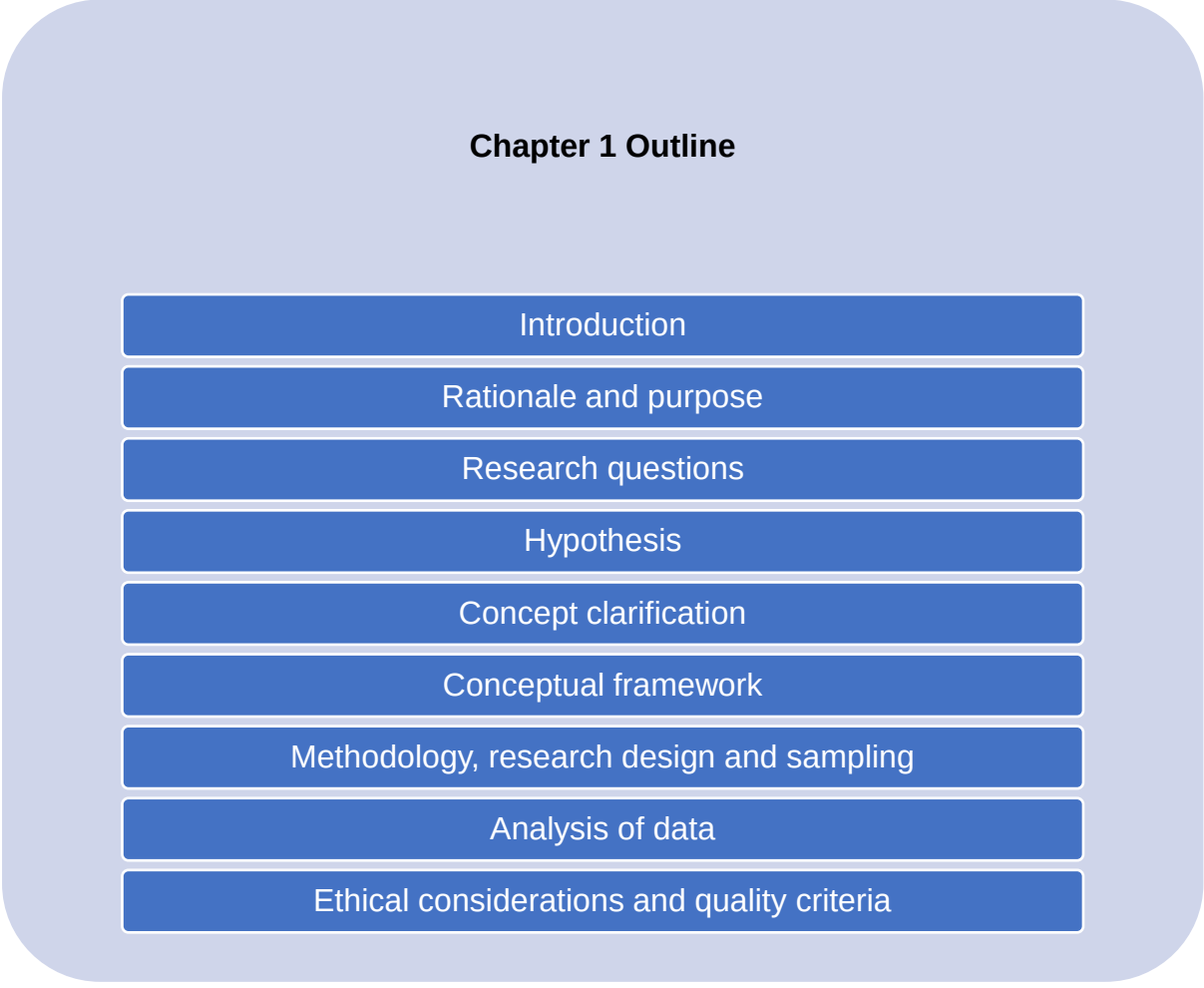

Figure 1. 1: Chapter 1 Outline

1.2. Introduction

This dissertation of limited scope aimed to explore the usage of YouTube as a teaching aid for preschoolers learning English as an Additional Language (EAL). Learning one language is developmentally vital for social skills and early academic development. Learning an additional language has been shown to have various benefits, such as strengthening cognitive abilities, employability, communicative and intercultural competence and academic achievement (Fox, Corretjer & Webb, 2019). Learning English as a second or an additional language in early childhood can stimulate language in a language-sensitive phase (Chanifa, Redjeki & Dayati, 2020). This can allow for better fluency and effortless mastery of languages (Chanifa, Redjeki & Dayati, 2020). Children who learn an additional language early in childhood may have the advantage of mental flexibility, development of reasoning, awareness of the language system in the social context of their environment and cultural understanding (Chanifa, Redjeki & Dayati, 2020).

English is an international language of medium and instruction for communication. English is pertinent for South African learners as it allows learners to access global and local means of communication, affecting job opportunities once they leave the schooling system (Jasim, 2021; Palomo Blázquez, 2018). 1.4 billion people in 67 countries across the world speak English (Statista Research Department, 2023b). In 2021, over 274,000 learners were learning English as a foreign language (Statista Research Department, 2022). South Africa's student population is over 3 million, and English is generally used as the language of Learning and Teaching (LoLT) (Galal, 2022; Heugh, 2013; Statista Research Department, 2022). Learning English is thus a roadmap to academic and post-academic success for individuals.

A Statistics South Africa Community survey in 2018 revealed that 8,1% of South Africans speak English as their home language, whilst 25.3% speak isiZulu, 14.8% speak isiXhosa, and 12.2% speak Afrikaans as their respective home language (Statista Research Department, 2023c). IsiZulu is the most spoken language outside the household at 25.1%, with English following at 16.6% (Statista Research Department, 2023d). In South Africa, 12 official languages exist, namely, isiZulu, isiXhosa, Afrikaans, English, Sepedi, Setswana, Sesotho, Xitsonga, Tshivenda, isiNdebele, isiSwati and Sign Language (Kretzer, 2019; SANews.gov, 2023; Statista

Research Department, 2023d). Although the most common language spoken in South Africa is IsiZulu, one of the teaching and learning languages is English for Grades school learners (Kretzer, 2019; Owen-Smith, 2010; Wildsmith-Cromarty & Balfour, 2019).

English proficiency is crucial for EAL learners. Language is a pertinent aspect of education in South Africa. The Department of Education Policy (LiEP) 1997 was created to maintain home language use as the LoLT while providing access to an additional language in South Africa (Education Policy Unit, 2013). This portion of the legislature indicates that learners should have access to at least one approved language as a subject in Grades 1 and 2 (Education Policy Unit, 2013). From Grade 3, learners should be offered their language or instruction and at least one additional approved language (Education Policy Unit, 2013). This aspect becomes challenging when the learner's language or instruction differs from the LoTL. For learners who do not speak the language of instruction, learning and teaching cannot wholly occur. The question then becomes what can be done to aid in teaching the language of instruction so that learning may occur. The recent COVID-19 pandemic and technological advancements may have provided some novel approaches to teaching language (Breslyn & Green, 2022).

The COVID-19 pandemic and the rise of Web 2.0 technologies have influenced traditional learning systems to take an online approach to teach learners at all levels (Breslyn & Green, 2022). One of the impacts of the COVID-19 pandemic involves changes in the modes of learning and online communication technologies and resources (Breslyn & Green, 2022). Subsequently, YouTube has become a medium that aids learning. With the rise of technological advances, many web-based media platforms are geared towards younger children and preschoolers, children between the ages of four and six (Dore et al., 2019; Hakim, 2019; Parish-Morris et al., 2013; Zosh et al., 2017). In the case of English as a Second Language, this may be an alternative strategy to develop the English language to academic fluency when learners are more receptive to language acquisition in early development.

1.3. Rationale

Myburgh, Poggenpoel, and Van Rensburg (2004) posited that when instruction differs from the learner's home language, teaching and learning cannot occur in totality. Whilst learners may have the capacity to exhibit higher-order thinking in their home language, they may not be able to demonstrate the same mastery in English due to a low level of proficiency in the language (Du Plessis & Louw, 2008). Learners then must master Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) in English to demonstrate their cognitive ability in assessments and examinations.

Whilst it takes approximately two years to develop BICS, it takes five to seven years to develop CALP, which is a substantial amount of time considering that learning continuously occurs between Grades 1 and 12. The lack of proficiency in the English language then becomes a roadblock to success in all subjects taught in English. Intervening as early as possible in academic school is pertinent to developing fluency in English. It may be an avenue to ensure that learners master English at a CALP level before they are required to utilise it. Preschool, ages 4-6 or Grade R may be sufficient to develop fluency in English before learners learn foundational academic skills and begin being assessed in it. As such preschool would be an appropriate age to develop early reading fluency skills in English which will be required in later academic career.

Preschool and preschool teachers play a foundational role in forming the basic skill set for formal education, and it is also an age where the learners are most susceptible to developing a novel skill set (Goh et al., 2020). This is not to say that preschoolers do not face barriers to learning due to minimal fluency in English as an Additional Language. A study by Goh et al. (2020) identified various barriers to facilitating teaching and learning for preschool learners and teachers. The study focused on the use of English as a Language of teaching and learning for EAL learners and teachers (Goh et al., 2020). Goh et al.'s (2020) study found that there was insufficient time to teach with the use of English for instructional tasks, as understanding may be a barrier. Additionally, Goh et al.'s (2020) study found that insufficient or inadequate teaching and learning resources and low parental involvement were all barriers to adequately teaching learners. EAL preschool learners with limited fluency struggle to grasp basic academic concepts and have confidence when communicating with peers.

This study is vital as the findings may give an alternative avenue to better develop English fluency at a preschool level at an earlier age. Subsequently, this allows learners to grasp foundational concepts in English once they reach Grade 1. This study hopes to understand better how YouTube can be utilised to facilitate the language development of EAL Grade R learners.

1.4. Purpose of the study

The study of limited scope investigated the effectiveness of YouTube videos for teaching phonemic awareness and vocabulary to EAL pre-schoolers. With the significant development of technology came the rise of applications that facilitate learning. From immersive learning and virtual reality to Chromebooks and YouTube videos, various technological learning aids have come to the forefront with the rise of Web 2.0 (Chen & Chien, 2022; Tan, 2019). Online learning has had some substantial growth and is being used to facilitate learning both in and outside the classroom (Chen & Chien, 2022; Koksal, 2020; Tan, 2019). In conjunction with the COVID-19 global pandemic, this has boosted more web-based learning protocols in South Africa and across the globe (ISASA, 2020; The World Bank, 2021; van der Berg, 2020). The rise of web-based media provides a new way to learn and develop language. With more children being exposed to various multimedia platforms, how can web-based media platforms such as YouTube facilitate language development in the early years of second language development?

1.5. Research questions

In line with the rationale and purpose of the study, the investigation is guided by the following research questions.

1.5.1. Primary research question

What is the relationship between the use of YouTube videos and development of phonemic awareness and vocabulary in preschoolers?

1.5.2. Secondary research question

Does a directional relationship exist between YouTube videos and preschoolers' phonemic awareness and vocabulary development?

1.6. Hypothesis

The study seeks to identify a relationship between YouTube videos and the variables mentioned above in ESL language development, namely vocabulary and phonemic awareness. The independent variable within the study is YouTube videos, whilst the dependent variables are vocabulary and phonemic awareness. The following hypothesis is presented:

> H_0: The null hypothesis is that there will be no significant difference in phonemic awareness and vocabulary development between EAL preschoolers who watch YouTube videos and those who do not.

The alternative hypotheses are as follows:

> H_1: There is a positive relationship between YouTube videos and phonemic awareness in EAL preschoolers.
>
> H_2: There is a positive relationship between YouTube videos and vocabulary in EAL preschoolers.
>
> H_3: A positive relationship exists between YouTube videos and vocabulary and phonemic awareness in EAL preschoolers.

1.7. Concept clarification

The following concepts require clarification to gain a clear and shared understanding of the concepts in the study context.

1.7.1. English Second Language (ESL) learners

Genesee (2015) identifies bilinguals as those who acquire a language other than their native language. In the case of second language learners, they can be defined within the parameters of learners who learn in a language other than their native language. In this study, any learner learning English despite speaking in their native language (other than English) will be considered English as a Second Language Learner.

1.7.2. Preschoolers

In South Africa, Grade R learners must be four years old and turning five years or older by June of their Grade R year (South African Government Department of Basic

Education, 2021). As Grade R is considered a foundational phase in South Africa, preschoolers will be defined as learners between four and six years of age.

1.7.3. YouTube videos

YouTube videos fall within the parameters and definition of multimedia. YouTube videos are defined as a computer-based application that consists of print, audio, audio print, visual silent, audiovisual motion, physical object, human and environment, audiovisual projection silent and visual motion (Rashid et al., 2016; Nasution, 2019). As such, YouTube videos in this study refer to any YouTube videos on the YouTube application geared to preschool learners with means of education.

1.8. Brief overview of the conceptual framework, paradigms, and methodologies

This section briefly overviews the theoretical framework, paradigmatic assumptions, and research methodologies. The current study aimed to understand better the impact of YouTube videos on phonemic awareness and vocabulary development in EAL Preschoolers.

1.8.1. Conceptual framework

Utilising the purpose of the study as a basis, the Researcher utilised a conceptual framework through connectivism and cognition theories to guide the study. This combination of theories consisted of connectivism and cognitive theory. Siemens' (2004) connectivist theory understands learning knowledge through a series of networks where language is developed in the engagement of technological media such as YouTube videos (AlDahdouh, Osorio & Caires, 2015; Foroughi, 2015 Goldie, 2016; Siemens, 2004; Smidt, Thornton & Abhari, 2017). Connectivism, however, does not account for how certain language aspects are developed in ESL learners. Therefore, the neurocognitive learning theory was also adopted to understand language development and precisely how language development could be measured.

Neurocognitive learning theory understands language acquisition through various stages, allowing for a quantifiable understanding of language development (Cockcraft, 2002; Weiten, 2014). Connectivism is valuable to the study as it accounts for how language is developed and how technology can assist in developing language. Incorporating cognitive theory within connectivism creates a basis for understanding

the cognitive process of language development. This conceptual framework is valuable to the study as both concepts develop tangible ways to answer the research questions.

1.8.2. Methodological paradigm

When choosing a methodological paradigm, the Researcher considered a positive and quantitative approach most suitable to address the goals of this study. The positivist paradigm seeks to solve problems through quantifiable methods (Park, Konge & Artino, 2020; Rahi, 2017; Sefotho, 2015). The study objectively shows whether a positive causal relationship exists between YouTube videos and phonemic awareness and vocabulary, employing experimentation. Subsequently, the positivist paradigm seeks to answer the research questions outlined above. Additionally, it discusses the practicality of implementing YouTube videos to develop phonemic awareness and vocabulary in the real world.

1.8.3. Research design

In line with the study's research questions, a quasi- experimental research design was identified as most appropriate to understand the research questions. The study sought to find a relationship between YouTube videos and vocabulary and phonemic awareness. The study sought to explore the effects of YouTube videos on language development. In doing so the study required a research design that accessed the magnitude of the treatment on language as well as the potential magnitude that the pretest may have on the treatment effect. The study required observation of these language aspects before and after exposure to the treatment and the test. Therefore, the most appropriate and central research design for the study was a Solomon four-group design. The Solomon-four research design is thus the most effective in exploring how YouTube videos can affect these aspects of language and to what degree, as seen in studies by Sarkar et al. (2017) and Bohecker and Doughty Horn (2016).

1.8.4. Sampling and selection of the participants

This research employed two non-probability sampling techniques, namely convenience and purposive sampling. This type of sampling is of value to the study as it will allow the researcher to gain access to the participants (Laher & Botha, 2012; Rahi, 2017). This study took place at Gauteng (School A), the intervention was administered over 22 days with 2 groups of participants for 15 minutes per day.

Participants were selected if they met the qualifying criteria. Participants who met the criterion were divided into four groups with Randomizer, a randomising cell phone application. The intervention consisted of exposure to educational YouTube videos for the period of the YouTube video ranging from 4-6 minutes. The control group received an arts and craft activity lasting 15 minutes The treatment group also received arts and craft activities after the treatment totalling a time of 15 minutes.

1.8.5. Data collection

The instrument utilised within the study is the Brigance Early Childhood Screen III. The Brigance III early assessment test is a developmental screen that measures the progress of Language development, Academic Skills, Self-help, Social-Emotional Skills and Physical Development (Curriculum Associates, 2021). The psychometric test measured, analysed and evaluated the causal relationship between independent and dependent variables, thus answering the research questions (Cohen, Manion & Morrison, 2017; Field, 2018; Foxcraft & Roodt, 2017). The data was analysed utilising the Statistical Package for the Social Sciences (SPSS) program. Observational data was also gathered utilising an observational journal in the field.

1.8.6. Analysis of data

The quantitative study was first analysed using a statistical analysis (Cohen, Manion & Morrison, 2017; Phakiti, 2015). The SPSS International Business Machines Corporation (IMB) version 26 was used to analyse the statistical data. Continuous variables were analysed first, followed by a comparison between the control and experimental groups. The control and experimental groups were compared to identify causality between the independent and dependent variables. A more in-depth discussion of the data analysis process can be found in Chapter 4.

1.9. Ethical considerations

The researcher is responsible for ensuring that the participants are safe from harm and protected from unnecessary distress (Andanda, 2005; Cacciattolo, 2015; Cohen, Manion & Morrison, 2017). The aspects related to the research process are discussed more thoroughly in Chapter 3, where a more comprehensive explanation of the ethical strategies that guide the study is explored.

1.10. Outline of Chapters

As depicted in Figure 1.1., Chapter 1 explored the literature review, research design and methodology, the study's findings, and conclusion. A brief outline of each chapter is depicted in Figure 1.1.

1.10.1. Chapter 2 Literature review

Chapter 2 is an in-depth outline of the literature review of aspects related to the study. The Chapter explores and defines individuals considered English Additional Language learners and preschoolers. The Chapter also explores the relationship between YouTube videos and phonemic identification and vocabulary development among preschool English and Second Additional learners. After providing a thorough outline of the core aspects of the research, the Chapter concludes by exploring the theoretical underpinnings of the research.

1.10.2. Chapter 3 Research design and methodology

Chapter 3 describes the research process. This Chapter comprises the research design and methodology utilised throughout the data collection process. A description of how the data was obtained, the analysis process, and the data interpretation is provided. The Chapter concludes with the ethical issues considered during the research process.

1.10.3. Chapter 4 Research findings

Chapter 4 provides an in-depth description of the results and findings of the study.

1.10.4. Chapter 5 Revising the research questions, recommendations and conclusion

Chapter 5 provides answers to the primary and secondary research questions. This Chapter also provides recommendations and lists the limitations encountered within the research process.

1.11. Summary

The current Chapter introduced the study and the subsequent Chapters. The problem statement, rationale, and research questions that guide the study were discussed. In addition, the study's core concepts were clarified, and a brief overview of the paradigms, research design, and methodology chosen for the study was provided. The

Chapter briefly discussed the ethical issues that were considered within the study. Lastly, the Chapter ended with a brief overview of the subsequent chapters. In the next Chapter, a review of the literature related to the study follows.

CHAPTER 2: LITERATURE REVIEW

2.1. Outline of Chapter 2

The purpose of Chapter 2 is to provide an overview of language development for ESL learners and define the ideal language development age, as depicted in Figure 2.1. This Chapter explores previous studies on technology usage for English as a Second Language, providing a conceptual framework for the research. Lastly, this Chapter explores previous literature on YouTube videos utilised as a teaching aid.

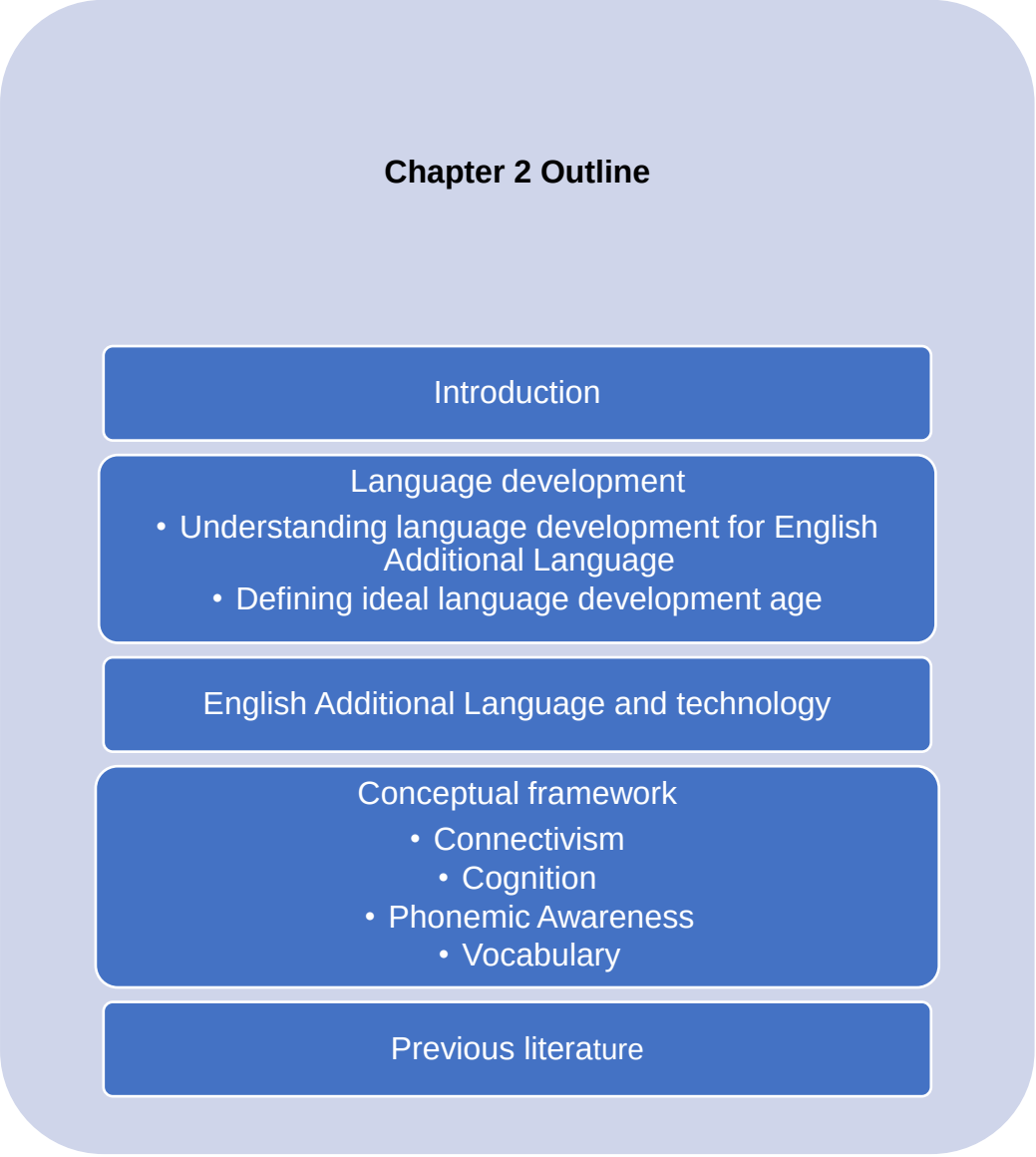

Figure 2. 1: Chapter 2 Outline

2.2. Introduction

This Chapter discusses the literature on the influence of YouTube videos on phonemic awareness and vocabulary in preschoolers learning a second language. As depicted in Figure 2.1, succeeding the introduction, this Chapter explores language development, how this occurs for English as a Second or Additional learning, and the ideal age for learning languages. This Chapter defines phonemic awareness and vocabulary. After that, the Chapter investigates the relationship between EAL and technology and the conceptual framework for this study. Lastly, the study explores relevant previous literature.

2.3. Language development

This subsection defines language and its components. The section also seeks to understand language development for ESL learners. Lastly, the section defines the ideal language learning age.

2.3.1. Defining language and language components

Language can be defined as the communicative ability within expressive and receptive language (Marrus & Hall, 2017). Expressive language is defined as the production and materialisation of language; subsequently, receptive language refers to the capacity to receive, comprehend and appropriately internalise and retort to the information (American Psychiatric Association, 2013; Marrus & Hall, 2017). Furthermore, both these expressive and receptive aspects of language build up the foundation of spoken language.

Spoken language consists of the following concepts: the production of language, the semantics, grammatical rules of the language, and the distinction between expressive and receptive language (Andujar, 2016; Cockcraft, 2002; Visser-Bochane et al., 2020; Weiten, 2014). Spoken language is a precursor to reading, which begins the literacy instruction required in formal education (Jasińska et al., 2021). This framework benefits the study as it provides parameters to measure language development.

Reading requires several abilities, namely phonological, semantic and orthographic information, all known to play a role in reading ability (Cain, Compton & Parrila, 2017). Similarly, Georgiou, Parrila and Papadopoulos (2008) posit that languages such as English and Danish are orthographically inconsistent. Children who learn these

languages must have a flexible understanding of language comprehension through grapheme-phoneme correspondence, analogy, morphological units and whole-world recognition (vocabulary) (Georgiou, Parrila and Papadopoulos 2008).

The English language is one of few in which the pronunciation within the reading system may vary. Phonological awareness and orthographic processing are pertinent for developing reading ability (Georgiou, Parrila & Papadopoulos, 2008). Additionally, for preliterate children (between the ages of three and half years and five and a half years old), language ability of phonological awareness and vocabulary knowledge are robust predictive features of reading success in future (Jasińska et al., 2021). As a result, building a solid literacy foundation for preschoolers is vital in developing their reading ability for academic success.

2.3.2. Understanding language development for English as a Second Language

The development of bilingual language in children affects the cognitive skills of the bilingual child (Rosselli & Ardila, 2018). During infancy, children undergo perceptual narrowing, where their experience with linguistics in their surroundings influences the developmental changes in language awareness (Rosselli & Ardila, 2018). Phonemic awareness is broad at birth but narrows due to linguistic experience (Rosselli & Ardila, 2018). Babies who grow up bilingual have a more general sensitivity to non-native phenomes due to the broader window for perceptual narrowing (Rosselli & Ardila, 2018). Bilingual children have been noted to have an advantage in inhibitory tasks, selective attention, executive functioning, working memory and global processing measures.

Bilingualism in children comes with many cognitive advantages. In contraposition, several disadvantages exist, such as delay in language acquisition, mixtures of language, lexical interference, and decreased vocabulary (Rosselli & Ardila, 2018). However, Hartshorne, Tenenbaum, and Pink (2018) assert that children who develop a second language (EAL) in childhood can set the language proficiency of a native speaker in that language. De Keyser (2012) argues a similar conclusion as Hartshorne, Tenenbaum, and Pink (2018), stating that children are better at acquiring a second language than adults through native language input. Addressing language acquisition delays at a younger age will allow bilingual learners, particularly EAL learners, to gain proficiency in English earlier.

Whilst gaining access to English from birth would be ideal for bilingualism, many preschool learners in South Africa are first exposed to English in preschool. Preschool teachers are pertinent to acquiring English as a Language of learning and Instruction. Learners are required to master Basic Interpersonal Communication Skills (BICS) as well as Cognitive Academic Language Proficiency (CALP) in English for success in a school that utilises English as the Language of Learning and Teaching (LoLT) (Du Plessis & Louw, 2008). ESL learners face the challenge of developing BICS and CALP in English while simultaneously meeting academic milestones and displaying mastery of academic concepts. As a result, this may be why ESL learners lag behind their English language peers (Du Plessis & Louw, 2008). Tackling language acquisition delays as early as possible in preschool, where language acquisition of all languages is still occurring, may make English competence a protective factor in further education.

2.3.3. Defining ideal language age

Language acquisition refers to the initial cognitive and social processes in language learning (Ho et al., 2011). This typically occurs between birth and the ages of four and five (Ho et al., 2011). For bilingual learners with some degree of another language, the initial stages of learning their second language are called acquisition (Ho et al., 2011). Language development is gaining the ability to comprehend and communicate (Ho et al., 2011).

Most languages contain multiple words that can be combined to create new words with infinite meanings (Feldman, 2019). In effective academic development and overall communicative ability, various language developmental milestones must be reached throughout the lifespan (Feldman, 2019). Table 2.1, adapted from Feldman (2019), summarises language developmental milestones from birth to six years. By age five, children have grasped a vocabulary of thousands of words and can create multiple sentences with grammatical features (Feldman, 2019). Between three years and six years, children are acquiring BICS, and this may be an opportunity to develop and access a second language (Feldman, 2019; Rosselli & Ardila, 2018).

Table 2. 1: Developmental Milestones

Age	Receptive	Expressive	Speech
Newborn	○ Attends to voice ○ Regards face	○ cries	○
3 - 6 months	○ Smiles when spoken ○ Turns when name is called	○ Coos independently and reciprocally with adult ○ Differentiates cry. ○ Begins to babble	○
6 – 12 months	○ Stops when told "no" ○ Learns routine. ○ Follows simple commands with gestures	○ Points to wants or interesting objects and actions. ○ Says "mama' or "dada" ○ Says first words	○
15- 18 months	○ Points to body parts ○ Follows single command without gesture	○ Acquires words slowly. ○ Uses simple and idiosyncratic forms. ○ Participates in conversations	○
18 - 24 months	○ Understands sentences	○ Exhibits vocabulary of > 50 words ○ Learns new vocabulary items easily. ○ Uses 2-word phrases	○ 50% correctly use the phonics p, m, h, n, w and b
24 - 36 months	○ Follows 2 and 3-step commands. ○ Answers "wh-questions."	○ Uses over 2-word phrases. ○ Uses increasingly complex grammar such as negotiation, questions	○ 50% correctly use k, d, g, t, hg, f, y
36 – 48 months	○ Understands plural, pronouns and possessives. ○ Understands questions of "who", "why", and "how many"	○ Combines 3-4 words in a sentence. ○ Uses conjunctions such as and, or, but	○ 90% correctly use p, m, h, n, w, b, 50% correctly uses r, l, s, ch, sh, z ○ Able to produce final consonants in

				words such as bus ○ No longer replaces sounds made in the back of the mouth (g, k) with sounds made in the front of the mouth (d, t)
48 – 60 months	○ Understands concepts, such as same/different		○ Uses mature grammar at near-adult levels. ○ Constructs narrative discourse, such as telling or retelling stories, makes explanations	○ 50% correctly use j, v, voiceless th (thing) ○ 90% correctly uses k, g, d, t, ng, f, y ○ Correct production of consonant clusters, such as st in stop ○ No longer deleting weak and unstressed syllables, such as in banana
60 – 84 months	○ Limited by the child's conceptual knowledge, no language skills ○ Understands humour, metaphor		○ Mature language constructions ○ Increasing use of sophisticated vocabulary and complex grammar	○ 90% correctly uses r, l, s, ch, sh, z, j, v, th ○ No longer substitutes liquids (r, l) with glides (w, j) ○ Can correctly use fricatives, such as voiceless th

Adapted from *How Young Children Learn Language and Speech in Pediatrics in Review* 40(8) by Feldman, 2019, Copyright 2019 by Pediatrics in Review.

Cognitive advantages of bilingualism in early development have been seen in children within the preschool age, particularly between three and five years old (Rosselli & Ardila, 2018). De Houwer (2011) identifies that the best phase for language

development would be below six years old, typically also the preschool phase. The age given by De Houwer (2011) and other previously mentioned studies does not negate that language development can occur after six years of age. However, rather than for EAL learners, developing the language before this age would be more beneficial as it would be easier. In alignment with this, Dickinson, Nesbitt and Hofer (2019) found that children between the ages of three and five begin to improve and develop phonological awareness, morphology and syntax, spelling, and vocabulary. Thus, the variation in age limit with the language development discussion seems to be a factor within the rate of development rather than the rule of development. As a result, this study was focused on preschoolers between the ages of four and six.

2.4. English Additional Language and Technology

In March 2020, the South African government announced a closure of all schools in South Africa due to the COVID-19 global pandemic (ISASA, 2020; van der Berg, 2020). This resulted in more web-based learning protocols in South Africa and globally (Hess, 2021; The World Bank, 2021). The rise of web-based media provides a new way to learn and develop language.

Various technological aids have been explored in recent years to address the lack of English proficiency in English Second Language (ESL) and EAL, including instant messaging, films, apps, and computer-based simulations, to name a few (Rashid et al., 2016; Mohsen, 2016; Andujar, 2016; Khan, 2015; Dore et al., 2019; Parish-Morris et al., 2013; Zosh et al., 2017). Heift and Chapelle (2012) have noted that a combination of Computer Assisted Language Learning (CALL) and classroom learning has been the focus of CALL researchers. Heift and Chapelle (2012) further asserted that these researchers aim to identify that combining technology-based learning alongside CALL is more effective than solely classroom-based learning. Heift and Chapelle (2012) then cited studies such as Nutta (1998), which support the evidence for a blended computer-based and classroom-based learning experience in supporting EAL learners. What is defined as Computer-based learning and web-based learning is a broad field, and a more modern approach to technology-based learning is vital for understanding the current effectiveness of technology-based learning in aiding EAL learners.

With technological advances, many web-based media platforms are geared towards younger children and preschoolers (Dore et al., 2019; Hakim, 2019; Parish-Morris et al., 2013; Zosh et al., 2017). YouTube videos are a popular web-based media utilised for entertainment and educational purposes by approximately 2.4 billion users worldwide (Degenhard, 2021; Statista Research Department, 2023c). In addition, of the ten most-viewed YouTube channels, three are geared at children, with the number one most-viewed YouTube channel being the Wow Kidz YouTube channel, followed by Cocomelon – Nursery Rhymes (Statista Research Department, 2023a). With many children engaging in web-based or computer-based learning, the main question is how web-based media like YouTube can be utilised in education specifically to facilitate language development in ESL speakers. This aligns with the research questions of the study.

Various studies viewed the preschooler age group and YouTube videos geared towards their learning. The YouTube channel "PinkFong" has had a significant influence within the sphere of English as a Second language, English foreign language acquisition and language developmental delays, as observed in studies such as Arif, Triyono and Sahayu (2020) and Lee, Kim and Park (2020). The studies all commonly concluded that PinkFong was an excellent motivator for preschoolers in developing language skills (Afri, Triyono & Sahayu, 2020; Lee, Kim & Park, 2020; Lorah et al., 2021). These findings align with studies on older ESL learners, indicating that YouTube videos motivate ESL development across educational development levels.

Whilst PinkFong seems to be an excellent resource for YouTube language development, not all of its videos target language aspects of vocabulary and phonemic awareness. The Jack Harmann YouTube channel is a music channel that focuses on a combination of musical, language and motor skill development for preschoolers and young learners (DiDomenico, 2017; Lorah et al., 2021). YouTube videos can be utilised in various ways to aid development in the classroom. An Indonesian study by Riswandi (2016) on Grade 7 learners found that using YouTube videos improved learners' English speaking skills and motivation.

An alternative way to utilise YouTube videos in the classroom is through blended learning (Fleck et al., 2014; Nasution, 2019). Nasution (2019) suggests the most effective way to incorporate blended learning is to begin the class with traditional

teaching of a new concept and then allow the learners to do activities on the concept. The concept is reinforced with a YouTube video based on the concept learnt, and the class concludes with reflections (Nasution, 2019). Integrating technology with traditional learning keeps the learners engaged and motivated to learn as they have an aspect to look forward to at the end of the class (Fleck et al., 2014; Nasution, 2019; Pratama, Arifin & Widianingsih, 2020).

A study by Yee and Hu (2022) was done in Malaysia about teachers' perceptions of YouTube in teaching writing. The study found that the teachers' perceptions of this form of blended learning were favourable overall. A study by Muslem, Fata and Saputri (2022) yielded similar results. This quantitative study done in Indonesia on Grade 7 learners found that using YouTube videos in the classroom improved the student's English-speaking skills (Muslem, Fata & Saputri, 2022). While various studies indicate that using YouTube videos may benefit EAL learners, few studies were done on ESL preschool learners in South Africa. In summary, various studies address the usefulness of utilising YouTube as a teaching aid for ESL learners. However, there is a gap in the literature on the effects of YouTube videos, such as PinkFong and Jack Hartmann, used as a teaching aid for language development (vocabulary and phonemic awareness) for South African ESL preschoolers.

2.5. Conceptual framework

The Researcher used a conceptual framework incorporating the Neurocognitive Learning theory and Connectivism in the study. The development of the conceptual framework was based on how and where language knowledge is developed.

2.5.1 Connectivism

Connectivism is an integrated learning theory based on understanding knowledge as a network (AlDahdouh, Osorio & Caires, 2015; Al-Shehri, 2011; Foroughi, 2015; Goldie, 2016; Siemens, 2004; Smidt, Thornton & Abhari, 2017). Networks can include computer networks, power grids, and social networks, comprising an integrated whole network (Siemens, 2004). Learning knowledge occurs through various networks (AlDahdouh, Osorio & Caires, 2015; Al-Shehri, 2011; Foroughi, 2015 Goldie, 2016; Siemens, 2004; Smidt, Thornton & Abhari, 2017). Learning in Connectivism is defined as actionable knowledge, and it can occur through the connections of networks that allow us to access knowledge (Siemens, 2004). Therefore, new knowledge is

consistently being acquired (Siemens, 2004). In a system where information is continually added, making decisions constantly changes. As such, Connectivism functions by a set number of principles:

Principles of connectivism:

1. Learning and knowledge rests in diversity of opinions.
2. Learning is a process of connecting specialised nodes or information sources.
3. Learning may reside in non-human appliances.
4. The capacity to know more is more critical than what is currently known.
5. Nurturing and maintaining connections is needed to facilitate continual learning.
6. The ability to see connections between fields, ideas, and concepts is a core skill.
7. Currency (accurate, up-to-date knowledge) is the intent of all connectivism learning activities.
8. Decision-making is itself a learning process. Choosing what to learn, the meaning of incoming information is seen through the lens of a shifting reality. While there is a correct answer now, it may be wrong tomorrow due to alterations in the information climate affecting the decision (Utecht & Keller, 2019).

As such, through the lens of connectivism, learning involves the process of learning, unlearning, relearning information and the ability to apply this information. This concept is depicted in Figure 2.2. The avenues in which one can gain this information can thus be through the networks, including traditional learning through social networks such as parents and schooling systems. Learning can also occur through personal knowledge, which consists of the personal network and connections individuals have formed, such as friends and family (Utecht & Keller, 2019). Learning can occur from the external environment, such as online learning platforms (Utecht & Keller, 2019).

Figure 2. 2: Connectivism

Concerning this study, the Connectivism approach would attribute that learning for EAL learners occurs through various networks. Whilst English can occur through the traditional nodes of networks such as peers, teachers and parents, including another node such as YouTube videos to the learners' network may assist in increasing the learners' knowledge.

2.5.2. Neuro-cognitive learning theory

Language development, bilingualism, in particular, influences the individual's cognitive skills (Rosselli & Ardila, 2018). According to Neuro-cognitive Learning Theory, spoken language consists of the following concepts: the production of language, the semantics and grammatical rules of the language, and the distinction between expressive and receptive language (Andujar, 2016; Cockcraft, 2002; Visser-Bochane et al., 2020; Weiten, 2014). Spoken language then is a precursor to reading language, which begins formal literacy education such as school (Jasińska et al., 2021). From a neurocognitive stance, learning development occurs in stages (Cockcraft, 2002; Weiten, 2014). Reading can be developed in several stages: sight vocabulary, the discrimination-net stage, the phonological stage, and lastly, the orthographic stage, as seen in Figure 2.3 (Cockcraft, 2002; Weiten, 2014).

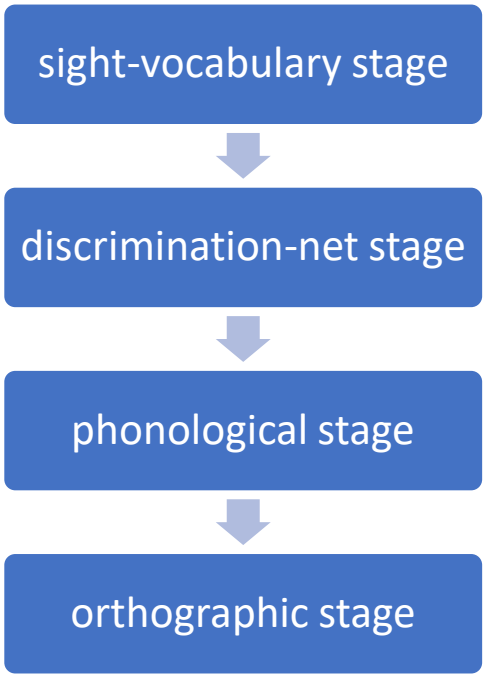

Figure 2. 3: Reading Stages

Between the ages of three and half years old and five and a half years old, language ability of phonological awareness and knowledge of vocabulary is in the process of developing and are robust predictive features of reading success in the future (Georgiou, Parrila & Papadopoulos, 2008; Jasińska et al., 2021).

2.5.3. Phonemic awareness

As one of the foundation tools of literacy, phonemic awareness is the ability to hear, manipulate and understand sounds in words and their syllables (Alhumsi, 2020; Cardis & Fatame, 2023). Phonemic awareness falls under the broader category of phonological awareness in the phonological stage (Alhumsi, 2020). Phonological awareness is rationalising one's language by segmenting spoken words into their basic phonemes (Alhumsi, 2020). Phonemic awareness is a vital skill in early literacy, particularly segmenting, blending, and decoding are required in reading (Alhumsi, 2020; Cardis & Fatame, 2023).

Developmentally, elementary phonological skills are present in preschoolers. By age four, children can identify syllables in familiar words; by age five, preschoolers can count the phonemes in spoken words (Cardis & Fatame, 2023; Feldman, 2019). At age six, children can compose known words by blending three phonemes, for

example, “c-a-t” and “d-o-g” (Cardis & Fatame, 2023). Subsequently, by age seven, in grade one, children can blend words to form words (Cardis & Fatame, 2023). The progression of these steps in phonological awareness is vital as it is an essential prerequisite for reading skills in school-aged children (Cardis & Fatame, 2023). Phonological awareness and, to its defined core, phonemic awareness is a superlative indicator for reading accuracy in beginners (Cardis & Fatame, 2023). Developing phonemic awareness is vital in the subsequent development of spelling and reading skills required for success in school (Cardis & Fatame, 2023).

In application, numerous tests can evaluate phonological awareness (Cardis & Fatame, 2023). Phonemic awareness can be assessed through phonemes counted in spoken words, phoneme blending, phonemic segmentation, phoneme identification, rhyme recognition, rhyme production, word categorization, final phoneme deletion, initial phoneme deletion, spoonerism and word blending (Cardis & Fatame, 2023). The Wide Range Achievement Test Fourth Edition, Comprehensive Test of Phonological Processing Second Edition, Detailed Assessment of Speed of Handwriting, The Wechsler Individual Achievement Test and the Brigance Early Childhood Screening III are all assessment tests used to assess phonological awareness.

2.5.4. Vocabulary

Vocabulary and phonemic awareness are essential English language learning tools (Cardis & Fatame, 2023; Katemba, 2021). Vocabulary can be defined as a list of words arranged alphabetically in conjunction with the definition (Katemba, 2021). Vocabulary should be taught at the start of English learning and involves listening, speaking, reading and writing skills (Katemba, 2021). Learners should master vocabulary to support written and oral communicative abilities, which can predict reading achievement in later stages (Katemba, 2021). Vocabulary can be found in word lists, negotiating vocabulary meanings, dictionary use, glosses and vocabulary cards (Ramezanali & Faez, 2019).

Developmentally, awareness of spoken and written word parts is first required, and then the relationship between the word and its meaning (Feldman, 2019; Laubscher & Light, 2020). Following this, the usage of the correct grammatical word function, collocations and frequency of the word (Fasih, 2022). Whilst awareness of words occurs as early as 24 months old, the awareness of written words and the relationship

between words and their meaning occurs between ages three and five (Feldman, 2019).

In application, various tests can be used to assess vocabulary skills (Bogue, DeThorne & Schaefer, 2014). Vocabulary can be evaluated through multiple assessments, such as The Expressive One-Word Picture Vocabulary Test, The Verbal Word Meaning Test, the Boehm Test of Basic Concepts, the Test of Word Knowledge, The Wechsler Individual Achievement Test and the Brigance Early Childhood Screening III.

2.5.5. Conceptual framework in relation to the study

As depicted in Figure 2.4, Neurocognitive theory works in understanding the stages of language acquisition. Connectivism understands the avenues in which language learning can occur for the EAL preschool learner. In this way, the differences between Connectivism and Neuro-cognitive theory also account for and make up for the limitations of each theoretical approach.

Connectivism understands knowledge as being distributed across a network of connections (Utecht & Keller, 2019). Learning then occurs as the ability to construct and access those networks (Utecht & Keller, 2019). YouTube videos are a node in the network of knowledge that an individual can access to learn new information. For this study, YouTube acts as a node of knowledge that EAL Preschool learners can access to aid the development of English. A critique of Connectivism is that the theory fails to explain what can constitute learning. This aspect is pertinent in this study as it is valuable to quantify and understand how learning occurs. Neurocognitive learning theory can fill this gap. Neurocognitive theory suggests that learning language occurs in stages. Therefore, as depicted in Figure 2.4, a combined Connectivism and Neurocognitive Theory conceptual framework guides this study.

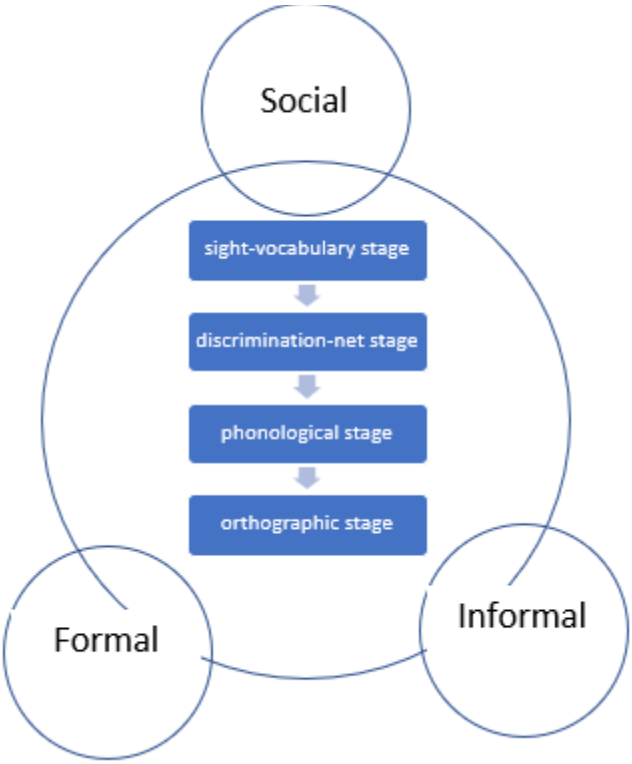

Figure 2. 4: Conceptual Framework in relation to the study

In this combined approach, different nodes of the knowledge network, such as YouTube, teachers, and peers, among other networks, can be accessed to build knowledge in each stage of English development for EAL preschoolers.

2.6. The use of YouTube in the classroom

YouTube can be used as a teaching aid in various ways. YouTube contains an array of channels and videos that can be used in an English class (Datskiv, 2020). YouTube can be used after traditional learning to motivate learners to concentrate and to reinforce concepts learnt in class (Alkathiri, 2019; Nasution, 2019). Feature films on YouTube can be used in the classroom to alleviate fatigue during grammar exercises (Datskiv, 2020). Using feature films found on YouTube can aid the practical implementation and understanding of grammar, sight words and phrasal verbs (Datskiv, 2020). Non-fictional journalist videos such as news interviews, documentaries, and educational films can be accessed on YouTube for the classroom (Datskiv, 2020). These videos can be used in the classroom to demonstrate various

fields and processes in science, current events, technology, industry and agriculture (Datskiv, 2020).

Educational videos and songs in multiple languages can be accessed on YouTube (Datskiv, 2020). Educational videos for all stages of learning English are available on YouTube (Datskiv, 2020; Duffy, 2008). These YouTube videos can present language in real life, develop oral communication skills, and teach foreign language culture and cross-cultural differences (Datskiv, 2020). Educational YouTube videos geared at children involve songs that combine words, phrases, music, and cartoon characters on various English topics (Datskiv, 2020; Krishnan & Yunus, 2018). Some of the most common YouTube channels for teaching English are Maple Leafe Learning, Elf Learning, Dream English Kids, Jack Hartmann's Music Channel, Pink Fong, and Zee Kids (Arif, Triyono & Sahayu, 2018; Datskiv, 2020; DiDomenico, 2017; Datskiv, 2020; Lee, Kim & Park, 2020; Lorah et al., 2021; Statista Research Department, 2021.a).

YouTube videos can be implemented in the classroom through class tasks. One way can be through a Back to the Screen task where learners are paired up, and one of the learners watches a video on screen and describes what is happening to the other learner whose back is facing the screen (Datskiv, 2020; Duffy, 2008). After that, roles are reversed, and the pair write what happened chronologically in the video (Datskiv, 2020). Pairs can discuss the video with other groups, and lastly, the whole class can watch the entire clip with sound together (Datskiv, 2020). Videos can facilitate practice over various reading strategies, such as predicting, summarising, visualising, questioning, evaluating and connecting (Datskiv, 2020). Watch and Observe is another video task that can be used in the classroom (Datskiv, 2020; Nasution, 2019). Learners can watch a short video or a scene from a film, and then the teacher can test vocabulary, run through the series in order of events or even ask a series of true or false questions (Datskiv, 2020).

Videos can be used as a listening tool where the learners work with a jumbled text, make sense of it, and then watch the movie to check the conversations (Datskiv, 2020). Critical Pedagogy and video clips with questions are novel ways of utilising YouTube videos in the classroom (Datskiv, 2020). Focus tasks can also be used, where learners are responsible for learning something specific (Duffy, 2008). Similarly, after watching the video, the learners can be asked about what in the video piqued

their interest and feelings (Duffy, 2008). This technique seems the most appropriate for ESL and EAL preschoolers who have not yet mastered writing or critical thinking skills. Considering the stage of English learning, an array of YouTube videos can facilitate learning English.

2.7. Benefits of YouTube as a technological aid

YouTube, as a technological aid to learning, was the focus of the study. Videos can make the traditional learning process lively and interesting (Datskiv, 2020; Nasution, 2019). Using YouTube videos can reduce cognitive load and align with the learners' expected learning outcomes (Duffy, 2008). Additionally, YouTube videos provide a cost-effective way to introduce technology into the classroom. Chromebooks, AI, tablets and laptops are expensive to implement in classrooms. YouTube videos can be played on the teacher's phone with data, alternatively with the latest download feature on YouTube. YouTube videos can be downloaded on the teacher's phone with wifi in the school or WIFI at a public library or mall.

This allows a technologically based teaching aid to be cost-effectively implemented in the classroom. Using YouTube videos in teaching can contribute to developing attention and memory (Chtouki et al., 2012; Datskiv, 2020; Fleck et al., 2014). Working memory is a critical element in information processing concerning multimedia (Fleck, et al., 2014). Stimuli, such as video and sound, engage the learner's attention spent on the information (Fleck et al., 2014). Doing so may allow the information to have a greater chance of reaching the long-term memory centre (Fleck et al., 2014).

Blended learning can contribute to individualised learning and the development of speech activity of learners (Datskiv, 2020; Krishnan & Yunus, 2018; Sari et al., 2017). A YouTube video can provide a stimulating means of understanding communication with real-life subjects and problems (Datskiv, 2020; Fleck et al., 2014). Using YouTube videos as a teaching aid can also increase the motivation of learners (Alkathiri, 2019; Datskiv, 2020; Duffy, 2008; Krishnan & Yunus, 2018; Nasution, 2019). It can also be used for the independent work of learners and increase the quality of the student's knowledge whilst improving the application of that knowledge (Datskiv, 2020). YouTube videos can be chosen to target and engage with the learners' literacy level (Duffy, 2008). The introduction of YouTube as a teaching aid can benefit the learners depending on the choice of video (Datskiv, 2020; Hakim, 2019). For this study, utilising

YouTube videos geared at Vocabulary and sight words and containing songs and music may aid in developing English for EAL preschool learners.

2.8. Challenges of YouTube videos

Whilst there are multiple benefits to implementing YouTube into the classroom, various challenges can be faced in learning with Web 2.0 technologies (Fleck et al., 2014). Whilst implementing YouTube videos in the classroom can be beneficial, doing so haphazardly may not reap equalling positive effects as blended learning (Fleck et al., 2014). Comment sections of the videos are often not monitored by the poster, and young individuals may have access to this (Duffy, 2008). Another challenge is that once a video has been appropriately chosen for a specific concept, the teachers then need to explore how to get learners to engage with the content of the video critically (Duffy, 2008).

2.9. Conclusion

Chapter 2 highlighted how language abilities are developed and what this looks like for bilingual learners. This Chapter explored the importance of reading and foundational skills of reading ability for EAL preschool learners. This Chapter also defined who EAL learners are and the most pertinent age for language development for EAL learners. This Chapter explored what resources can facilitate phonemic awareness and vocabulary development for EAL preschool learners, focusing on YouTube videos as a technological resource. The Chapter explored a conceptual framework aligned with the research question within the study. Lastly, this Chapter explored the previous literature and the benefits of YouTube videos.

In summary, the literature review identified how effective YouTube is as a motivator for learners. The review also found that whilst there has been various qualitative research done on the effects of YouTube videos, there has been limited research on the effect of YouTube videos as a teaching aid for language development in EAL preschoolers. Various benefits and challenges exist for implementing YouTube as a teaching aid; however, implementing YouTube videos in the classroom appears to hold more benefits than challenges in the South African context.

CHAPTER 3: METHODOLOGY

3.1. Introduction

Chapter 3 utilises the literature review of Chapter 2 as a basis for the research process used for the conduction of the study. As depicted in Figure 3.1, this Chapter begins with exploring research paradigms that this study takes, followed by the research design. A description of the sampling method and the selection of participants is then discussed, followed by a description of the data collection methods, identifying the reliability and validity of these methods and indicating any possible advantages and disadvantages. Lastly, the data analysis methods and ethical considerations are given.

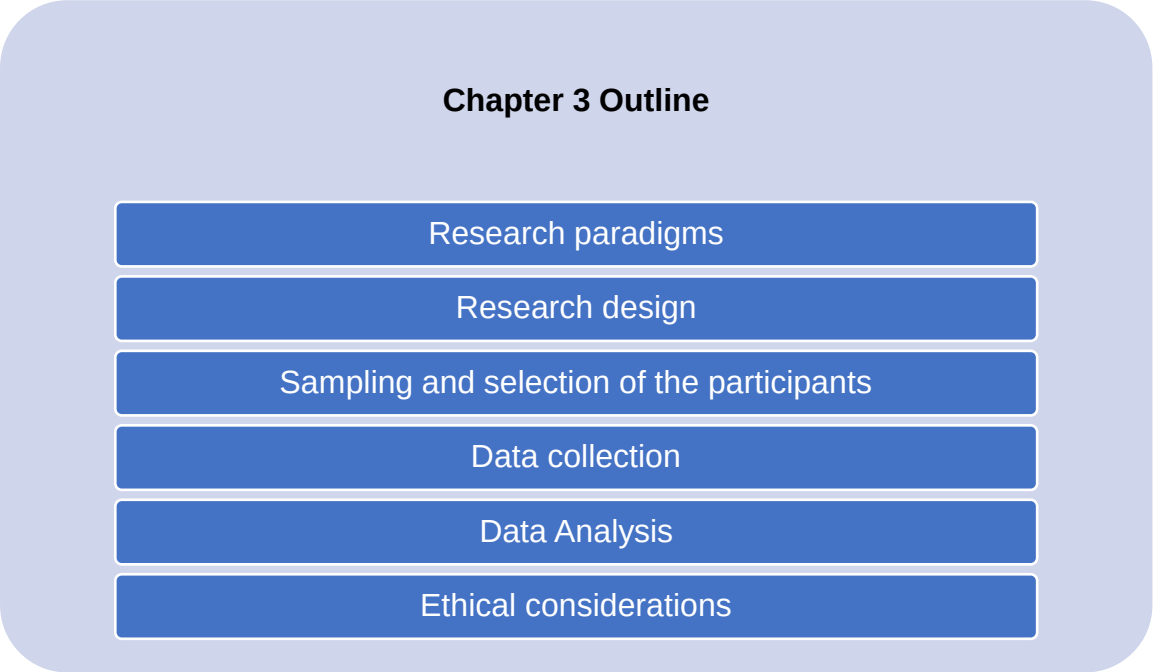

Figure 3. 1: Chapter 3 Outline

3.2. Research paradigms

This section provides an overview of the epistemology that the research takes. This section also provides an overview of the methodological approach taken by the research.

3.2.1. Epistemology

This study aimed to explore how YouTube videos affect phonemic awareness and vocabulary in EAL preschoolers. The study opted for a positivist approach as it best aligned with the aims of this study. A positivist paradigm is a research approach that relies on measurement and reasoning to derive and reveal quantifiable knowledge (Park, Konge & Artino, 2020; Rahi, 2017). The positivist approach asserts that if a value is immeasurable, it cannot be known and defined for sure (Rahi, 2017). The positivist paradigm seeks to solve problems through quantifiable methods (Park, Konge & Artino, 2020; Rahi, 2017; Sefotho, 2015). The positivist paradigm views and understands the world through an objective and quantifiable lens (Park, Konge & Artino, 2020; Rahi, 2017; Sefotho, 2015).

The positivist paradigm claims objectivity, indicating a separation between the researcher and the focus of the study (Sefotho, 2015; Rahi, 2017). Positivists believe they will understand the world through experimentation and observation (Park, Konge & Artino, 2020; Sefotho, 2015). In addition, the positivist paradigm seeks to use experimentation results to inform science (Park, Konge & Artino, 2020; Rahi, 2017). In this sense, the positivist paradigm is a suitable lens for the study. The study seeks to objectively view whether a positive causal relationship exists between YouTube videos and phonemic awareness and vocabulary in EAL preschoolers, employing experimentation. Subsequently, the positivist paradigm aims to answer the research questions outlined above. Additionally, it discussed the practicality of implementing YouTube videos to develop phonemic awareness and vocabulary of EAL preschoolers in the real world.

3.2.2. Methodological approach

The positivist paradigm seeks to gain knowledge through experimentation by identifying causality (Park, Konge & Artino, 2020). As such, this study will utilise a quantitative methodology to achieve this goal. A quantitative study is the numerical examination of quantity-based data to observe cause-and-effect relationships and test hypotheses (Apuke, 2017; Landrum & Garza, 2015; Stockemer, 2019). This description does not negate the non-numerical measurements as quantitative. Instead, it interprets the methodology on a spectrum of numerical and descriptive, indicating that quantitative is more on the numerical side of the spectrum (Landrum & Garza, 2015; Stockemer, 2019). For this study, a quantitative method can allow a quantifiable way to measure the impact of utilising YouTube as a teaching aid for EAL preschoolers.

The main advantage of utilising quantitative methodology for this study is that it allows for an objective, experimental approach to answer the research question. This type of experimental design can be checked through replication to observe whether YouTube videos can be used as a teaching tool for EAL preschoolers in multiple contexts. Quantitative research processes do not need to be directly observed. There are some disadvantages to utilising a quantitative research design. The focus on numerical data can run the risk of broader themes and relationships being overlooked. Another disadvantage of this methodology is that it does not explore learners' perspectives within the study. Tests can be intentionally or unintentionally manipulated based on the researcher's bias. Quantitative research methods can be more expensive than other methods of gathering data.

3.3. Research methodology and strategies

This subsection explains the research design the study undertook and the advantages and disadvantages of the particular approach. The subsection also provides an overview of the sampling process, data collection method, data analysis and ethical considerations that the study undertook.

3.3.1. Research design

A Solomon four-group (quasi-experimental) research design was the central research design within this study. A Solomon four-group research design is a quasi-experimental research design consisting of one control group and three experimental groups (Bohecker & Doughty Horn, 2016; Cohen, Manion & Morrison, 2017; Marsden & Torgerson, 2012). The study sought the effect of YouTube videos on vocabulary and phonemic awareness in EAL preschool learners. In doing so, the study had to observe these language aspects before and after EAL preschool learners were exposed to YouTube videos. As such, a Solomon four-group design was the most appropriate.

This study consisted of two control groups and two experimental groups. As seen in Table 3.1, the first group receives no intervention and a post-test; the second group gets a pre-test, intervention, and a post-test. The third group receives the intervention and the post-test, and the fourth group receives a pre-test and post-test. In Table 3.1, the intervention refers to YouTube videos. The Solomon-four research design is the most effective in exploring how YouTube videos can affect these aspects of language and to what degree, as seen in studies by Sarkar et al. (2017) and Bohecker and Doughty Horn (2016).

Table 3. 1: Sampling

Groups	Number of participants	Pre-test	YouTube videos	Post-test
Group 1	2			X
Group 2	2	X	X	X
Group 3	2		X	X
Group 4	2	X		X

3.3.2. Advantages of the Solomon four-group design

The main advantage of utilising a Solomon four-group design is that this method rules out test effects like pre-test sensitivity (Bohecker & Doughty Horn, 2016; Cohen, Manion & Morrison, 2017; Flannelly, Flannelly and Jankowski, 2018; Marsden & Torgerson, 2012; Sarkar et al. 2017). By including two control groups, the researcher can effectively observe the effects of the intervention (Bohecker & Doughty Horn, 2016; Cohen, Manion & Morrison, 2017; Marsden & Torgerson, 2012).

3.3.3. Limitations of the Solomon four-group design

A potential challenge of utilising this research method is the effects of maturation, where the individual matures and develops English over time through traditional means of learning (Flannelly, Flannelly and Jankowski, 2018; Marsden & Torgerson, 2012). This limitation is of no consequence to the current study as the time between the intervention and the post-test was not more than 24 hours after exposure to YouTube videos for most participants.

3.4. Sampling

This research employed two non-probability sampling techniques: convenience and purposive sampling. This type of sampling was of value to the study as it allowed the researcher to gain access to the participants (Laher & Botha, 2012; Rahi, 2017). This study occurred in Gauteng (School A), which the researcher is acquainted with, within one month, as indicated in Table 3.2.

Table 3. 2: Intervention Schedule

Monday	Tuesday	Wednesday	Thursday	Friday
10	11	12	13	14 Pre-test on groups 2 and 4
17 Groups 1 and 4: arts and craft Group 2 and 3: Video 1	18 Groups 1 and 4: arts and craft Group 2 and 3: Video 2	19 Groups 1 and 4: arts and craft Group 2 and 3: Video 3	20 Groups 1 and 4: arts and craft Group 2 and 3: Video 4	21 Groups 1 and 4: arts and craft Group 2 and 3: Video 1
24 Groups 1 and 4: arts and craft Group 2 and 3: Video 2	25 Groups 1 and 4: arts and craft Group 2 and 3: Video 3	26 Groups 1 and 4: arts and craft Group 2 and 3: Video 4	27 Public holiday	28 School closed
1-May Public holiday	2 Groups 1 and 4: arts and craft Group 2 and 3: Video 1	3 Groups 1 and 4: arts and craft Group 2 and 3: Video 2	4 Groups 1 and 4: arts and craft Group 2 and 3: Video 3	5 Groups 1 and 4: arts and craft Group 2 and 3: Video 4
8 Groups 1 and 4: arts and craft Group 2 and 3: Video 1	9 Groups 1 and 4: arts and craft Group 2 and 3: Video 2	10 Groups 1 and 4: arts and craft Group 2 and 3: Video 3	11 Groups 1 and 4: arts and craft Group 2 and 3: Video 4	12 Groups 1 and 4: arts and craft Group 2 and 3: Video 1
15 Groups 1 and 4: arts and craft Group 2 and 3: Video 2	16 Groups 1 and 4: arts and craft Group 2 and 3: Video 3	17 Groups 1 and 4: arts and craft Group 2 and 3: Video 4	18 Post-test on groups 1, 2, 3, 4	19 End of data collection scoring and analysis to begin

Criteria for participation included being a registered preschool learner of School A, between four and six, being an EAL preschool learner and having access to less than one hour a day of Educational YouTube videos (Intervention). Participants who met the criterion were divided into four groups with Randomizer, a randomising cell phone application.

As outlined in Table 3.3, the intervention consisted of four YouTube videos, two from the Pinkfong Baby Shark- Kid's Songs & Stories and two from the Jack Hartmann Music Channel, focused on phonemic awareness and vocabulary. These videos were chosen utilising Neumann and Herodotou's (2020) YouTube evaluation rubric that assesses the quality of YouTube videos through Design features, Content quality,

Learning objectives and Age appropriateness in Appendix 1. The intervention was administered over 22 days. The intervention was conducted on Groups 2 and 3, as indicated in Table 3.3. The intervention occurred in the order illustrated in Table 3.2 (Intervention schedule).

Table 3. 3: Video Schedule

1. Jack Hartmann Kids Music Channel	https://www.youtube.com/watch?v=WP1blVh1ZQM&t=7s&ab_channel=JackHartmannKidsMusicChannel	6minutes 20seconds
2. Pinkfong Baby Shark-Kid's Songs & Stories	https://www.youtube.com/watch?v=yr8xVjBZWsE&ab_channel=PinkfongBabyShark-Kids%27Songs%26Stories	4minutes 33seconds
3.PinkFong Baby Shark Kids' Songs & Stories The vowel family	https://www.youtube.com/watch?v=arQxkdRYyE4&ab_channel=PinkfongBabyShark-Kids%27Songs%26Stories	1min 33 seconds
4. Jack Hartmann Music Channel Sight Words Rap 1	https://www.youtube.com/watch?v=3zJJ1S6-rMc&ab_channel=JackHartmannKidsMusicChannel	2minutes 11seconds

Table 3. 4: Intervention Process

Control Groups	Intervention Groups
1. Preschoolers are divided into control or intervention Groups through the Randomizer application	1. Preschoolers are divided into control or intervention Groups through the Randomizer application
2. Preschoolers in the control group are further randomised into two groups	2. Preschoolers in the intervention group are further randomised into two groups
3. Preschoolers in Group 4 are pre-tested with the Brigance Early Childhood Screen II	3. Preschoolers in Group 2 are pre-tested with the Brigance Early Childhood Screen II
4. Preschoolers in Group 1 and Group 4 spend 15 minutes in free play.	4. Preschoolers in groups 2 and 3 are exposed to the YouTube.
5. Preschoolers in control groups are given the post-test (Brigance Early Childhood).	5. Preschoolers in the intervention Groups are given the post-test (Brigance Early Childhood).

3.5. Data collection

From April 14, 2023, to May 19, 2023, the data collection procedure occurred at school A with eight participants and one teacher. The data was collected through an assessment, and an observational field note as tests allowed numerical data to be collected (Cohen, Manion & Morrison, 2017). The assessment measured, analysed, and evaluated the effect between independent and dependent variables, thus answered the research questions (Cohen, Manion & Morrison, 2017; Field, 2018; Foxcraft & Roodt, 2017). The instrument utilised within the study was the Brigance Early Childhood Screen III. The Brigance Early Assessment test is a developmental screening and assessment inventory that measures the progress of Language development, Academic Skills, Self-help, Social-Emotional Skills and Physical Development (Curriculum Associates, 2021). The test takes 10-15 minutes for the whole screening, and the study focused on the Language and Academic screening (Curriculum Associates, 2021).

The Language domain in Brigance III assesses receptive and expressive language skills (Brigance & French, 2013). The Language Domain assesses phonemic awareness through discriminating ending sounds, identifying initial letters in words and themes among words (Brigance & French, 2013). The Academic Domain assesses literacy skills and mathematical concepts (Brigance & French, 2013). The Literacy assessments within the Academic Domain assess vocabulary by discriminating between letters and identifying lowercase letters (Brigance & French, 2013). The Brigance III was chosen as the pre-test and post-test assessment as it was short enough to assess the English proficiency of preschoolers as an additional language without fatiguing the learners. Another advantage of using this is that it allows both variables to be measured in one session. It has gone through reliability and validity testing as an existing measure.

The Brigance III First Grade assessment has a reliability coefficient of 0.96, indicating that The Brigance consistently measures Physical, Language, Academic Domain and Adaptive Behaviour (Brigance & French, 2013). The Brigance III items function similarly across major identified groups (Brigance & French, 2013). The Brigance III has a considerable advantage in its assessment ability as teachers can assess using this media. This can allow for the progress of learners' English skills to be tracked. The main disadvantage of utilising The Brigance III is that it was developed in the United States and, therefore, can lack cross-cultural reliability.

Once the preschool learners with EAL were divided into their respective groups, those selected for the pre-test were tested and collected from them. Succeeding the relevant participants were exposed to the intervention. After that, all the groups were given the post-test to collect the data. The data was then analysed utilising the Statistical Package for the Social Sciences (SPSS) program.

3.6. Data analysis

The quantitative study was first analysed using a statistical analysis (Cohen, Manion & Morrison, 2017; Phakiti, 2015). The SPSS (IMB) version 27 analysed the statistical data. Continuous variables were first analysed, then the control and experimental groups. In each group, the Continuous variables include the mean and standard deviations for each group's results (Field, 2018; Foxcraft & Roodt, 2017). Comparison between the control and experimental groups was then made with a T-test to identify causality between the independent and dependent variables. A One-way ANOVA was done to compare post-test groups, as seen in a study by Zulkiply and Aziz (2019). The standardisation and Pearson's correlation coefficient were tested on the pre-test treatment group to determine if a relationship exists between YouTube videos and vocabulary and phonemic awareness and to what degree the relationship exists (Field, 2018). To answer the question, the statistical analysis was completed based on the following hypothesis:

> H_0: The independent variable will not affect any of the dependent variables.

The alternative hypotheses are as follows:

> H_1: There is a positive relationship between YouTube videos and phonemic awareness in EAL preschoolers.
>
> H_2: There is a positive relationship between YouTube videos and vocabulary in EAL preschoolers.
>
> H_3: A positive relationship exists between YouTube videos and vocabulary and phonemic awareness in EAL preschoolers.

3.7. Ethical considerations

Within research, the researcher is responsible for ensuring that the participants were safe from harm and protected from unnecessary distress (Andanda, 2005; Cacciattolo, 2015; Cohen, Manion & Morrison, 2017). The researcher was granted ethical clearance by the Ethics Committee at the University of Pretoria before the research commenced. The study complied with the ethical considerations stipulated by the Faculty of Education of the University of Pretoria. Cacciattolo (2015) identified that any research conducted with EAL individuals requires consideration of the following ethical

themes: informed consent, privacy and confidentiality, deception, and cross-cultural representation. Informed consent involves the participant making a choice knowledgeably, voluntarily, and fully competent (Andanda, 2005; Cacciattolo, 2015). A principal letter was given to school A, and once permission from the school was granted, Parental consent (see Appendix C) was sent out to the parents. Parental consent was attained four weeks before the data collection commenced, and participants' assent was attained a week before data collection began (See Appendix D) (Andanda, 2005).

A pseudo name was given to the school and the participants involved in the study regarding privacy. All data documents regarding the research and participants were stored on a password-protected laptop accessible only by the researcher, and anonymity was maintained (Arifin 2018; Republic of South Africa, 2013). In addition to this, the researcher adequately disposed of any identifiable participant information (Cohen, Manion & Morrison, 2017). Regarding deception, the participants' guardians were not deceived during the study. The participants were briefed concerning the purpose at the end of the study. Due to being a part of the study, no material was gained or offered to respondents or their parents/caregivers.

3.8. Conclusion

Chapter 3 explored the positivist approach as it relates to the study. It provides a basis for measuring the possible effect of YouTube videos on EAL preschoolers' phonemic awareness and vocabulary. This chapter highlighted the Solomon four-group research design and the sampling method that the study utilised, calling attention to the advantages and disadvantages of utilising the Solomon four-group design. The chapter provided a summary of the sampling method, intervention schedule and intervention process that the study undertook. Additionally, the chapter investigated the Brigance III, providing the instrument domains and its relevance as a measurement tool for assessing phonemic awareness and vocabulary in EAL preschoolers. Lastly, the chapter considered the study's ethical conundrums and how these were approached.

CHAPTER 4: RESULTS AND DISCUSSION

4.1. Introduction

This Chapter presents the analysis and discussion of the study's results. As depicted in Figure 4.1, the Chapter begins with the demographic statistics of the sample. A summary of each group's pretest and post-test scores was also explored. Following this, the results of the comparison test, the test of variances of means, and the test of comparison on the intervention groups are presented. The field notes of the study were also investigated and presented. Lastly, this Chapter is completed with a discussion of the study's quantitative results and observation notes.

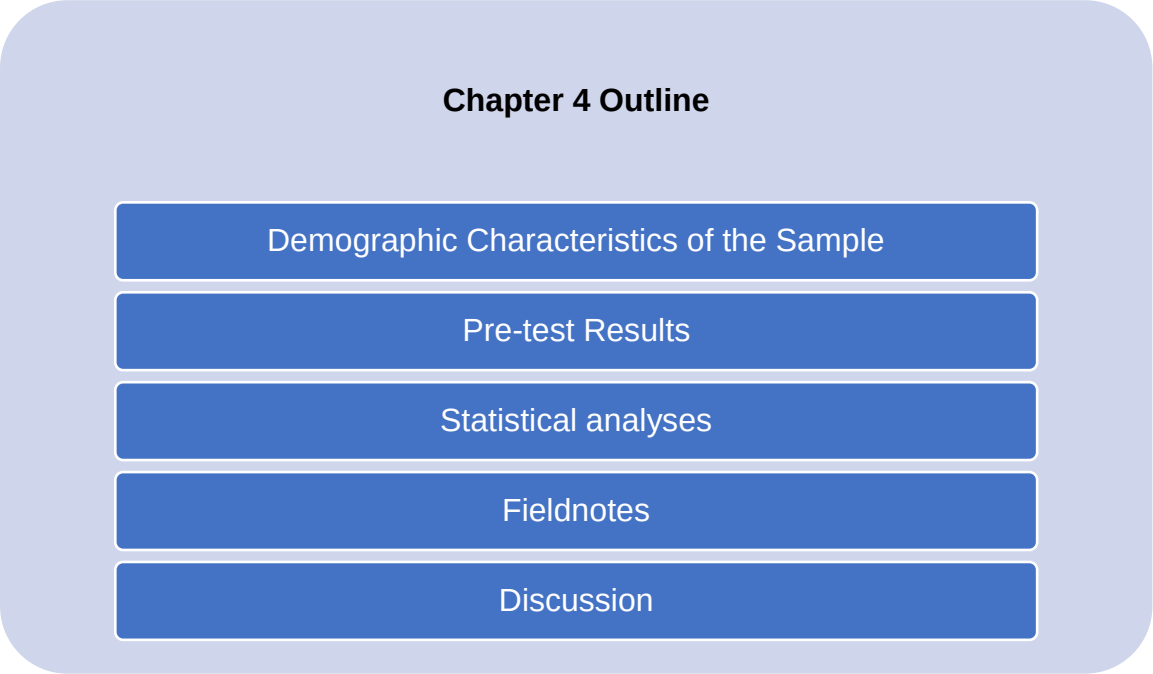

Figure 4. 1: Chapter 4 Outline

4.2. Demographic characteristics of the sample

As mentioned in the previous Chapter, the sample was obtained utilising non-probability, purposive sampling. Table 4.1 illustrates the demographic characteristics of the study sample.

Table 4. 1: Demographic Characteristics of Participants at Baseline

Baseline Characteristics	***Pretest Treatment***		***Pretest Control***		***Treatment***		***Control***		***Total Sample***	
	n	%	n	%	n	%	n	%	n	%
Gender										
Female	1	50	1	50	2	100	1	50	5	63
Male	1	50	1	50	0	0	1	50	3	37
Age										
4	0	0	0	0	1	50	0	0	1	12
5	2	100	2	100	1	50	1	50	6	75
6	0	0	0	0	0	0	1	50	1	12
Race										
African	2	100	2	100	2	100	2	100	8	100

The final sample consisted of eight preschoolers who were English as Additional Language (EAL), of which 37% (3) were male and 63% (5) were female. The mean age of the sample was five years three months, with participants' ages ranging between four and six years of age— 100% of the participants identified as African. The participants were normally distributed between each of the research groups.

4.3. Pretest results

An Independent Samples T-test compares two groups to determine whether the samples differ (Field, 2018). Although the sample is from the same school, the level of exposure to English for the EAL learners is unknown as such an independent T-test allowed for determining whether the learners had a similar base of English at the beginning of the study and after the first term of school. An independent T-test, as depicted in Table 4.2, was conducted on the pretest control and treatment groups to identify whether there was a statistical difference between the student's abilities before being exposed to the YouTube Videos.

Table 4. 2: T-test Results Comparing Pretest Treatment and Control Groups

	Group	n	M	SD	t	df	p
Pretest Language	Pretest treatment	2	14.00	2.82	.12	2	.91
	Pretest control	2	13.50	4.95			
Pretest Literacy	Pretest treatment	2	8.50	.71	-1.10	2	.39
	Pretest control	2	13.50	6.36			
Pretest Total Score	Pretest treatment	2	39.50	.71	-.63	2	.59
	Pretest control	2	40.50	2.12			

***p < 0.05

The Language Domain of the Brigance III measured phonemic awareness, whilst the Literacy Domain measured Vocabulary. The Total Score of the Brigance III measured all Domains within the Brigance III. The independent samples t-test results indicated that although the control and treatment groups scored below the average for their age range in the Literacy and the Language Domain, the learners' mean scores were in the same range. There was no significant difference in the mean score between the treatment and control groups of the Literacy Domain since P value =.39 which is greater than 0.5. The standard deviations showed a significant difference in the Pretrest treatment Literacy Domain and the Pretest treatment group Total Score of the learners. These scores suggest a significant variance in one of the learners' abilities, implying that one performed significantly lower than the average. The Pretest Literacy and Language scores of the control group indicate a low spread in the learner's scores, suggesting that the learners' scores were average.

The independent samples t-test results indicate no significant difference between the pretest treatment and control group in the Language, Literacy and Total Score. These scores suggest no difference in the Language, Literacy and Overall abilities between the pretest treatment and control group. However, the homogeneity of variance was also tested with Levene's test. Levene's could not be calculated as absolute deviations were constant within each cell, indicating that variances between groups may have existed. This type of error may also be due to a small sample size. Variances between the groups suggested that there may be differences in the learner's ability.

Independent sample t-test for equity of means indicated no statistical differences in the pretest scores of both the control and treatment groups. These scores suggest there may not have been enough participants to accurately detect if differences between the pretest groups' Language and Literacy skills existed.

As Levene's could not be computed, a One-Way ANOVA, Table 4. 3, was conducted to assess the homogeneity of variances. A One-Way ANOVA is used to determine whether there are any statistically significant differences between the means of three or more groups (Field, 2018).

Table 4. 3: Means, Standard Deviations, and One Way Analysis of Variance in Language, Literacy and Total Score of Pretest Groups

		Sum of Squares	df	Mean Square	F	Sig.
Pretest Language	Between Groups	,250	1	,250	,015	,913
	Within Groups	32,500	2	16,250		
	Total	32,750	3			
Pretest Literacy	Between Groups	,250	1	,250	,200	,698
	Within Groups	2,500	2	1,250		
	Total	2,750	3			
Pretest Total Score	Between Groups	1,000	1	1,000	,400	,592
	Within Groups	5,000	2	2,500		
	Total	6,000	3			

p < 0.001

Table 4. 4: Robust Tests of Equality of Means

		Statistic[a]	df1	df2	Sig.
Pretest Language Domain	Welch	,015	1	1,590	,915
Pretest Literacy	Welch	,200	1	1,471	,712
Pretest Total Score	Welch	,400	1	1,220	,625

a. Asymptotically F distributed.

The results of the ANOVA, Table 4.3 and the Welch, Table 4.4, both indicate no significant difference between the scores of the pretest treatment for the control and treatment groups. These scores also suggest no differences between the scores and abilities of the EAL preschool learner's Literacy and Language skills on the Brigance III before receiving treatment.

4.4. Statistical analysis

The primary research question was: What is the relationship between YouTube videos and developing phonemic awareness and vocabulary in preschoolers? The secondary research question was: Does a directional relationship exist between YouTube videos and preschoolers' phonemic awareness and vocabulary development? To answer these questions, various statistical analyses were completed based on the null and alternative hypotheses as follows:

H_0: The independent variable will not affect any of the dependent variables.

The alternative hypotheses are as follows:

H_1: There is a positive relationship between YouTube videos and phonemic awareness in EAL preschoolers.

H_2: There is a positive relationship between YouTube videos and vocabulary in EAL preschoolers.

H_3: A positive relationship exists between YouTube videos and vocabulary and phonemic awareness in EAL preschoolers.

4.4.1. Paired sample T-test

A paired samples t-test compares the repeated means of two variables for a single group (Field, 2018). A paired samples t-test (Table 4.5) was conducted on the pretest and post-test control and treatment groups to identify if the treatment had any effect.

Table 4. 5: Results of the Comparison Between Mean, Standard Deviation, and Correlation of Pretest Groups

		M	N	SD	Correlation	p
Pair 1	Pretest Language	13,75	4	3,30	.92	.76
	Post-test Language	12,25	4	3,30		
Pair 2	Pretest Literacy	8,25	4	,95	.48	.52
	Post-test Literacy	23,50	4	20,04		
Pair 3	Pretest Total Score	40,00	4	1,41	.34	.66
	Post-test Total Score	47,50	4	9,81		

The results of the paired samples t-test statistics showed that the means for the Total Score and Literacy post-test score increased while the mean of the Language post-test score decreased. Table 4.5 shows that there was no statistical difference between Language (p = 0.76), Literacy (p = 0.52) and Total score (p = 0.66). Therefore, the results of the paired samples t-test showed a non-significant difference between the Language (M=13.75; SD=3.30), Literacy (M=8.25; SD= 0.95) and Total Score (M=40.00; SD=1.41) before treatment and the Language (M=12.25; SD=3.30), Literacy (M=23.50; SD=20.04) and Total Score (M=47.50; SD=9.81) after treatment. The 95% confidence interval of the difference between the means ranged from [-22.51 to 7.511] and did not indicate a difference between the means of the samples. Therefore, the Researcher failed to reject the null hypothesis that there was no difference between the means and concluded that YouTube videos do not affect EAL preschool learners' phonemic awareness and vocabulary skills.

4.4.2. One-way ANOVA

A One-Way ANOVA, as indicated in Table 4.6, was conducted to identify and confirm whether there were significant differences between the post-test scores of all the groups. The One-Way ANOVA was also utilised to determine whether the Brigance III may have affected the increased test scores of the pretest treatment and control groups.

Table 4. 6: Means, Standard Deviations, One-Way Analyses of Variance between Intervention Groups on the Post-test Language, Literacy and Total Scores

		Sum of Squares	df	Mean Square	F	Sig.
Post-test Language	Between Groups	226,38	3	75,46	8,05	,036
	Within Groups	37,50	4	9,38		
	Total	263,88	7			
Post-test Literacy	Between Groups	202,38	3	67,4	17,41	,009
	Within Groups	15,50	4	3,88		
	Total	217,88	7			
Post-test Total Score	Between Groups	860,38	3	286,79	5,69	,063
	Within Groups	201,50	4	50,38		
	Total	1061,88	7			

$p < 0.05$

The One-Way ANOVA was performed to compare the scores of the four experimental groups. The scores ANOVA indicate no significant differences between the learners' Total [F(3,4) = 5.69, p = 0.06]. These scores suggested that no variance existed between all ESL Preschool learners' literacy skills and overall ability. The ANOVA scores indicated a statistical difference in the learner's Language skills [F(3,4) = 8.05, p = 0.036] and Literacy [F(3,4) = 17,41, p = 0.009] scores. The language scores suggested variance in the EAL preschool learner's language abilities after exposure to the YouTube Videos. As there was a statistically significant difference in the Language scores of the learners, a Post Hoc comparison using Tukey's Honestly Significant Difference (HSD) test depicted in Table 4.7 was conducted to explore the groups in which variances existed. A Post Hoc test is performed to examine where the significant difference derived from.

Table 4. 7: Multiple Comparisons Post hoc Tests of Tukey of Intervention Groups on Language

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval Lower Bound	Upper Bound
Pretest treatment	Pretest control	,500	3,062	,998	-11,96	12,96
	Treatment	7,000	3,062	,244	-5,46	19,46
	Control	-8,000	3,062	,179	-20,46	4,46
Pretest control	Pretest treatment	-,500	3,062	,998	-12,96	11,96
	Treatment	6,500	3,062	,286	-5,96	18,96
	Control	-8,500	3,062	,153	-20,96	3,96
Treatment	Pretest treatment	-7,000	3,062	,244	-19,46	5,46
	Pretest control	-6,500	3,062	,286	-18,96	5,96
	Control	-15,0000	3,062	,027	-27,46	-2,53
Control	Pretest treatment	8,000	3,062	,179	-4,46	20,46
	Pretest control	8,500	3,062	,153	-3,96	20,96
	Treatment	15,0000	3,062	,027	2,53	27,46

*The mean difference is significant at the 0.05 level

The Post hoc comparisons using the Tukey HSD test indicated that the mean Language score was significantly different between the treatment and control group (p =0.027, 95% C.I. = [-27.46, -2.53]). The treatment and control groups did not have exposure to the pretest. These scores suggested there may have been a difference between the treatment group and control groups' initial language ability. These scores may also have indicated that the treatment did not affect the EAL preschool learners' Language and Literacy and, subsequently, the EAL preschooler's phonemic and vocabulary.

These results failed to reject the null hypothesis that the independent variable (YouTube) would not influence any of the variables and reject the alternative hypotheses that a positive relationship existed between YouTube videos and phonemic awareness in EAL preschoolers: there is a positive relationship between YouTube videos and vocabulary development in EAL preschoolers; and there is a positive relationship between YouTube videos and; vocabulary and phonemic awareness in EAL preschoolers. The results also answer the research question, "What

is the relationship between YouTube videos and developing phonemic awareness and vocabulary in preschoolers?". The study results indicated no direct evidence that YouTube videos aid the development of phonemic awareness and vocabulary but that Brigance may have aided the development of phonemic awareness and vocabulary. Subsequently, the secondary research question can be answered in that a directional relationship does not exist between YouTube videos and preschoolers' phonemic awareness and vocabulary.

4.5. Analysis of observations

The qualitative observations from the study indicated that all the learners showed high engagement and enthusiasm for the YouTube videos regardless of their focus on vocabulary or phonemic awareness. Observations from week one to week two during the intervention phase showed that the learners demonstrated a positive attitude towards watching the videos during the learning phase in the classroom. This enthusiasm did not decrease as the intervention weeks progressed. The learners could answer questions about the content they watched and showed excitement towards and what phonemes and words they observed. The learners mentioned that they enjoyed the video's specific letters, words, songs and colours. Learners identified the phonics "z", "d", "l", and "a".

During weeks three to five of the intervention phase, the learners still showed a positive attitude towards watching videos after the learning phase. The learners were motivated by the activities alongside the videos and displayed a positive attitude about the activities each day. The learners began singing along to the songs in the videos, and the pretest treatment group began identifying letters and phonics on posters in the classroom. During week five of treatment, there was video fatigue, where participants pre-empted the videos or observed how much of the video was left to watch. Throughout the treatment phase, the implementation of the YouTube videos was easily achieved with the YouTube videos quickly played on a Tablet or Mobile Device. Utilising both devices was implemented efficiently, and the size of the device displaying the video did not affect the learner's ability to engage with the videos. Downloading the videos on the device also allowed the expense of the treatment to be cost-effective, with the main expense being the data utilised to download the videos initially at the beginning of the intervention schedule.

4.6. Discussion

The results of the initial pretest comparison between the pretest control (Group 4) and the pretest treatment (Group 2) indicated no significant differences. This suggests that the EAL preschool learners had similar language abilities before being exposed to the YouTube videos. The comparison between Group 2's pretest scores and Group 2's post-test scores suggests that the YouTube videos may have affected the Language Domain (which measured vocabulary) and Literacy Domain (which measured phonemic awareness) as there was an increase in the post-test scores. However, when comparing Group 4's pretest scores to Group 4's post-test scores depicted in Table 4.5, there was an increase in post-test scores, suggesting that the YouTube videos did not affect the post-test scores and that the rise in scores may be due to traditional learning. The means of the post-test scores for Groups 2 and 4 were compared, indicating no significant difference between the Group 2 and Group 4 post-test scores. These scores confirm that the increase in scores for Group 2 was not correlated with YouTube videos.

A means comparison with all the intervention groups was done to ensure that the increase in Group 2 and Group 4's scores was not directly a result of the Brigance III. The control group (Group 1) shared similar scores to Groups 1 and 2, whilst the treatment group (Group 3) scored the lowest of all the intervention groups. The low scores within Group 3 suggest that YouTube videos may adversely affect language development. Extraneous variables such as the youngest participant (age 4) and the only participant with a disability were randomly assigned to Group 3. These variables may have impacted the learner's overall ability; however, this cannot be determined without the pretest. Therefore, the means comparison of the intervention groups 1,2 and 4 suggests that Brigance III did not influence the increase in scores.

The quantitative study results indicated that through the month of intervention, YouTube videos did not have a quantifiable effect on ESL preschoolers' phonemic awareness and vocabulary. These findings are consistent with the literature gap on quantifiably determining the impact of YouTube videos on language development in ESL preschool learners in South Africa. This gap in the literature may be due to the length of the study. A longitudinal study such as the one done by Anthony et al. (2009) over a few months may have allowed for a more significant observation of the effect

of YouTube videos. Similarly, utilising a participant group may have allowed for a more significant quantitative analysis of the potential impact of YouTube videos on phonemic awareness and vocabulary development in ESL preschool learners in South Africa.

4.6.1 Qualitative discussions

The qualitative observations of the study align with studies on the use of YouTube as a motivator for learning. Studies such as Arif et al. (2020) and Lee, Kim and Park (2020) had similar findings to this study's observations, where the preschool learners were motivated and enthusiastic for the learning phase as they pre-empted the YouTube videos and possible phonics, letters and sight words they may have been learning. Whilst no quantitative evidence supports that learners' phonemic awareness and vocabulary were developed with YouTube videos, the EAL preschoolers were motivated to learn.

The EAL preschoolers were observed attempting to independently identify phonics, letters and sight words across the classroom. These findings align with studies by Alkathiri (2019) and Nasution (2019) that YouTube videos used after traditional learning can motivate learners to concentrate and reinforce the concepts learnt in class. As the study was based on finding quantifiable markers of phonemic awareness and vocabulary development after using YouTube as a teaching aid, there is only observational data to support this. A more in-depth study may be required to explore the observations of this study.

The qualitative observations also found that using YouTube videos in the classroom was quick and effective to implement. This blended learning method was cost-effective and could be implemented by any teacher with a mobile device. Neumann and Herodotou's (2020) rubric for evaluating YouTube videos for Young Children could be utilised by teachers to determine which YouTube videos would be most effective for each learning topic.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1. Introduction

Chapter 1 introduced the study, provided a rationale, purpose and research questions and laid a foundation for the study. Chapter 2 provided an overview of language development for EAL learners, defined the ideal language development, explored previous studies on technology usage for English as a Second Language and provided a conceptual framework that guided the study. Chapter 3 explored the research paradigms and research design. It also described the sampling method and the selection of participants, which was then discussed, followed by a description of the data collection methods and ethical considerations. Chapter 4 presented the analysis and discussion of the study's findings. As depicted in Figure 5.1, this Chapter discusses the study's quantitative and qualitative findings. The Researcher explores and discusses the study's advantages, limitations, and recommendations for future research and practice.

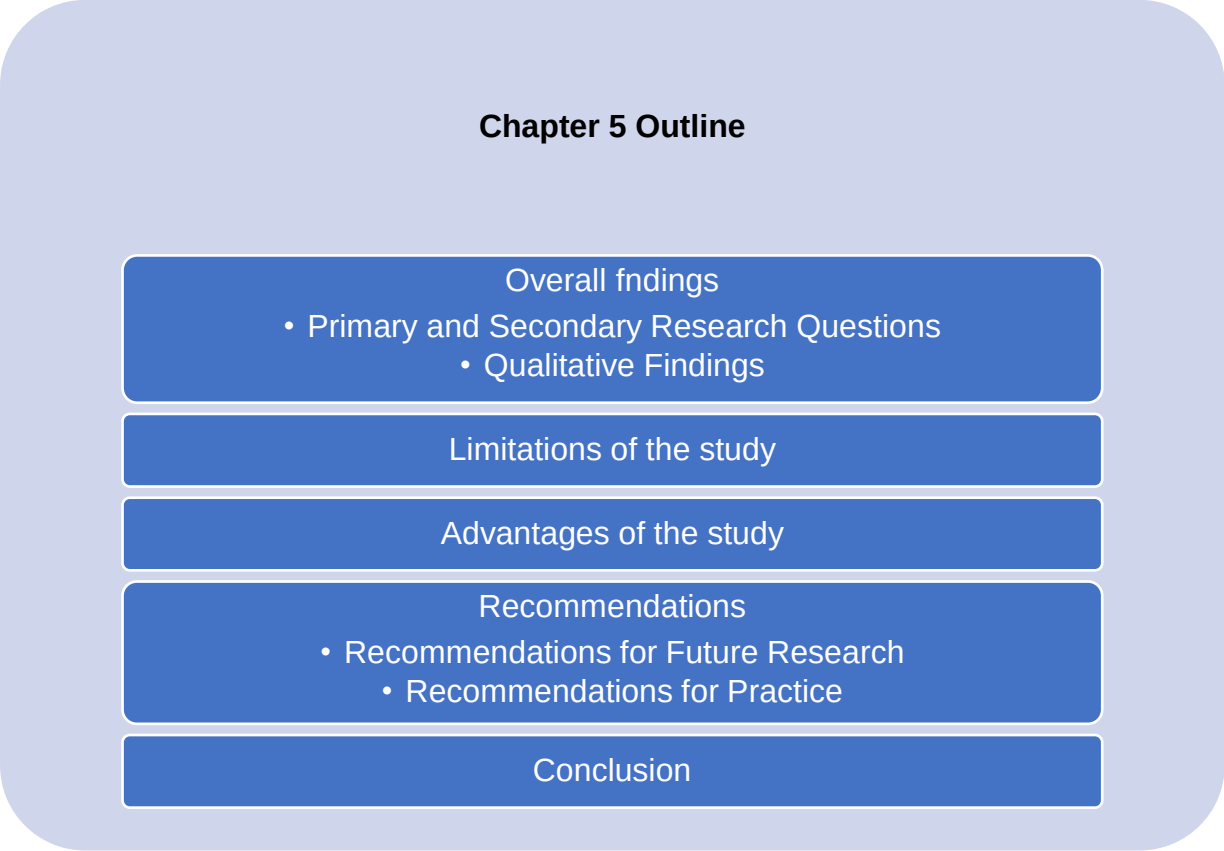

Figure 5. 1: Chapter 5 Outline

This study aimed to determine whether YouTube videos could facilitate the development of phonemic awareness and vocabulary development in ESL preschoolers. This Chapter thus summarises, answers and concludes the findings of this study, considering its minimal impact on the broader topic.

5.2. Overall findings

This subsection provides an overview of the primary and secondary research questions, stipulating the study's findings and answering the research questions. The subsection also explores the study's quantitative findings and possible meanings linked to the study.

5.2.1. Primary and secondary research question

The study's primary research question was "What is the effect of YouTube videos on developing phonemic awareness and vocabulary in preschoolers?". The null hypothesis is that YouTube videos would not affect phonemic awareness and vocabulary in EAL preschoolers. This means that YouTube videos would not impact phonemic awareness and vocabulary development in EAL preschoolers. The statistical analysis revealed that all the EAL preschoolers scored below average for the Language and Literacy Domains, which assessed phonemic awareness and vocabulary, which was hypothesised to occur. Most of these EAL learners were only exposed to English on an academic level for the first time during the study, so an average low score was expected.

The findings, however, showed no statistical difference between the post-test scores of the treatment and control groups despite an increase in scores, and the researcher failed to reject the null hypothesis. This means that when quantifying the effect of YouTube videos on phonemic awareness and vocabulary development in EAL, there was no quantifiable evidence to support that YouTube videos affected the EAL preschoolers' phonemic awareness and vocabulary development. These findings are similar to what has been explored in previous literature on EAL preschoolers, in which there was a gap in quantifying the effect that YouTube videos may have on language on EAL preschoolers. When viewing the literature on increasing the motivation to learn, these findings suggested that YouTube videos increased the motivation to learn and could increase the understanding of concepts. This indicates that YouTube videos increase learning ability and subsequently improve learning. The results of this study suggest that YouTube videos may increase the motivation to learn. However, no evidence was found that watching YouTube videos increases language development in EAL learners.

The secondary research question was, "Does a directional relationship exist between YouTube videos and preschoolers' phonemic awareness and vocabulary development?" It was not explored as failing to reject the null hypothesis indicated no quantifiable relationship between YouTube videos; therefore, a directional relationship could not exist. The results of the study also revealed shortcomings of the study.

Concurrently, the study brought forth qualitative aspects that may benefit from further exploration.

5.2.2. Qualitative findings

Whilst the research question was answered through the failure to reject the null hypothesis, qualitative observations within the study identified that a possible relationship between YouTube videos and motivation to learn EAL preschoolers might exist. This hypothesis aligns with studies by Arif et al. (2020) and Lorah et al. (2021) that concluded that PinkFong was a strong motivator for preschool learners in developing language skills. This suggests that introducing this form of blended learning in the classroom may motivate EAL preschoolers to learn language concepts and may be an effective way to teach more complex language concepts. This is in congruence with the conceptual framework of the study. As a node of knowledge in the learning network, YouTube can be effective in the early stages of English learning ability as it motivates and reinforces traditional learning for EAL preschoolers.

The qualitative observations of the study revealed that learners were motivated to learn and independently identified language components such as phonics, vocabulary, letters and sight words outside of the learning experience and shared those experiences with peers. This allows learners to access language nodes in their learning network, such as peers, posters and books. The study also found that blended learning through YouTube videos was effective cost-saving. This also suggests that schools with a shortage of resources and a low socioeconomic status learner background would be able to access blended learning.

5.3. Limitations of the study

One of the most significant limitations of the study was the sample size. The sample of the study contained eight EAL Preschool learners and one teacher. The smaller sample may have impacted the quantitative results regarding the accuracy of scores and the ability to calculate possible variability. Studies on EAL learners and language development, such as Anthony et al. (2009) and Muslem, Fata and Saputri (2022), worked on sample sizes larger than eight participants, which allowed for a better comparison of results, observations and analysis of possible themes.

Another limitation of the study is the time of intervention. A month of intervention may be successful for some studies. What could have been more beneficial to the current study is having an intervention schedule with a more extended period. Longitudinal studies like Anthony et al. (2009) allow for observation of the long-term effects of the study. A longitudinal study with the same parameters may provide some more influential results. A similar limitation of the study was not considering the potential of the EAL learners requesting and watching YouTube videos outside the school setting. Although this did not occur, the possibility existed without premeditated parameters. The additional video time could have inadvertently increased the scores if participants had requested the videos outside the school setting.

As the learners are EAL preschoolers, they come from various backgrounds and are still developing and learning different academic skills. Extraneous variables such as disability, sickness, and absenteeism are all aspects that may influence test scores and receiving the intervention. These are variables that may have impacted the study in various ways. Considering these nuances, these variables may have affected the treatment groups' results in the study. The study could not navigate these extraneous variables; perhaps there may be more avenues to navigate the variables in a longitudinal study.

5.4. Advantages of the study

One of the main advantages of the study is that it attempts to tackle a gap in the literature. This study attempted to quantify the effects of YouTube videos rather than exploring perceptions of the impact of YouTube videos. In doing so, the study also tackles the gap in the literature on the impact of YouTube videos as a teaching tool for EAL preschoolers in South Africa. Although unable to achieve the goal, this study begins to explore avenues for more in-depth exploration. Similarly, another advantage of the study is that it retrieves data from the learners through Brigance III, instead of parents' and teachers' perceptions. In doing so, this allowed for themes and aspects of better exploration to be revealed.

The study utilised a Solomon- four square design that allowed the children to learn the language aspects through the test rather than the intervention to be ruled out. This allowed for control of threats to internal validity, such as selection, maturation and instrumentation. Using quantitative data allows for numerical statistics and results that

are generalisable and comparable if implemented correctly. The study utilised the Brigance III, a reliable psychometric instrument used by teachers, psychologists, psychometrists and early developmental practitioners. This study contributed to establishing the reliable use of the Brigance III in future studies with similar sample sizes and sociocultural contexts.

This study contributed to the growing research on the impact of YouTube videos as a teaching aid for EAL learners and learning development for younger children. The study allowed for exploring future studies and the practical use of YouTube videos in language development. The study also explores research on younger EAL learners in the South African context, in which research on this aspect is limited.

5.5. Recommendations

The subsection explores the recommendations for future research on learning and YouTube and language development and technology. The section also provides recommendations for practising in the classroom for EAL preschoolers and teaching using YouTube to support language development.

5.5.1. Recommendations for future research

Whilst various online resources have been explored under the circumstances of COVID-19, blended learning in the post-COVID-19 era and Web 2.0 era with YouTube videos requires further exploration. Whilst there are multiple YouTube videos geared to younger children in the preschool age range for education purposes, the impact of these videos is under-explored (Neumann & Herodotou, 2020; Shoufan, 2019). Whilst studies like Neumann and Herodotou (2020) present avenues for teachers to use to evaluate the appropriateness of YouTube videos, future studies may benefit from exploring the long-term impact of using not only YouTube videos as a teaching aid but other technological advances such as ChatGPT, Chromebook and even video games in the classroom. Longitudinal studies may be a way to access and evaluate the long-term effects of YouTube as a teaching aid for language learning and development. Similarly, YouTube's learning benefits and shortcomings as a teaching aid for language development must be explored.

Neumann and Herodotou (2020) created a format to evaluate educational YouTube videos that can be utilised in the classroom. Future research is needed to refine the evaluation tools of YouTube videos as a teaching aid for young learners, and this may

also benefit broader educational spheres and ages. Another recommendation for future research is exploring the practical implementation of YouTube videos in various schools and contexts.

The Brigance III was an adequate measurement tool for the study. However, this particular screening tool has not been standardised specifically for South African learners. Recommendation for future research may be in developing a screening tool specifically for preschool EAL learners in South Africa. The development of such a tool may also be beneficial in practical usage of monitoring language development throughout the academic year.

Studies focused on the experiences of young learners developing English as a Second Language may be pertinent for future research. Research exists on the perceptions of parents and teachers on utilising YouTube videos. The learner experience of YouTube videos and language is still growing. Future research would significantly add to the individual use of young South African learners from various socioeconomic and cultural backgrounds.

5.5.2. Recommendations for practice

The study's results did not provide quantifiable evidence of the usefulness of YouTube as a teaching aid for language development in EAL preschoolers. It offered some tangible literature on best implementing YouTube videos in the classroom. The results also provided insight into ways to motivate EAL preschoolers to learn English. It is recommended for the teacher to utilise YouTube videos to motivate learners when teaching language concepts that might be difficult for EAL preschoolers to grasp, such as differentiating between "d" and "b". Additionally, it is recommended that teachers utilise a rubric similar to Neumann and Herodotou's (2020) to select YouTube videos most appropriate for the concepts they plan to teach.

Secondly, whilst not considered in the research process, preschool learners requesting guardians or family members to watch videos outside the school setting may be a great learning opportunity. It is recommended that teachers share YouTube videos played in class and similar YouTube videos to the ones played in the classroom with parents. In this way, parents can foster home language development by speaking

to the child and also aid in developing English through YouTube videos and other English development tactics such as reading English bedtime stories.

5.6. Conclusion

There are various factors to consider in the closing of the research conducted. The study explored YouTube videos as a teaching aid in the classroom and the practical implications for EAL preschoolers. The interpretation of the quantitative findings was discussed statistically, and the qualitative findings were explored. The limitations and advantages of the study were discussed, and the recommendations for future research and recommendation for practice were discussed. In conclusion, studying the relationship between YouTube videos and EAL preschoolers' language development is only at the forefront of more research to come.

References

AlDahdouh, A., Osorio, A. & Caires, S. (2015). Understanding knowledge network, learning and connectivism. *International Journal of Instructional Technology and Distance Learning*, *12*(10), 3-21. https://doi.org/10.5281/zenodo.46186

Alhumsi, M. H. (2020). The influence of phonemic awareness instruction on EFL emergent readers word recognition. *Language Literacy: Journal of Linguistics, Literature, and Language Teaching*, *4*(1), 1-14. DOI: 10.30743/ll.v4i1.1938

Alkathiri, L. A. (2019). Original paper students' perspectives towards using YouTube in improving EFL learners' motivation to speak. *Journal of Education and Culture Studies*, *3*(1), 12-30. DOI: 10.22158/jecs.v3n1p12

Al-Shehri, S. (2011). Connectivism: A new pathway for theorising and promoting mobile language learning. *International Journal of Innovation and Leadership on the Teaching of Humanities*, *1*(2), 10-31. DOI: 10.22158/jecs.v3n1p12

American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). American Psychiatric Association https://doi.org/10.1176/appi.books.9780890425596

Andanda, P. (2005). Module two: Informed consent. *Developing World Bioethics*, *5*(1), 14-29. https://doi.org/10.1111/j.1471-8847.2005.00100.x

Andujar, A. (2016). Benefits of mobile instant messaging to develop ESL writing. *System*, *62*, 63-76. http://dx.doi.org/10.1016/j.system.2016.07.004

Anthony, J. L., Solari, E. J., Williams, J. M., Schoger, K. D., Zhang, Z., Branum-Martin, L. & Francis, D. J. (2009). Development of bilingual phonological awareness in Spanish-speaking English language learners: The roles of vocabulary, letter knowledge, and prior phonological awareness. *Scientific Studies of Reading*, *13*(6), 535-564. https://doi.org/10.1080/10888430903034770

Apuke, O. D. (2017). Quantitative research methods: A synopsis approach. *Kuwait Chapter of Arabian Journal of Business and Management Review*, *63*(11), 40-47. DOI: 10.12816/0040336

Arif, M., Triyono, S. & Sahayu, W. (2020). Pinkfong stories in extending utterances to young Indonesian EFL learners: A case study. *Applied Linguistics Research Journal*, *4*(2), 15-24. Doi: 10.14744/alrj.2020.29981

Arifin, S. R. M. (2018). Ethical considerations in qualitative study. *International journal of care scholars*, *1*(2), 30-33. https://doi.org/10.31436/ijcs.v1i2.82

Bohecker, L., & Doughty Horn, E. A. (2016). Increasing students' empathy and counseling self-efficacy through a mindfulness experiential small group. *The Journal for Specialists in Group Work*, *41*(4), 312-333.

Bogue, E. L., DeThorne, L. S. & Schaefer, B. A. (2014). A psychometric analysis of childhood vocabulary tests. *Contemporary Issues in Communication Science and Disorders*, *41*(Spring), 55-69. https://doi.org/10.1044/cicsd_41_S_55

Breslyn, W. & Green, A. E. (2022). Learning science with YouTube videos and the impacts of Covid-19. Disciplinary and interdisciplinary science education research, 4(13), 1-20. https://doi.org/10.1186/s43031-022-00051-4

Brigance, A. H. & French, B. F. (2013). *Brigance Inventory of Early Development III. Technical Manual.* Curriculum Associates.

Cacciattolo, M. (2015). Ethical considerations in research. In M. Vicars, S. R. Steinberg, T. McKenna and M. Cacciattolo (Eds.), *The praxis of English language teaching and learning (PELT): Beyond the binaries: Researching critically in EFL classrooms* (pp. 55-73). Brill Sense.

Cain, K., Compton, D. L. & Parrila, R. K. (Eds.). (2017). *Theories of reading development* (Vol. 15). John Benjamins Publishing Company.

Cardis, A. & Fastame, M. C. (2023). Phonemic awareness of schoolers test assessment (PASTA): A pseudoword blending task for Italian pupils. *Psychology in the Schools*, *60*, 2744-2761. https://doi-org.uplib.idm.oclc.org/10.1002/pits.22891

Chanifa, A. M., Redjeki, E. S. & Dayati, U. (2020, December). *Benefits of teaching foreign language for early childhood*. In 6th International Conference on Education and Technology (ICET 2020) (pp. 112-115). Atlantis Press.

Chen, S. Y. & Chien, W. C. (2022). Immersive virtual reality serious games with DL-assisted learning in high-rise fire evacuation on fire safety training and research. *Frontiers in psychology*, *13*, 786314. https://doi.org/10.3389/fpsyg.2022.786314

Chtouki, Y., Harroud, H., Khalidi, M. & Bennani, S. (2012). The impact of YouTube videos on the student's learning. *2012 international conference on information technology based higher education and training (ITHET)* (pp. 1-4). IEEE. doi: 10.1109/ITHET.2012.6246045

Cockcraft, K. (2002). Language Development. In J. Watts, K. Cockcraft & N. Duncan, (Eds.) *Developmental Psychology* (2nd ed., pp. 378-395). UCT Press

Cohen, L., Manion, L., & Morrison, K. (2017). Observation. In *Research methods in education* (pp. 542-562). Routledge.

Curriculum Associates. (2021). *Brigance early childhood*. https://www.curriculumassociates.com/products/brigance/early-childhood.

Datskiv, S. (2020) Using online video in class: How to use YouTube channels in ESL class. *Актуальні проблеми сучасної іноземної філології: Студентський науковий вісник. Рівне: РДГУ. 2020. 98 с. Редакційна колегія: Ніколайчук ГІ, кандидат педагогічних наук, доцент, декан факультету іноземної філології, РДГУ.*, 55. https://d1wqtxts1xzle7.cloudfront.net/63122440/Aktualni_problemy_suchasnoi_inozemnoi_filolohii_202020200428-7545-cdgn15-libre.pdf?1588691399=&response-content-disposition=inline%3B+filename%3D63122440.pdf&Expires=1696488981&Signature=G8BQbWGwZbPTQ5lGTjiUkfsxSTwuYY9nWEiitusk11ATcAGiHJVA3EuRPHdAqtGOboyIT1naF2ysvRZqC1XGaDObvyG9otf2QP05~uZG3d7ecvONNyaVMverkAMiAhux0J7EaPcDcKw0PvU5L6S3xk47YqW~hwR4l~4Ibfnx8ySmDnfkOUNd6c~2N25b2W8IT8ZL7HmhafX3sqn6W1qMCkA2USfu-VnOgXkGrqKXUyuByjqFK2Xsqu83k0w09pk7AmqKwAfE9JnmKCg5z3GtY870lz3Ct9ZGKLHoUQBlJLaGTrBEZyQCPs8V2k6G7X8~nuYj7mm34K1oFuImjGZvtg__&Key-Pair-Id=APKAJLOHF5GGSLRBV4ZA#page=55

Degenhard, J. (2023, Aug 14). *Forecast of the number of YouTube users in the world from 2019 to 2028 (in millions).* Statista. https://www.statista.com/forecasts/1144088/youtube-users-in-the-world

De Houwer, A. (2011). Language input environments and language development in bilingual acquisition. *Applied Linguistics Review, 2*(2), 221-240.

https://www.researchgate.net/profile/Annick-De-Houwer/publication/284505937_Language_input_environments_and_language_development_in_bilingual_acquisition/links/56fabefd08ae8239f6dad437/Language-input-environments-and-language-development-in-bilingual-acquisition.pdf?_sg%5B0%5D=started_experiment_milestone&origin=journalDetail

De Keyser, R. (2012). Interactions between individual differences, treatments, and structures in SLA. *Language Learning*, *62*, 189-200. https://doi.org/10.1111/j.1467-9922.2012.00712.x

Dickinson, D. K., McCabe, A., Anastasopoulos, L., Peisner-Feinberg, E. S. & Poe, M. D. (2003). The comprehensive language approach to early literacy: The interrelationships among vocabulary, phonological sensitivity, and print knowledge among preschool-aged children. *Journal of Educational Psychology*, *95*(3), 465. https://doi.org/10.1037/0022-0663.95.3.465

Dickinson, D. K., Nesbitt, K. T. & Hofer, K. G. (2019). Effects of language on initial reading: Direct and indirect associations between code and language from preschool to first grade. *Early Childhood Research Quarterly*, 49, 122-137.

DiDomenico, J. (2017). Effective integration of music in the elementary school classroom. *ie: Inquiry in Education*, *9*(2), 4.

Dore, R. A., Shirilla, M., Hopkins, E., Collins, M., Scott, M., Schatz, J., Lawson-Adams, J., Valladares, T., Foster, L., Puttre, H., Spiewak Toub, T., Hadley, E., Golinkoff, R. M., Dickinson, D. & Hirsh-Pasek, K. (2019). Education in the app store: Using a mobile game to support US preschoolers' vocabulary learning. *Journal of Children and Media*, *13*(4), 452-471. https://doi.org/10.1080/17482798.2019.1650788

Duffy, P. (2008). Using YouTube: Strategies for using new media in teaching and learning. In R. Kwan (Eds.), *Enhancing learning through technology: research on emerging technologies and pedagogies* (pp. 31-43). https://doi.org/10.1142/9789812799456_0003

Du Plessis, S. & Louw, B. (2008). Challenges to preschool teachers in learner's acquisition of English as language of learning and teaching. *South African journal of education*, *28*(1), 53-76. https://hdl.handle.net/10520/EJC32153

Education Policy Unit. (2013, February 7). *The status of the language of learning and teaching in South African Public Schools*. Planning, monitoring & evaluation. https://evaluations.dpme.gov.za/evaluations/135

Fasih, P. (2022) The role of vocabulary in task-based language teaching in international and Iranian contexts. *Konin Language Studies, 10*(1), 87-108. doi: 10.30438/ksj.2022.10.1.4

Feldman, H. M. (2019). How young children learn language and speech. *Pediatrics In Review*, 40(8), 398-411. https://doi.org/10.1542/pir.2017-0325

Field, A. (2018). Discovering statistics using IBM SPSS statistics (5th ed). SAGE Publications.

Flannelly, K. J., Flannelly, L. T. & Jankowski, K. R. (2018). Threats to the internal validity of experimental and quasi-experimental research in healthcare. *Journal of Health Care Chaplaincy*, *24*(3), 107-130. https://doi.org/10.1080/08854726.2017.1421019

Fleck, B. K., Beckman, L. M., Sterns, J. L. & Hussey, H. D. (2014). YouTube in the classroom: Helpful tips and student perceptions. *Journal of Effective Teaching*, *14*(3), 21-37.

Foroughi, A. (2015). The theory of connectivism: can it explain and guide learning in the digital age? *Journal of higher education theory and practice*, *15*(5), 11.

Fox, R., Corretjer, O. & Webb, K. (2019). Benefits of foreign language learning and bilingualism: An analysis of published empirical research 2012–2019. *Foreign Language Annals,* 52(4), 699-726. https://doi.org/10.1111/flan.12424

Foxcraft, C. & Roodt, G. (2017). *Introduction to psychological assessment in the South African context* (4th Ed.). Oxford.

Smith, F. (1992). *To think: In language, learning and education*. Routledge.

Galal, S. (2022, July 27). *Number of learners in South Africa 2021, by Province.* Statista. https://www.statista.com/statistics/1322769/number-of-students-in-south-africa-by-province/

Genesee, F. (2015). Myths about early childhood bilingualism. *Canadian Psychology/Psychologie Canadienne*, *56*(1), 6. https://doi.org/10.1037/a0038599

Georgiou, G. K., Parrila, R. & Papadopoulos, T. C. (2008). Predictors of word decoding and reading fluency across languages varying in orthographic consistency. *Journal of Educational Psychology*, *100*(3), 566. https://doi.org/10.1037/0022-0663.100.3.566

Goh, P. S. C., Loy, C. L., Wahab, N. A. & Raja Harun, R. N. S. (2020). Preschool teachers' use of English as a medium of instruction: A systematic review of barriers and strategies. *Issues in Educational Research*, *30*(3), 943-964.

Goldie, J. G. S. (2016). Connectivism: A knowledge learning theory for the digital age? *Medical Teacher*, *38*(10), 1064-1069. http://dx.doi.org/10.3109/0142159X.2016.1173661

Hakim, L. N. (2019). The implementation of YouTube in teaching vocabulary for young learners. *Journal of Advanced English Studies*, *2*(1), 13-18. DOI: http://dx.doi.org/10.47354/jaes.v2i1.50

Hartshorne, J. K., Tenenbaum, J. B. & Pinker, S. (2018). A critical period for second language acquisition: Evidence from 2/3 million English speakers. *Cognition*, *177*, 263–277. https://doi.org/10.1016/j.cognition.2018.04.007

Heift, T. & Chapelle, C. C. (2012). Language learning through technology. In Lantolf, J. P., Poehner, M. E. & Swain, M. (Eds.)., *The Routledge handbook of Second Language Acquisition*. Taylor & Francis Group.

Heugh, K. (2013). Multilingual education policy in South Africa constrained by theoretical and historical disconnections. *Annual Review of Applied Linguistics*, *33*, 215-237. doi:10.1017/S0267190513000135

ISASA (2020). *Adjusted level 3 lockdown and reopening of independent schools*. https://www.isasa.org/adjusted-level-3-lockdown-and-reopening-of-independent-schools/

Jack Haartman Kids Music Channel. (2010). *Jack Haartman Kids Music Channel.* YouTube. Retrieved November 24, 2023 from https://www.youtube.com/channel/UCVcQH8A634mauPrGbWs7QlQ

Jasim, Y. (2021). Benefits of learning a second language. *Available at SSRN 3895362*. http://dx.doi.org/10.2139/ssrn.3895362

Jasińska, K. K., Shuai, L., Lau, A. N., Frost, S., Landi, N. & Pugh, K. R. (2021). Functional connectivity in the developing language network in 4-year-old children predicts future reading ability. *Developmental science*, *24*(2), e13041. https://doi-org.uplib.idm.oclc.org/10.1111/desc.13041

Katemba, C. V. (2021). The art of enhancing vocabulary through technology. *Journal of English Language Teaching and Applied Linguistics (SMART)*, 35-45. DOI: 10.52657/js.v7i1.1340

Khan, A. (2015). Using films in the ESL classroom to improve communication skills of non-native learners. *ELT Voices*, *5*(4), 46-52.

Koksal, I. (2020). The rise of online learning. *Forbes*. https://images.bizbuysell.com/shared/listings/179/1799854/2b054e56-d93d-42d2-9aa8-24d1c6d38ab9.pdf

Kretzer, M. M. (2019, September 8). *South African teachers switch languages in class: why policy should follow*. The Conversation. https://theconversation.com/south-african-teachers-switch-languages-in-class-why-policy-should-follow-122087#:~:text=According%20to%20the%20country's%20official,as%20a%20medium%20of%20instruction

Krishnan, P. D. & Yunus, M. M. (2018). Animated cartoons to develop listening skill and vocabulary. *International Journal of Engineering & Technology*, *7*(4.21), 20-25.

Laher, S., & Botha, A. (2012). Methods of sampling. In W.B. Kawulich, & M. Garner, (Eds.) *Doing social research: a global context.* Berkshire: McGraw-Hill Higher Education.

Landrum, B., & Garza, G. (2015). Mending fences: Defining the domains and approaches of quantitative and qualitative research. *Qualitative psychology*, *2*(2), 199.

Laubscher, E., & Light, J. (2020). Core vocabulary lists for young children and considerations for early language development: A narrative review. *Augmentative and Alternative Communication*, *36*(1), 43-53.

Lee, J. H., Kim, T. & Park, H. (2020). Smart study's strategy in the kids content industry: VRIO framework. *The Journal of Economics, Marketing and Management*, *8*(3), 1-8. https://doi.org/10.20482/JEMM.2020.8.3.1

Marrus, N. & Hall, L. (2017). Intellectual disability and language disorder. *Child and Adolescent Psychiatric Clinics*, *26*(3), 539-554. https://doi.org/10.1016/j.chc.2017.03.001

Marsden, E. & Torgerson, C. J. (2012). Single group, pre-and post-test research designs: Some methodological concerns. *Oxford Review of Education*, *38*(5), 583-616. https://doi.org/10.1080/03054985.2012.731208

Mohsen, M. A. (2016). The use of computer-based simulation to aid comprehension and incidental vocabulary learning. *Journal of Educational Computing Research*, *54*(6), 863-884. https://doi.org/10.1177%2F0735633116639954

Muslem, A. Fata, I. A. & Saputri, W. I. (2022). The effect of English authentic Youtube videos on students' speaking skills in rural school. *Journal of Education Technology*, *6*(3), 423-430. https://doi.org/10.23887/jet.v6i3.45412

Myburgh, O., Poggenpoel, M. & Van Rensburg, W. (2004). Learners' experience of teaching and learning in a second or third language. *Education*, *124*(3).

Nasution, A. K. R. (2019). YouTube as a media in English language teaching (ELT) context: Teaching procedure text. *Utamax: Journal of Ultimate Research and Trends in Education*, *1*(1), 29-33. https://doi.org/10.31849/utamax.v1i1.2788

Neumann, M. M. & Herodotou, C. (2020a). Evaluating YouTube videos for young children. *Education and Information Technologies*, *25*, 4459-4475. https://doi-org.uplib.idm.oclc.org/10.1007/s10639-020-10183-7

Neumann, M. M. & Herodotou, C. (2020b). Young children and YouTube: A global phenomenon. *Childhood Education*, *96*(4), 72-77. https://doi-org.uplib.idm.oclc.org/10.1080/00094056.2020.1796459

Nutta, J. (1998). Is computer-based grammar instruction as effective as teacher-directed grammar instruction for teaching L2 structures? *CALICO journal*, 49-62. https://www.jstor.org/stable/24147822

Owen-Smith, M. (2010). The language challenge in the classroom: A serious shift in thinking and action is needed. *Focus*, *56*(7).

Palomo Blázquez, A. (2018). The benefits of learning English as a second language. *Publicaciones Didácticas*. https://core.ac.uk/download/pdf/235850879.pdf

Parish-Morris, J., Mahajan, N., Hirsh-Pasek, K., Golinkoff, R. M. & Collins, M. F. (2013). Once upon a time: parent–child dialogue and storybook reading in the electronic era. *Mind, Brain, and Education*, *7*(3), 200-211. https://doi.org/10.1111/mbe.12028

Park, Y. S., Konge, L. & Artino, A. R. (2020). The positivism paradigm of research. *Academic Medicine*, *95*(5), 690-694. DOI: 10.1097/ACM.0000000000003093

Phakiti, A. (2015). Quantitative research and analysis. In B. Paltridge, A. Phakiti (Eds.) *Research methods in applied linguistics: A practical resource*. (pp.27-48). Bloomsbury Publishing.

Pinkfong Baby Shark - Kids' Songs & Stories. (2011). *Pinkfong Baby Shark - Kids' Songs & Stories.* YouTube. Retrieved November 24, 2023 from https://www.youtube.com/channel/UCcdwLMPsaU2ezNSJU1nFoBQ

Pratama, S. H. H., Arifin, R. A. & Widianingsih, A. W. S. (2020). The use of YouTube as a learning tool in teaching listening skill. *International Journal of Global Operations Research*, *1*(3), 123-129. DOI: 10.47194/ijgor.v1i3.50

Rahi, S. (2017). Research design and methods: A systematic review of research paradigms, sampling issues and instruments development. *International Journal of Economics & Management Sciences*, *6*(2), 1-5. DOI: 10.4172/2162-6359.100040

Ramezanali, N. & Faez, F. (2019). Vocabulary learning and retention through multimedia glossing. *Language Learning & Technology*, *23*(2), 105-124. https://doi.org/10125/44685

Rashid, Z.A, Kadiman, S., Zulkifli, Z., Selamat, J. & Hashim, M. H. M. (2016). Review of web-based learning in TVET: History, advantages and disadvantages. *International Journal of Vocational Education and Training Research*. 2(2), 7-17. DOI: 10.11648/j.ijvetr.20160202.11

Republic of South Africa. (2013). *Protection of personal information act (No. 4 of 2013)*. Sout African Government. https://www.gov.za/documents/protection-personal-information-act.

Riswandi, D. (2016). *Use of YouTube-based videos to improve students' speaking skill*. In Proceeding of the international conference on teacher training and education*, 2*(1), 298-306.

Rosselli, M. & Ardila, A. (2018). Neuropsychology of bilingualism. In J. Lantolf, M. Poehner, M. Swain (Eds), *The Routledge Handbook of Sociocultural Theory and Second Language Development* (pp. 119-135). Routledge.

SAnews.gov. (2023, July 20). *Sign language officially the 12th official language.* SA News.gova.za. https://www.sanews.gov.za/south-africa/sign-language-officially-12th-official-language#:~:text=By%20making%20sign%20language%20the,and%20social%20inclusion%20are%20recognised.

Sari, S., Anjani, R., Farida, I., & Ramdhani, M. A. (2017, September). Using android-based educational game for learning colloid material. In *Journal of Physics: Conference Series* (Vol. 895, No. 1, p. 012012). IOP Publishing.

Sarkar, K., Dasgupta, A., Sinha, M. & Shahbabu, B. (2017). Effects of health empowerment intervention on resilience of adolescents in a tribal area: A study

using the Solomon four-groups design. *Social Science & Medicine*, *190*, 265-274. https://doi.org/10.1016/j.socscimed.2017.05.044

Sefotho, M. M. (2015). A researcher's dilemma: Philosophy in crafting dissertations and theses. *Journal of Social Sciences*, 42(1-2), 23-36.

Shoufan, A. (2019). Estimating the cognitive value of YouTube's educational videos: A learning analytics approach. *Computers in Human Behavior*, *92*, 450-458. https://doi.org/10.1016/j.chb.2018.03.036

Siemens, G. (2004). *Connectivism: A learning theory for the digital age*.*Elearnspace.org* Elearnspace. https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=f87c61b964e32786e06c969fd24f5a7d9426f3b4

Silver, R. E., Alsagoff, L., & Goh, C. C. (Eds.). (2009). Language learning in new English contexts: Studies of acquisition and development. Bloomsbury Publishing.

Smidt, H., Thornton, M. & Abhari, K. (2017, January). *The future of social learning: A novel approach to connectivism.* In Proceedings of the 50th Hawaii International Conference on System Sciences. http://hdl.handle.net/10125/41410

South African Government Department of Basic Education. (1997). *Language in EducationPolicy.* *https://www.gov.za/sites/default/files/gcis_document/201409/languageeducationpolicy19971.pdf*

South African Government Department of Basic Education. (2021). *Admission of learners to public schools.* Basic Education. https://www.education.gov.za/Informationfor/ParentsandGuardians/SchoolAdmissions.aspx.

Statista Research Development. (2022, November 23). *Number of students learning the English language by country 2021.* Statista. https://www.statista.com/statistics/474379/english-language-students-per-country/.

Statista Research Department. (2023a, Sep 5). *Most viewed YouTube channels worldwide in August 2023, by monthly views (in billions).* Statista. https://www.statista.com/statistics/373729/most-viewed-youtube-channels/.

Statista Research Department. (2023b, June 16). *The most spoken languages worldwide 2023*. Statista. https://www.statista.com/statistics/266808/the-most-spoken-languages-worldwide/#:~:text=In%202022%2C%20there%20were%20around,at%20the%20time%20of%20survey.

Statista Research Department. (2023c, January 24). *Revenue of English Language learning market worldwide 2013-2021.* Statista. https://www.statista.com/statistics/650117/english-language-learning-revenue-worldwide/.

Statista Research Department. (2023d, April 26). *Distribution of languages spoken by individuals inside and outside of households in South Africa 2018.* Statista. https://www.statista.com/statistics/1114302/distribution-of-languages-spoken-inside-and-outside-of-households-in-south-africa/

Stockemer, D. (2019). *Quantitative methods for the social sciences*. Springer International Publishing. https://doi.org/10.1007/978-3-319-99118-4.

Tan, S. (2019). The rise of immersive learning. *Journal of Applied Learning and Teaching*, *2*(2), 91-94. DOI: https://doi.org/10.37074/jalt.2019.2.2.12

The World Bank, (2021). *Remote learning during COVID-19: Lessons from today, principles for tomorrow. https://www.worldbank.org/en/topic/edutech/brief/how-countries-are-using-edtech-to-support-remote-learning-during-the-covid-19-pandemic.*

Utecht, J. & Keller, D. (2019). Becoming relevant again: Applying connectivism learning theory to today's classrooms. *Critical Questions in Education*, 10(2), 107-119.

van der Berg, S. (2020, July 16). *COVID-19 school closures in SA and their impact on children*. eNCA. https://www.enca.com/analysis/covid-19-school-closures-sa-and-their-impact-children

Visser-Bochane, M. I., Reijneveld, S. A., Krijnen, W. P., Van der Schans, C. P. & Luinge, M. R. (2020). Identifying milestones in language development for young children ages 1 to 6 years. *Academic Pediatrics*, *20*(3), 421-429. https://doi.org/10.1016/j.acap.2019.07.003

Weiten, W. (Eds.). (2014). Language and cognition in psychological. In themes and variations (pp.307- 337). Cengage Learning.

Wildsmith-Cromarty, R. & Balfour, R. J. (2019). Language learning and teaching in South African primary schools. *Language Teaching*, *52*(3), 296-317. doi:10.1017/S0261444819000181

Yee, L. S. & Hu, T. K. (2022). Implementation of YouTube in teaching writing: perception of Malaysian Primary School English teachers. *International Journal of Advanced Research in Education and Society*, *4*(1), 23-29. https://doi.org/10.55057/ijares.2022.4.1.4

Zosh, J. M., Lytle, S. R., Golinkoff, R. M. & Hirsh-Pasek, K. (2017). Putting the education back in educational apps: How content and context interact to promote learning. In R. Barr & D. N. Linebarger (Eds.), *Media exposure during infancy and early childhood* (pp. 259-282). Springer, Cham. https://doi.org/10.1007/978-3-319-45102-2_17

Zulkiply, N., & Aziz, A. A. (2019). The effects of digital game-based learning on early English literacy task for non-native speakers. *Asia-Pacific Journal of Research in Early Childhood Education*, *13*(2), 123-140.

Criteria	Sub-criteria (Evaluation Questions)	0 No	1 Partial evidence	2 Yes
Age appropriateness	1. Can the child imitate the content presented (e.g. repeat a song, make body movements or gestures)?			
	2. Does the content share similarities with the child (e.g., age, gender, interests)?			
	3. Is the behaviour on-screen positive (e.g., ethical, fair, caring, moral, non-violent, non-scary, healthy)?			
	4. Does the on-screen behaviour receive appropriate reinforcement (e.g., positive behaviour is praised or encouraged, and negative behaviour is discouraged)?			
Content quality	5. Are social relationships accurately represented (e.g., gender and cultural stereotypes, power relationships)?			
	6. Does the video encourage children to perform creative tasks, solve problems or provide alternative ideas or ways of doing things?			
	7. Does the video encourage children to repeat content?			
	8. Are the images, audio, sounds and language used appropriately for children (i.e. the child can understand the content)?			
	9. Is each scene clear, logical, and easy to follow?			
Design features	10. Is some content repeated during the video (e.g., to reinforce learning in positive ways)?			
	11. Is there low and gradual pace with infrequent scene and character changes?			
	12. Are pictures/graphics/animations presented alongside words/narration?			
	13. Is conversational style used in wording (oral and written)?			
	14. Are learning elements highlighted in the video?			
Learning objectives	15. Does the video support cognitive development (e.g., language, literacy, math, science knowledge)?			
	16. Does the video support physical development (e.g., gross and fine motor skills)?			
	17. Does the video support socio-emotional development (e.g., fosters positive relationships, communication skills, moral attitudes, resilience, self-regulation, self-confidence)?			
Total Score				
Quality Rating	0 to < 17: *Not Recommended*; 17 to 34: *Recommended*			

"Encourage" (e.g., to directly ask a child to repeat or do something)

Appendix B

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

STUDY TITLE: The effectiveness of YouTube as a teaching aid for phonemic awareness and vocabulary in English second language pre-schoolers

Principal Investigator: Mbali Ndzimbomvu

Supervisor: Prof. Funke Omidire

Institution: University of Pretoria

DAYTIME AND AFTERHOURS TELEPHONE NUMBER(S):

Daytime number/s: 084 691 3337

Afterhours number: 084 691 3337

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

				:
date	**month**	**year**		**Time**

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Dear Sir/Madam

My name is Mbali Ndzimbomvu, and I am Third Year Masters student conducting a study on how educational YouTube videos can be used to improve language development. My supervisor is Prof. Funke Omidire.

I hereby wish to apply for permission to conduct research in Gauteng (School A) in Gauteng. My research project will involve Grade R learners. My research topic is:" The effectiveness of YouTube as a teaching aid for phonemic awareness and vocabulary in English second language pre-schoolers.". The aim of this study is to understand how YouTube videos can be used as a teaching aid to improve language development. The children at your school are an important part of the study as they can help to understand how educational, fun and interactive YouTube videos can be used to develop phonic identification and vocabulary in children.

This study will be asking the learners a few questions about phonics and vocabulary. Then the learners will get to watch fun, interactive and educational YouTube videos. Lastly, we will ask the learners a few questions about phonics and vocabulary to see if the YouTube videos had any effect on their language. I would like to conduct this process over a month. During this period, I would also like to spend about 15 minutes over 22 days with each learner to see if these fun, educational YouTube videos have an effect on the language of the Grade R learners. All equipment required for this research will be provided and utilised by the researcher. In line with your school regulations and government, Covid protocol will also be implemented.

Before commencing with any data collection exercise, I will first come to the school and explain the research and what each of the participant's role will be. I will explain how I will go about the research and how the research process will be done. Any information obtained from the learners will be treated with the strictest confidentiality

and will be used solely for research purposes only. I would like to request the children's parent/guardians for permission for the children to participant in the study, as well as send consent forms. Furthermore, any information obtained from the learners will be treated with the strictest confidentiality. In addition to this, I would also like to request the parents or guardians' permission to use their data, confidentially and anonymously, for further research purposes, as the data sets are the intellectual property of the University of Pretoria and, where relevant, project funders. 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.

It is my presumption that the research findings will make a creditable contribution towards identifying the effect of education and interactive YouTube videos on phonemic awareness and vocabulary in preschool learners.

Yours sincerely,

Mbali Ndzimbomvu

Appendix C

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

STUDY TITLE: The effectiveness of YouTube as a teaching aid for phonemic awareness and vocabulary in English second language pre-schoolers

Principal Investigator: Mbali Ndzimbomvu

Supervisor: Prof. Funke Omidire

Institution: University of Pretoria

DAYTIME AND AFTERHOURS TELEPHONE NUMBER(S):

Daytime number/s: 084 691 3337

Afterhours number: 084 691 3337

DATE AND TIME OF FIRST INFORMED CONSENT DISCUSSION:

date	**month**	**year**

:
Time

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Dear Parent or Legal Guardian

Dear Mr. /Mrs. ……...

1) INTRODUCTION

My name is Mbali Ndzimbomvu, and I am Third Year Masters student conducting a study on how educational YouTube videos can be used to improve language development. My supervisor is Prof. Funke Omidire. The study is titled: The effectiveness of YouTube as a teaching aid for phonemic awareness and vocabulary in English second language pre-schoolers. I invite your child to participate in a research study. This information document will help you to decide if your child may want to participate. Before you agree that your child may take part, you should fully understand what is involved. Please do not hesitate to ask the researcher if you have any questions that this document does not fully explain.

2) THE NATURE AND PURPOSE OF THIS STUDY

The aim of this study is to understand how YouTube videos can be used to improve language development. Your child is an important part of the study as they can help to understand how educational, fun and interactive YouTube videos can be used to develop phonic identification and vocabulary in children.

3) EXPLANATION OF PROCEDURES AND WHAT WILL BE EXPECTED FROM PARTICIPANTS.

I will ask your child a few questions about phonics and vocabulary. After this, your child will get to watch fun, interactive and educational YouTube videos after school hours at the school. Lastly, we will ask your child a few questions about phonics and vocabulary to see if the YouTube videos had any effect on them learning new words to support their language acquisition.

4) POSSIBLE RISK INVOLVED

There are no known possible risks to the study. It is a safe space for your child to participate in as it will be at school and their class teacher will be there too. The duration of this study will be around 15 minutes per day over 22 days.

5) COVID-19 PROTOCOL

Strict COVID-19 Protocol will be adhered to and aligned to the school protocol as well as strict government protocol through the duration of the study. Both your child and the researcher will be expected to wear a mask or shield through the duration of the study and social distancing will be maintained. Sanitiser will be provided and utilised before and through the duration of the YouTube video viewing and if your child is asked questions about the YouTube videos. The researcher and child's participation may be rescheduled if COVID-19 symptoms are exhibited.

6) POSSIBLE BENEFITS OF THIS STUDY

Your child will benefit from the study because your child will get to watch some fun, interactive and educational YouTube video's, in the hopes that it may improve their vocabulary and phonic awareness. The results of the study will be used to understand how these educational and interactive YouTube videos can help with language development of phonemics and vocabulary in future.

7) YOUR CHILD'S RIGHTS AS A PARTICIPANT?

Your child's participation in this study is entirely voluntary. Your child can refuse to participate or stop at any time during the study without giving any reason. Your child's anonymity and confidentiality will be protected throughout the research as they will be given pseudo names and any data from them will be stored in a password protected document.

8) ETHICS APPROVAL

This Protocol was submitted to the Faculty of Health Sciences Research Ethics Committee, University of Pretoria, Medical Campus, Tswelopele Building, Level 4-59, Telephone numbers 012 356 3084 / 012 356 3085 and written approval has been granted by that committee. The study has been structured in accordance with the Declaration of Helsinki (last update: October 2013), which deals with the recommendations guiding doctors in biomedical research involving humans. A copy of the Declaration may be obtained from the investigator should you wish to review it.

9) INFORMATION AND CONTACT PERSON

The contact person for the study is Mbali Ndzimbomvu. If you or your child have any questions about the study, please contact her at the following telephone numbers 084 691 3337. Alternatively, you may contact my supervisor at email address funke.omidire@up.ac.za.

10) COMPENSATION

There are no costs involved for your child to be part of the study and your child will not be paid to participate in the study.

11) CONFIDENTIALITY

All information about your child will be kept strictly confidential. Once we have analysed the information no one will be able to identify your child. Research reports and articles in scientific journals will not include any information that may identify your child. I would also like to ask your permission to use your child's data, confidentiality and anonymously, for further research purposes, as the data sets are the intellectual property of the University of Pretoria and, where relevant, project funders. 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.

12) CONSENT TO PARTICIPATE IN THIS STUDY

- I confirm that the person requesting my consent for my child to take part in this study has told me about the nature and process, any risks or discomforts, and the benefits of the study.
- I have also received, read and understood the above written information about the study.
- I have had adequate time to ask questions and I have no objections for my child to participate in this study.
- I am aware that the information obtained in the study, including personal details, will be anonymously processed and presented in the reporting of results.

- I understand that my child will not be penalised in any way should my child wish to discontinue with the study.
- My child is participating willingly.
- I have received a signed copy of this informed consent agreement.

Parent/Legal Guardian's name (Please print)	Date
Parent/Legal Guardian's signature	Date
Researcher's name (Please print)	Date
Researcher's signature	Date

AFFIRMATION OF INFORMED CONSENT BY A DIFFERENTLY LITERATE PARTICIPANT

I, the undersigned, ……..…, have read and have explained fully to the participant, named …… , the participant informed consent document, which describes the nature and purpose of the study in which I have asked the child's parent/legal guardian to participate. The explanation I have given has mentioned both the possible risks and benefits of the study. The participant indicated that he/she understands that he/she will be free to withdraw from the study at any time for any reason and without jeopardising the child's standard care.

I hereby certify that the participant has agreed to participate in this study.

_____	_____
Parent/Legal Guardian's name (Please print)	Date
_____	_____
Parent/Legal Guardian's signature	Date
_____	_____
Investigator's Name (Please print)	Date
_____	_____
Investigator's Signature	Date
_____	_____
Name of the person who witnessed the informed consent (Please print)	Date
_____	_____
Signature of the Witness	Date

Appendix D

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Study title: The effectiveness of YouTube as a teaching aid for phonemic awareness and vocabulary in English second language pre-schoolers

Principal Investigator: Mbali Ndzimbomvu

Supervisor: Prof. Funke Omidire

Institution: University of Pretoria

Daytime telephone number/s: 084 691 3337

Date and time of informed consent discussion:

date	**month**	**year**

:
Time

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Dear Learners,

This letter comes after I have met and explained the study to you so you can understand what it is about. Here I will explain it to you again.

My name is Mbali Ndzimbomvu, and I am Third Year Masters student conducting a study on how educational YouTube videos can help you learn words better. My supervisor is Prof. Funke Omidire. I would like to ask if you want to join in the study about words and letter sounds.

1) PURPOSE OF THE STUDY

A research study is an activity to find out about something we want to learn through science. This is a study to see how videos can be helpful to learn words and letters. If you want to join the study, you will be asked a few questions and get to watch some fun YouTube videos. After you watch the YouTube videos, you will be asked more questions about the video you watched. If you do not want to join the study, you will be allowed to leave, and you will not get into trouble.

2) CONSENT TO PARTICIPATE IN THIS STUDY

Tick for yes ✓ and cross for no ✕

Do you understand this research study, and are you willing to join in it?

Do you understand that you will answer questions and watch some fun videos?

 ○  ○

Has the researcher answered all your questions?

 ○  ○

Do you understand that you can leave at any time should you want you?

 ○  ○

If you tick at the bottom, it will mean that the researcher has explained the study to you, your parent has given consent and that you would like to be in this study.

3) COVID-19 regulations

While you are in the study, you will need to follow all the school and government rules about Covid-19. This means you will need to sanitise your hands, wear a mask and keep some space between you and the researcher while you watch videos and talk to the researcher.

	Your Name	Person Obtaining Consent	Parent / Guardian / Nurse/ Teacher As Witness
Name Please ask teacher to print			
Signature			
Date			