STRENGTHENING GROUP WORK PLAY-BASED PEDAGOGY TO ENHANCE CORE SKILLS IN YOUNG LEARNERS

by

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July 2020

Declaration

I hereby declare that the study on **Strengthening group work play-based pedagogy to enhance core skills in young learners** represents my own work and that all the sources that I have used or quoted have been indicated and acknowledged by means of complete references.

I declare that this is the first time I have submitted this thesis to the Department of Early Childhood Education, Faculty of Education, University of Pretoria, for the degree of Philosophiae Doctor and that I have not previously submitted it for a degree at any other university.

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Dedication

I dedicate this work to my wife Mrs Chibuzor Martin-Ekeh and my children Light Chiziterem Chukwudi, Olive Viyachi Chukwudi, Barachel Zimchi Chukwudi, Elchislon Chidindu Chukwudi and Elzaphan Chijindu Chukwudi. The above mentioned stood by me and gave me all the support I needed to achieve this great task.

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Abstract

The researcher investigated teachers' use of group work play-based pedagogy to enhance core skills in young learners. The reason for this investigation was rooted in the teaching methods used by most Nigerian teachers. Most Nigerian teachers prefer to use the traditional learning approach (TLA); known as teacher-centred learning, in comparison to learner-centred pedagogy. According to the research, the learner-centred approach is a contributing factor to the development and enhancement of the acquisition of core skills among young learners.

The study site identified was the eastern part of Nigeria. Nine participants were purposively sampled, who were responsible for teaching young learners between the ages of five to eight years. The researcher adopted the qualitative approach with an interpretive paradigm when employing a professional development programme through Participatory Action Research (PAR), observational schedule and field notes as tools for data collection.

Findings from the study revealed that teachers do not understand what core skills are and how they should be developed in young learners. It was also found that teachers did not have sound knowledge of curriculum implementation and its impact on the development of core skills. Teachers also lacked the knowledge and understanding of the use of diverse group work play-based pedagogy in the early grade classes

A recommendation was made for teachers to use group work play-based pedagogy to develop core skills among learners. It also recommended the provision of adequate continuous professional development training on group work play-based pedagogies to enhance and strengthen teachers' knowledge and understanding. The study proposes the need for teachers to update their knowledge and understanding of curriculum policies on play-based pedagogy.

Keywords: group work play-based pedagogy, core skills, young learners, professional development programme

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TO WHOM IT MAY CONCERN

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Kind regards

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Acronyms

ECE	Early Childhood Education
B. Ed	Bachelor of Education
ECCDE	Early Childhood Care Development and Education
FGN	Federal Government of Nigeria
Hons	Honours
ICT	Information Communication Technology
MKO	More Knowledgeable Other
NCE	Nigeria Certificate in Education
NERDC	Nigerian Educational Research and Development Council
NPE	National Policy on Education
PAR	Participatory Action Research
TLA	Traditional Learning Approach
UBE	Universal Basic Education
UNESCO	United Nations Education Scientific and Cultural Organization
UNICEF	United Nations International Learner's Emergency Fund
US	United States
ZPD	Zone of Proximal Development
4C's	Communication, Collaboration, Critical thinking, Creativity

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CHAPTER ONE: GENERAL ORIENTATION

Figure 1.1: Outline of Chapter 1

1.1 INTRODUCTION

Teaching and learning during the 20th century were predominantly characterised by teacher-centred pedagogy (Fleer, 2013; Hong, Shaffer & Han, 2017; Montessori & Costelloe, 1972). Teachers provided information to learners, and the learners worked in isolation with a focus in memorisation of facts. Instructions were text book driven, which emphasised the lower level of Blooms' taxonomy, namely knowledge and understanding. There was also much emphasis on the 3Rs: Reading, Writing and Arithmetic (Goswami, 2014; Sawyer Jr, 2018). Learning was passively orientated, and diversity among learners was ignored (Goswami, 2014; Sawyer Jr, 2018). However, a paradigm shift emerged from teacher-centred pedagogy to learner-centred teaching and learning for the 21st century (Henson, 2003; Siraj, 2017). The shift in pedagogical approach to learning was necessary because early childhood learners learn best when they are actively involved in their learning. Learning in the early childhood is characterised by the phenomenon of

developing the whole child. This corroborates with the global aim of early childhood researchers, which is, geared towards the development 21st century skills (communication, collaboration, critical thinking and creativity) (Allen & Williams, 2012; Goodspeed, 2016.

Core skills such as communication, collaboration, critical thinking and creativity are also known as the 4Cs. These are essential skills that enhance the quality of human life and existence, in addition, their relevance are characterised by the holistic development of young learners reaching their full potentials. They are closely linked and integrated into the 21st century skills (Allen & Williams, 2012; Fischer & Zigmond, 2001; Goodspeed, 2016; Siraj, 2017). When these skills are embedded and integrated into learning, then learning becomes interesting and benefits the learners in developing their core skills. Here, there would be no opportunity for teachers to use traditional learning approach (TLA) and bore young learners while teaching and learning are in progress (Bird & Edwards, 2015; Langub & Lokey-Vega 2017; Mahajan, 2017). An appropriate pedagogy and a conducive learning environment must be created if core skills in young learners are to be enhanced. Teachers should also create a conducive atmosphere for teaching and learning for young learners in such a way as to be able to educate them for future life skills (Beazidou & Botsoglou, 2016; Cartney & Rouse, 2006; Devi, Fleer & Li, 2018). The constructivist learning approach advocates that learners construct knowledge themselves; this approach also discourages the use of TLA, which is characterised by teacher-centred learning.

Fleer (2013) advocates for the creation of a conducive learning environment that calls for a constructivist learning approach. It is for this reason that teacher-centred learning is fading fast. Early childhood researchers such as Fleer (2013), Hong et al. (2017), Montessori and Costelloe (1972) advocate the use of play-based pedagogy in teaching young learners. Play-based pedagogy is an instructional procedure in education which integrates the teacher or the facilitator of learning into a joint playful task with the learner, to promote the social, emotional, physical and cognitive development of the learner (Fleer, 2013; Hong et al., 2017; Montessori & Costelloe, 1972). In a simplistic definition, the concept of play-based pedagogy means learning through play; this is why play is simply an act of pleasure and leisure for adults, whereas for young learners play is work,

and, serious work when properly harnessed (Ceglowski, 1997; Gunnarsdottir, 2014; Pyle & Bigelow, 2015). Young learners are not just blank slates on which teachers write (tabula rasa), they are capable of learning through their previous experiences, especially when allowed to learn through play (Apache, 2005; Ceglowski, 1997; Fleer, 2009; Hong et al., 2017; Siraj, 2017).

The application of play-based pedagogy to enhance the core skills of young learners should not be stereotyped in a traditional classroom format, sitting and setting, because play involves both indoor and outdoor activities. Young learners are stimulated when they play outdoors. Play promotes healthy growth and development (Beatson, 2020; Perry, 2019; Weissman & Hendrick, 2013). The more young learners are confined to classroom seats and behind desks, the more they are deprived of developing a sense of freedom, creativity, collaboration as well as new possibilities for adventure (Weissman & Hendrick, 2013). Hence, teachers should utilise every available learning space in the school environment to ensure that the teaching and learning of core skills are not restricted to classrooms alone.

The enhancement of core skills; communication, collaboration, critical thinking and creativity skills or 4Cs in young learners cannot be overemphasised. Rock and Crow (2017) suggest that early development of socio-emotional skills (collaboration, creativity and communication) in young learners boosts their academic performance and improves other aspects of their learning. Furthermore, Rock and Crow (2017) suggest that socio-emotionally skilled learners are more likely to graduate earlier from high school, complete a higher degree and maintain full employment at age 25. Core skills are a prerequisite for the improvement of one's quality of life because they have the potency to make individuals effective and relevant in the society (Allen & Williams, 2012; Fischer & Zigmond, 2001; Goodspeed, 2016; Siraj, 2017).

The use of group work in play-based pedagogy has shown to enhance the competence and effectiveness of young learners with and without disabilities (Hong et al., 2017). According to Weissman and Hendrick (2013), the accomplishments young learners achieve in school is an indicator of the importance of their social skills (collaboration and communication) development. Shi, Mphande, Simcock, Ives, and Bronson (2006),

McClelland and Morrison (2003), Peisner and Feinberg (2001) and Rim-Kaufman, Pianta and Cox (2000) further assert that cognitive skills (creativity and critical thinking skills) are enhanced and developed rapidly when young learners have acquired social skills. Teachers' capabilities in facilitating learning play fundamental role in the acquisition of these skills by learners. There is need to enhance teachers' effectiveness through professional development workshops that builds their capacity to facilitate the acquisition of core skills.

Capacity building incorporates the idea that education and training are the core developmental focus of teachers' capabilities for effectiveness in school (Stosich, 2016; Thoonen, Sleegers, Oort & Peetsma, 2012; Yashkina, Lieberman & Campbell, 2017). It focuses on actions unwavering in helping teachers develop and increase their knowledge, attitudes, aptitude and understanding to enable them to bring about the desired change. Capacity building also refers to the development or enhancement of skills, knowledge, attitudes in individuals and groups of people for whom the training is designed (Stosich, 2016; Thoonen et al., 2012; Yashkina et al., 2017). Strengthening teachers' capacity helps them to become more efficient and productive in discharging their duties. When the quality of knowledge and skills of a teacher is high, the learning outcome expected will be of a high quality. This, therefore, necessitates the strengthening of teachers' capacity in the use of group work play-based pedagogy to enhance core skills.

Critical thinking	Communication	Collaboration	Creativity
analyses different parts of an object and integrates it into a whole	relates thoughts and ideas comprehensively	works effectively in a small group	analyses, elaborates and creates new ideas from an existing one
synthesises complex route and makes connections	coherently communicates	adjust to group dynamics to achieve group goals	open and responsive to new ideas
interprets a story line and draws conclusion	uses communication for variety of purposes	takes responsibility for any assigned work in the group	displays originality and inventiveness of ideas
reflects critically and asks significant questions	chooses appropriate words in communicating ideas	respects group members contributions	considers the act of dancing, drawing, moulding as creative adventures

(Adapted from https://za.pinterest.com)

Figure 1.2: Focus of Twenty-First Century Pedagogy

1.2 RATIONALE

For more than two decades, the researcher served as a pre-school teacher, lecturer, supervisor of teaching practice students and a United Nations International Learners' Emergency Fund (UNICEF) facilitator for in-service teacher training programmes and interventions. During that time, the researcher observed that most pre-primary and primary teachers did not use group work play-based pedagogy when teaching young learners. Ogunyemi and Ragpot (2015) affirmed the researcher's observation as they noted that some Nigerian educators with a narrow understanding of play do not integrate

play into young learners' education. Meanwhile, Fleer (2013), Hong et al. (2017), Montessori and Costelloe (1972) strongly advocate the use of play in teaching young learners.

Anecdotal evidence shows that most Nigerian teachers prefer the use of teacher-centred learning to learner-centred pedagogy, and the researcher believes this is responsible for the inadequacies in the enhancement of core skills acquisition among young learners. In 2011, the researcher observed that most teachers in public pre-primary schools within the Owerri Education zone were unqualified to teach young learners due to their lack of knowledge and understanding about play-based pedagogy and group work. The researcher considers this a challenging factor that impedes the development, acquisition and enhancement of core skills among young learners. The researcher views corroborate the assertion of Henson (2003) and Siraj (2017), who noted that 21st century teaching and learning should be learner-centred and not teacher-centred.

Furthermore, most Nigerian public pre-primary classrooms are poorly equipped with appropriate resources to support the enhancement of core skills. This is another indicator which shows that most pre-primary teachers are not resourceful; hence; they lack the capacity to facilitate learning in the 21st century classrooms. Lee, Hwang, and Yoon (2016) encouraged the empowerment of pre-primary teachers through capacity building for effective school development.

This study will provide teachers with in-depth knowledge, understanding and values of group work and play-based pedagogy for young learners. Teachers are provided with strategies on how to develop and enhance the core skills of learners through group work and play. The study will also expose teachers to develop resource materials for each lesson, prepare a child-friendly learning environment and facilitate learning in a learner-centred approach. It is envisaged that both teachers and learners will be the direct beneficiaries of this research.

Teachers will collaboratively learn how to integrate group work into play while teaching. Educational stakeholders, government and other researchers will also benefit from this research, as it will add to the body of existing knowledge. These benefits will help teachers to equip young learners adequately, since Weissman and Hendrick (2013) had earlier

observed that most young learners who are admitted into pre-school classes do not have the basic skills necessary to succeed in school.

The researcher, therefore, intend to bridge the gap in teaching approaches for young learners by strengthening teachers' capacity to enhance core skills of young learners by using group work play-based pedagogy.

1.3 PROBLEM STATEMENT

Teaching and learning are considered successful when the outcome of learning objectives has been achieved by the teacher (Afurobi, Izuagba, Ifegbo & Opara, 2017; Zakin, 2012). In setting behavioural objectives for learning, Bloom's taxonomy is usually considered; hence, teachers consider the cognitive domain, affective domain and psychomotor domain (Adams, 2015; Armstrong, 2016; Bloom, 1956; Bloom & Dole, 2018; Forehand, 2010).The researcher observed that most pre-primary teachers fail in the actualisation of their learning objectives because of inappropriate teaching pedagogy. They employ the chalk and talk method, which makes learning teacher-centred and learner-passive. The researcher will rather prefer teachers to facilitate learning than being a conventional 20th century teacher.

The Nigeria's National Policy on Education and early childhood educators strongly advocate that young learners should be taught using play-based pedagogy. Meanwhile, the use of play-based pedagogy in some public pre-primary schools is yet to be achieved due to inadequate implementation (Federal Government of Nigeria, 2013; Fleer, 2013, 2017). From the researcher's observation, it was apparent that most teachers of young learners lack adequate knowledge of how to utilise various play-based pedagogies. This lack of adequate play-based pedagogical knowledge among most pre-primary teachers ignited the researcher's enthusiasm to address the problem through capacity building for pre-primary teachers.

Another problem the researcher intends to address is that of inadequate enhancement of core skills in young learners. Pre-primary and primary education is the phase in which young learners learn core skills that will sustain them throughout their journey in life (Allen & Williams, 2012; Goodspeed, 2016). Thus, communication, collaboration, critical thinking and creativity are indispensable skills in young learners' early development (Allen

& Williams, 2012; Goodspeed, 2016). As the researcher interacted with and interviewed young adults who have difficulty in grasping their core skills in 2011, the researcher discovered that pre-primary teachers did not properly enhance the core skills of these young adults when they were young learners. This problem is among the challenges the researcher hope to address through the introduction of group work during the capacity building for pre-primary teachers.

Finally, resourcefulness in the production of learning materials is another challenge the researcher noticed with pre-primary teachers. Montessori (2018) and Fleer (2013) support the preparation of learning environment as a precursor to facilitating hands-on learning, but the researcher scarcely sees hands-on materials in some public pre-primary schools when he goes for teaching practice supervision. The researcher supposes that pre-primary teachers should be resourceful in the production of learning materials which will help them to equip and prepare their learning environment rather than waiting for the government to provide such materials for them. In view of these problems, the following research questions were formulated as set out in the next section.

1.4 RESEARCH QUESTIONS

The research question and sub-questions help the researcher to maintain focus throughout the study (Maree, 2010). The following main research question and sub-questions guided the study:

1.4.1 The main research question

- How can teachers' capacity be strengthened to use group work play-based pedagogy to enhance core skills of young learners?

1.4.2 Research sub-questions

- What previous knowledge, skills and practice do teachers have and demonstrate in implementing group work play-based pedagogy?
- What strategies can enhance teachers' knowledge and skills to implement group work play-based pedagogy in their lessons?

- How would a professional development programme assist teachers to implement group work play-based pedagogy to enhance core skills in young learners?

1.5 CONCEPTUAL CLARIFICATION

The concepts that were used in this study were clarified to mean the following:

1.5.1 Core skills

Core skills are those aptitudes that are essential for survival in life in a global economy. For young learners to excel, they must develop these skills. They are sometimes referred to as cognitive and social-emotional skills, 21st century skills, soft skills, life skills, essential skills, and employability skills (Allen & Williams, 2012; Fischer & Zigmond, 2001; Goodspeed, 2016; Siraj, 2017). Rock and Crow (2017) maintained that young learners with socio-emotional skills do better in school. Skills acquisition, however, continues to be a veritable tool for inclusive development and remains an indicator of quality living especially in the 21st century, because no employer wants to employ someone without relevant skills (Deming, 2017; Tan, Armum, Chokkalingam, Mohd Meerah, Halim, Osman & Chellappan, 2017).

For the purpose of this study core skill will include communication, collaboration, critical thinking and creativity skills (4Cs).

1.5.2 Young learners

A publication connected to child's rights asserts that a child is anyone under the age of 18 (UNICEF & Rights, 1991). Policy documents of the Republic of South Africa and Nigeria also agree that a child is anyone under 18 years of age (Childrens' Act 38, 2005; UNICEF, 2011). Follari (2015) considers young learners to be learners up to eight years of age. He further categorises them into infants, 0-2 years; toddlers, 2-3 years; pre-schoolers, 3-5 years; and early elementary pupils, 6-8 years. The National Policy on Education (Federal Government of Nigeria 2013), considers the term "young learners" to be synonymous with infants, kindergartens, pre-schoolers and learners. In this study, the term "young learners" refers to young learners within the age of five to eight years.

1.5.3 Play

The phenomenon "play" does not have a single or specific definition. Eberle (2014) considers it to include elements of humour, skills, pretence, fantasy, risk, contest and celebrations in which young learners participate. Howard, Miles, Rees-Davies, and Bertensha (2017) believe that play involves a self-chosen and self-directed activity that is imaginative, active, non-literal, mental, and is in some way derived from a real-life situation.

For this study, the researcher considers "play" to mean an expression of an intrinsic behaviour that leads to a pleasurable activity that young learners engage in for fun and learning. Teachers of young learners, therefore, should use play to develop epistemic (cognitive/intellectual) and ludic (social and creative) skills in young learners.

1.5.4 Pedagogy

There are two major lenses with which researchers look through in terms of pedagogy. Firstly, pedagogy is seen as a form of didactics, lessons or instructional methods for teaching (Mortimore, 1999; Pollard, 2010). With this lens, the emphasis is on the delivery of lessons through the instructional method. Secondly, pedagogy is also seen as a holistic approach which includes lessons, practice, principles, theories, perceptions and challenges that form and shape teaching and learning (Brock, Jarvis & Olusoga, 2014).

The researcher, therefore, adopts the first definition of pedagogy because he only intends to look at instructional methods for lesson delivery, hence his interest in play-based pedagogy.

1.5.5 Play-based pedagogy

There are different kinds of teaching and learning pedagogy that a teacher may adopt in delivering a lesson. However, the use of an appropriate pedagogy for young learners, who are within the ages of five to seven years plus and are either in their final class before entering primary school or already in primary school is paramount to their success in education (World Health Organization [WHO], 2003; UNICEF, 2012).

In this study, play-based pedagogy deals with the playful attributes that a teacher uses during a teaching and learning session with young learners to actualise curriculum

outcomes without resorting to "formal" approaches - as described by Brooker, Blaise and Edwards (2014) and Moyles (2014).

1.5.6 Group work

Group work in the context of this research will deal with the use of play-based strategies which are not individualistic or parallel but is a joint work geared towards the achievement of a set goal for each group as indicated by the teacher for group action (Allen & Williams, 2012; Cartney & Rouse, 2006; Hong et al., 2017). In this research project, group work is closely related to play-based pedagogy. Therefore, for this study, it is used as a phrase, namely, group work play-based pedagogy.

1.6 LITERATURE REVIEW

Play-based learning is a concept that many early years educators adopt as part of their pedagogy and practice (Aldhafeeri, Palaiologou & Folorunsho, 2016; Chien, 2017). It is understood from these scholars that play-based learning entails learners engaging in free play and exploring the use of different materials. They may also play with each other and use materials to represent other objects.

Play-based learning refers to learning and activities that a learner is experiencing in a play-based environment. Play-based pedagogy is well suited to supporting diversity and inclusive education as it incorporates the interests, insights and backgrounds of all the learners (Pyle & Danniels, 2017; Thuketana & Westhof, 2018). Play-based pedagogy embraces the individual strengths and needs of learners, which leads to a naturally inclusive environment (Pyle & Danniels, 2017; Thuketana & Westhof, 2018).

Play is a vehicle through which learning occurs (Chen & Fleer, 2016; Fleer, 2013). It (play) is an intrinsically motivating and voluntary activity that allows the child the opportunity to construct their own knowledge (Marginson & Dang, 2017; Topçiu & Myftiu, 2015). When a teacher adopts an approach that recognises the use of active, hands-on and playful motions in a learning environment, this is considered as play pedagogy (Fleer, 2017; Montessori, 2013). Wood (2004) considered play-based pedagogy to mean those provisions marked out for play and playful approaches by early childhood professionals which help to facilitate learning, describe the design of play-based environments and all

the pedagogical decisions, strategies, materials and techniques that support teaching and learning through play. In the next sections I will elaborate on the importance of play-based pedagogy for young learners and various related aspects such as group work.

1.6.1 Importance of play-based pedagogy for young learners

The importance of play-based pedagogy cannot be over-emphasised because there are numerous studies on the importance of play. Whitebread et al. (2012) assert that play develops the cognitive schema, creative skills, language and literacy skills, numeracy skills, emotional and physical development of young learners. Whitebread, Basilio, Kuvalja and Verma (2012) affirm that learners understand and consolidate on the world around them through play, and this facilitates the development of their abilities for high cognitive performance. Vygotsky noted that when young learners play with objects and with their peers, emotions and language skills develop increasingly. Play supports young learners' development of metacognitive and self-regulatory abilities (Whitebread et al., 2012).

The importance of play cannot be over emphasised hence, it's indispensable phenomenon for learners hence its recognition by the United Nations High Commission for Human Rights as a right for every child (United Nations, 1989, 2012). Learners' right to play has faced many challenges due to society's indifference to the importance of play. Much more is that most educators in Nigeria play down on the need to use group work play-based pedagogy to facilitate learning and this seems to impact negatively on the enhancement of core skills.

1.6.2 Value of group work in pre-primary and primary schools

Fleer (2013) noted that young learners experience unoccupied play up to two years, solitary play from $2^1/_2$ - $3^1/_2$ years, onlooker and parallel play from $3^1/_2$ years - 4 years and associative play from 4 years - 5 years. It is not a very simple task for young learners to integrate themselves into group work and play at age 5 - 6 years, hence the need for a play facilitator (Forman, 2018). At this phase of young learners' life, they will need to overcome their individual and personality differences to enable them to fit into group work and play. Group work and play is, therefore, an important concept to consider.

Working collaboratively is one of the classroom organisational frameworks teachers employ to aid learners learning experiences (Thuketana & Westhof, 2018). When learners interact among themselves, they are motivated and stimulated in hearing the ideas and opinions of their peers. Learners who work in a small group have the opportunity to understand the view of their mates about a problem or situation (Nugra & Abraham, 2018). Working collaboratively helps to build young learners personality and abilities as they are faced with challenges and tasks that motivate and stir them to improve on their weaknesses (Nugra & Abraham, 2018).

Group work is synonymous to working collaboratively or cooperatively. Its values cannot be overestimated. Group work and play help young learners to reach their potentials and capability and build positive relationship among peers while accepting diversity and inclusion (Thuketana & Westhof, 2018). Furthermore, it sustains the interest and attention of the learner, even in the state of indecisiveness. When play is fused into group work, it increases productivity and performance because a group that works in harmony achieves more, unlike when it is just an individual working alone (Nugra & Abraham, 2018; Topçiu & Myftiu, 2015). Team spirit, listening, speaking, leadership and other interpersonal skills are developed through group work and play (Brame, Director & Biel, 2016). An individual becomes more knowledgeable about themselves while engaging in group work and play because their group members will point out to them their strengths and weaknesses (Brame et al., 2016). Flaws, healthy psychological, social and cognitive perspectives are also developed through group work. The use of group work in a learning process places the teacher in a supervisory capacity while the group members become active learners in the learning process. When learners are actively engaged in the learning process, it leads to the enhancement of their core skills.

1.6.3 Core skills

The complex nature of the 21st century requires a proactive and dynamic attitude in dealing with virtually everything that poses a challenge to our way of life, and this calls for effective decision-making (Nel, 2014). In some areas where high crime rates exist, and more sophisticated ways of committing a crime is on the increase, humans are expected to cohabit, collaborate, communicate and live as a community in a complex world (Hipp

& Kubrin, 2017; Jaishankar, 2011). The critical difference between the 20th and 21st century is rooted in the quest for skills that lead to self-actualisation, employability and relevance to the society and is dynamic in adapting to changes in the society (Ansari & Gershoff, 2015; Saxena, 2014; Siraj, 2017). The dynamics and challenges of every society determine the key needs of that society as such, and core skills have become a resolute answer which underpins the 21st century challenges.

1.6.4 What are basic core skills?

Core skills are globally referred to by scholars as functional skills, essential skills, employability skills, key skills, soft skills, life skills, transferability skills and 21st century skills (Allen & Williams, 2012; Ansari & Gershoff, 2015; Saxena, 2014; Siraj, 2017). These skills that assist individuals in deciding how best to relate, collaborate, criticise, create, share, observe, manipulate, analyse, synthesise and handle things properly and accurately have become a great asset – otherwise, life itself would not be worth living (Fischer & Zigmond, 2001; Kemp & Carter, 2000; Nel, 2014; Siraj, 2017). Furthermore, these skills are characterised by components which will be discussed in detail in chapter two.

Core skills permit young learners to express their knowledge, understanding and skills in a flexible manner while adapting to new situations. They promote and provide the foundation for lifelong learning and personal development. Anyone who is proficient in these skills eventually meet both his personal and societal needs (Allen & Williams, 2012; Goodspeed, 2016). Organisations all over the world search for people who can communicate very well, analyse and solve problems, work collaboratively with others, use information technology, take up active responsibility and work flexibly in modern workplaces (Allen & Williams, 2012; Goodspeed, 2016; Kuchel, 2017). It is for these reasons that enhancing core skills becomes very important in the 21st century.

1.6.5 Importance of developing core skills in young learners

The expectation of parents and the society is that every young learner will grow and become an adult in years to come. The implication of this expectation is that the failure to

invest in the child today will lead to failure in the future society. Young learners need to develop core skills for the following reasons:

Communication: This is development of oral and written words will help the young learner to express himself effectively, thus, conveying his feelings and thoughts to others, and this will eventually translate to how he will relate with people around him (Hong et al., 2017; Tan et al., 2017). This skill is also essential for a child's learning. Through communication, young learners are taught numeracy skills – involving processing, interpreting, communication and problem-solving.

Collaboration: The proper relationship with one another is a skill that boosts co-operation in any organisation, including the school. Developing this skill very early in young learners will help equip them to effectively co-operate with others, use their interpersonal skills appropriately, recognise and value other people's roles, take responsibility for their contributions and develop a love for humanity (Aronson & Patnoe, 2011; Deming, 2017).

Critical thinking: This is when young learners develop the skill of thinking critically, it helps them to know how to analyse situations and recommend possible solutions to problems. Besides, it helps them to learn how to plan and organise themselves when carrying out a task. As learners think critically, they learn to reflect on problematic situations before drawing conclusions (Clarence, 2018; Robson & Hargreaves, 2005).

Creativity: This is the development of creativity skills in young learners enables them to paint pictures, compose music, develop the skills of mind mapping, come up with something new or add a novel dimension to an existing phenomenon (Bloom & Dole, 2018; Goodliff, Canning, Parry & Miller, 2017). Creative thinking means looking at something in a new way. The development of creativity in the young learner will help the learner in solving problems in an exceptional way (Bloom & Dole, 2018; Goodliff et al., 2017).Some components of creativity include open-mindedness, problem-solving, analytical skills and organisation of ideas and its representation (Bloom & Dole, 2018; Goodliff et al., 2017).

Webster-Stratton and Reid (2004) observe that learners' abilities to manage their lives, make friends and adapt to their environment are indicators of school readiness and academic success. They further stress that socially and emotionally adjusted learners show a greater readiness for academic processes. Siraj (2017), Vickers (2016) and Whitebread et al. (2012) agree that the pre-primary year is a period of intense preparation for young learners to develop the tools they need before beginning with formal schooling. It is further argued that it is a period of language development, self-control, and social skill development, self-care, thinking skills and pre-writing skills.

The importance of enhancement of core skills in young learners cannot be overemphasised because of the need to prepare young learners for the fourth industrial revolution. There has been a global technological revolution which has already turned the world into a global village using the internet (Bloem, Van Doorn, Duivestein, Excoffier, Maas & Van Ommeren, 2014; Colombo, Karnouskos, Kaynak, Shi, & Yin, 2017; Li, Hou & Wu, 2017; World Economic Forum, 2016) This present global and technological advancement did not just happen, but rather Development and improvement in the way we live, work and relate with one another keep unfolding through different phases of the industrial revolution (Bloem et al., 2014; Colombo et al., 2017; Li et al., 2017; World Economic Forum, 2016).

In the first industrial revolution, water and steam power were the main sources of mechanised production (Bloem et al., 2014; Colombo et al., 2017; Li et al., 2017; World Economic Forum, 2016). During this period, many marriages were concluded and many children were born who helped in the mechanised production and served the economic purposes of the era. Thereafter, electricity emerged in the second industrial revolution as an energy source for the mass production in the industry (Bloem et al., 2014; Colombo et al., 2017; Li et al., 2017; World Economic Forum, 2016). It was an improvement in the global economy as work was made easier and faster than in the first industrial revolution era. The use of electricity in the second industrial revolution was enhanced with the innovation of electronics and information technology which were used to automate production, hence the third industrial revolution came about (Bloem et al., 2014; Colombo et al., 2017; Li et al., 2017; World Economic Forum, 2016). Presently, information

technology has led to so much development across the globe that some young learners are acquainted and proficient in the use of information technology. It is, therefore, necessary that these young learners must be prepared for the fourth industrial revolution which is focused on digital revolution (Bloem et al., 2014; Colombo et al., 2017; Li et al., 2017; World Economic Forum, 2016).

The enhancement of core skills in young learners is of great importance because the digital revolution is already emerging. It will be characterised by business disruption, inequality, agile governance, security and conflict, innovation and productivity, disruption of jobs and skills (Bloem et al., 2014; Colombo et al., 2017; Li et al., 2017; World Economic Forum, 2016). The implication of this is that only people with core skills, otherwise known as employability skills, will fit into the system. It is for this reason that teachers need to enhance the core skills of young learners so that they can be properly integrated into the emerging fourth industrialisation (Bloem et al., 2014; Colombo et al., 2017; Li et al., 2017; World Economic Forum, 2016). The next paragraph discusses the enhancement of core skills using group work play-based principles.

1.6.6 Group work to enhance core skills using play-based principles

Teaching and learning may be facilitated in various ways. However, the use of group work has proven its value in providing opportunities for learners to understand concepts better, learn from each other and reach consensus (Brame et al., 2016; Neuman, McConnell & Kholowa, 2014; Waterloo, 2018). Group work is a catalyst for collaborative and corporative learning (Brame et al., 2016).

The application of group work in the teaching and learning processes gives the classroom a different appearance from the regular classroom setting (Edwards & Cutter-Mackenzie, 2011; Hedges & Cooper, 2018; Walsh, McGuinness, Sproule & Trew, 2010; Waterloo, 2018). There are different flexible group work methods that teachers can adopt depending on how large or small their classrooms are. These methods include think-pair-share, circle of voices, rotating trios, snowball groups, jigsaw, fishbowl, learning teams, and others (Edwards & Cutter-Mackenzie, 2011; Hedges & Cooper, 2018; Walsh et al., 2010; Waterloo, 2018). Group work fosters socio-emotional skills, cognitive skills, language and physical development.

Other important aspects of group work through play are the preparation of group work and the assessment of young learners who, through play, work in groups. The details of this aspect and other related issues will be discussed thoroughly in the main body of the literature review. However, in the next paragraph, the researcher discusses the Nigerian national policy on education and the young learners' curriculum.

1.6.7 Nigeria National Policy on Education and Curriculum for young learners

The Nigerian National Policy on Education (NPE) is a document that contains Nigeria's educational goals and philosophy. In the policy document of Federal Government of Nigeria (2013), the government maintained that it is its responsibility to promote the training of teachers of young learners in an adequate number. This role is to enable teachers to contribute to the development of a sustainable curriculum. The policy which made provision for the establishment of schools for learners aged 5 - 6 to be part of the existing sections of public primary schools, opined that young learners aged five plus should be taught rudiments of numbers, letters, colour, shapes forms, co-operation and team spirit (collaboration skills) through play (Federal Government of Nigeria, 2013). Furthermore, the policy document maintained that creativity, a spirit of enquiry (critical thinking skills), social norms, exploration of environment and arts should be inspired through play (Federal Government of Nigeria, 2013).

Whereas the policy was loud and specific on the strategy through which learning must take place, the policy was silent on the teaching strategies to employ while teaching other young leaners in the lower basic education (6 - 8 years). However, Federal Government of Nigeria (2013) noted that learners in the lower basic group must be taught numeracy, literacy and the ability to communicate effectively (communication skills). The teaching of critical thinking skills is not left out as the policy document noted that young learners must also be taught a sound basis for scientific and reflective thinking (critical thinking skills). To develop a sound attitude, morals and the ability to adapt to a changing environment (collaboration skills) were also included in the goals of education for young learners in the lower basic group (Federal Government of Nigeria, 2013). These young learners were also expected to acquire creativity skills through the development of crafts and

manipulative skills which would enable them to function effectively in the society within the limits of their capacity (Federal Government of Nigeria, 2013).

A curriculum document developed for young learners aged 5 - 6 by the Nigerian Educational Research and Development Council (NERDC), took into consideration an integrated approach of thematic content presentation for learners (Federal Government of Nigeria, 2018). The curriculum document opined that the facilitation of learning for young learners must focus on the learners' physical development, social and financial literacy, emotional, cognitive and creativity skills. Federal Government of Nigeria (2018) in the document One-year preprimary education curriculum maintained that irrespective of background, experiences and age, young learners are capable and competent to assimilate these learning contents if units of learning are broken down.

The thematic presentation of any learning content must consider the learners' knowledge, skills and attitude, teachers/parents/caregivers' activities, learning strategies, learning resources and assessments. Federal Government of Nigeria (2018) in the document One-year preprimary education curriculum further outlines various learning strategies that teachers should adopt while facilitating learning. These learning strategies include the organisation of indoor and outdoor play or activities, demonstration methods, exploration of materials relevant to teaching units, modelling, storytelling, activities based on arts and crafts, singing and dancing, dramatisation, role-playing through group activities in class, discussions on reading materials and group work among many other strategies as stated in the document One-year preprimary education curriculum (Federal Government of Nigeria, 2018). The policy document and curriculum for young learners advocated the use of group work play-based pedagogy for the facilitation of learning.

1.7 THEORETICAL FRAMEWORK

The theoretical framework for this study is based on the socio-cultural theoretical ideologies of Vygotsky. His contributions are of great importance to this study because of the relationship between social interaction perspective and the zone of proximal development. To establish the relationship between the social interaction perspective and the zone of proximal development, the researcher elaborated on the socio-cultural theory of Vygotsky.

1.7.1 Socio-Cultural Theory of Vygotsky

Vygotsky was a Russian psychologist whose work in the 1920s and 1930s in the Soviet Union gained greater general prominence in the 1970s when it was translated into English. He believed that young learners learn through interaction and activity with people, materials, tools and symbols of their social and cultural environments (Brock et al., 2014). Considering Vygotsky's view on the social construction of knowledge, which has attracted more attention in recent times, Joubert (2016) argued that Piaget and Vygotsky are some of the social-constructivist founding fathers who advocated for interaction among learners in a learning process.

The socio-cultural theory of Vygotsky not only supports learning through interaction with others but also integrates it into the learners' cognitive structure. Development in every learner appears first at the social interaction level (inter-psychological) and later appears inside the individual level (intra-psychological). All the higher functions begin as an actual relationship between individuals (Vygotsky, 1978). The second characteristic of Vygotsky's theory is the phase of cognitive development that is linked to the "Zone of Proximal Development" (ZPD).

The concept of the Zone of Proximal Development (ZPD) is an approach to learning that suggests that learning must be harmonised with the learner's level of development. He maintained that to comprehend the connection between development and learning, two developmental concepts must be noted, namely; **scientific concepts** (higher thinking) and the **spontaneous concept** which deals with learning using real objects or hands-on experience (Joubert, 2016).

ZPD is an area of enquiry, which prepares the learner cognitively but requires help and social interaction with more knowledgeable or experienced persons or peers (Briner, 1999). The ZPD enhances collaborative learning, communication, creativity, and scaffolding which are approaches that support intellectual knowledge, skills, and facilitation of learning. Montessori's ideology agrees with Vygotsky's view that learning for young learners becomes spontaneous as they construct meaning out of their own experiences while learning cumulates into historical knowledge and eventually leads to the formation of scientific concepts in young learners (Brock et al., 2014; Joubert, 2016).

The implication of Vygotsky's theory to my study is that play-based pedagogy is an active engagement of learners, and this leads to social interaction between participants of different states of experience and knowledge in their zones of proximal development. The ZPD incorporates the preparation of a learning environment for young learners as supported by Montessori, who advocates for the development of various equipment that encourages hands-on methods of teaching and learning (Brock et al., 2014; Joubert, 2016). Montessori maintains that teachers become facilitators rather than conventional classroom teachers; this supports Vygotsky idea of social constructivism (Eun, 2017; Gajdamaschko, 2015; Marginson & Dang, 2017; Topçiu & Myftiu, 2015; Vygotsky, 1978).

1.8 RESEARCH METHODOLOGY

This aspect of the research expounded the rationale for the research method(s) used in this study. Explanations of the research strategy employed are elucidated.

1.8.1 Research design

A research design is an overall strategy that proposes the underlying philosophical assumptions that specify the choice of participants, the data collection techniques and method for data analysis used (Creswell & Creswell, 2017; Maree, 2010). For this study, the research design seeks to explain what data is required, the appropriate method employed for data collection, its analysis and how this process answered the research question. The research adopted a qualitative and interpretivist paradigm for this research, and a participatory action research was suitable because it aimed at training and empowering teachers for effectiveness.

1.8.2 Qualitative research approach

Qualitative research is the opposite of quantitative research, which adopts a non-quantitative method of data analysis. A researcher, who adopts qualitative research, collects data, analyses data and interprets data by observing what people do and say. Qualitative research denotes features, symbols and descriptions of things. It is more subjective and uses diverse approaches to collect information from participants, carry out in-depth interviews and make use of focus groups. Qualitative research is usually exploratory and open-ended. A small number of participants are interviewed in-depth, or

a moderately small number of focus groups are used to study a phenomenon (Burton et al., 2018; Creswell & Creswell, 2017).

The epistemology of qualitative research explains the reason behind the behaviour of a phenomenon under investigation while aligning it with a social context, context-related, context-dependent and context-rich phenomenon (Burton et al., 2018; Creswell & Creswell, 2017). When a researcher carefully studies the context of a particular behaviour, it enables the researcher to understand and describe the situation, its uniqueness and therefore adopt the best qualitative approach to solving the problem of the phenomenon (Burton et al., 2018; Creswell & Creswell, 2017).The researcher viewed and classified qualitative research into the following types:

- Phenomenology; this is a type of qualitative research wherein the researcher tries to understand how one or more individuals experience a phenomenon.
- Ethnography; researchers focus on unfolding the tenets of a group of people, consider their shared attributes, principles, customs, practices, language, and quantifiable characteristics of the participants. The researcher may choose to live in the research site and study the cultural practices of the people.
- Case study; this is a type of qualitative research which is geared towards providing a detailed account of one or more cases.
- Grounded theory; it is an inductive type of research that is based on observations of data from which a theory is established. It uses various data sources, including quantitative data, review of records, interviews, observation and surveys.
- Historical research; it is research that deals with a discussion of the past and present events in a framework of the current condition. It allows for reflection and provides conceivable answers to existing issues and problems.
- Participatory action research; this is fundamentally research involving action which is usually carried out through the collective activity of people who are possibly affected by the problem being investigated.

The qualitative procedures the researcher chose to use in this design included observation, interviews, document analysis and capacity-building training workshops for

teachers (Creswell, 2014; Maree, 2010).The researcher chose an interpretivist and social constructivist approach because it provides a first-hand experience of participants. Information is recorded as it occurs, it allows for control over the structure of the interviews, closes the distance between the participants and the researcher, represents data using appropriate coding patterns, and saves time and expense of transcribing.

This research espoused the social constructivist dimension of the interpretivist paradigm because it is focused on strengthening teachers' capacity in using group work play-based pedagogy to enhance core skills. Participants of the study were teachers of young learners in three sub-urban public schools in the Owerri educational zone.

Furthermore, my choice for a qualitative study guided the formulation of the interview schedule and capacity training for my participants. The researcher made sure that the questions did not pose any psychological discomfort or threat to the participants. Participants were free to interact with me and respond to activities during the workshops and training organised for them.

1.8.3 Research methods

The following were the research methods used to support the study. Each of these sections are dealt with in-depth in chapter three.

1.8.3.1   Participants and Sites

Nine teachers of young learners who were all females, constituted my primary participants, while the young learners in their classes were my secondary participants. In selecting the participants, the researcher chose the purposive sampling technique. Etikan, Musa, and Alkassim (2016) assert that purposive sampling technique, which is also referred to as judgemental, selective or subjective sampling technique is a non-probability sampling technique. Researchers employ purposive sampling in research when the participants are expected to meet certain criteria which suit the research profile. In this study, the researcher adopted purposive sampling in selecting three public primary schools that housed pre-primary and primary classes. Three (3) teachers represented each of the schools. The total number of sampled teachers were nine (9) and the selected

teachers taught learners in the pre-primary and primary classes. The age of learners in the pre-primary and primary classes are within ages five to eight years.

The focus of the study was on public pre-primary and primary schools; the choice for selecting public pre-primary and primary schools was premised on the age of the learners (5 - 8 years) who constituted the secondary participants. The age of the secondary participants falls within the early childhood education learners for whom the study is primarily meant. The study, which employed a purposive-sampling technique, focused on schools located in the sub-urban areas of the Owerri educational zone, Imo State, Nigeria.

Imo State, Nigeria has three (3) educational zones, which include Owerri, Orlu and Okigwe. The research site is situated Owerri zone; it is the capital territory of the State and has the highest number of young learners enrolled in the 1,275 primary schools. The primary schools are made up of 2,780 teachers of Early Childhood Care Development Education (ECCDE) and primary teachers (Universal Basic Education key statistics of 2014) because of a population upsurge in the area. Owerri educational zone is made up of a total number of eleven (11) local government areas which include Aboh Mbaise, Ahiazu Mbaise, Ezinihitte Mbaise, Ikeduru, Mbaitolu, Ngor Okpala, Oguta, Ohaji/Egbema, Owerri Municipal, Owerri North and Owerri West. It is located in a rain forest zone of West Africa and is situated on latitude 5^0 12' and 5^0 56' North of the Equator and longitude 6^0 38' and 7^0 25 East of the Greenwich Meridian.

1.8.3.2 Data collection process

The University of Pretoria approved the ethical application before the researcher proceeded to collect data that lasted for a period of three months, and happened in different phases. Permission was also sought from school authorities, parents, learners and teachers before undertaking the research. Only willing participants were used in the study. In the first phase, the researcher conducted a semi-structured interview with the pre-primary and primary school teachers to elicit and evaluate their responses on group work play-based pedagogy. The evaluated responses from my participants informed me of areas where they needed capacity development, and subsequently, a workshop was organised to capacitate teachers on areas of inadequacies in line with the research topic.

1.8.3.3 Data collection methods

The methods used for data collection were semi-structured interviews, observation, document analysis, field notes and photovoice (Creswell, 2014; Maree, 2010).The researcher was committed to plan and train teachers on group work play-based pedagogy and enhancement of core skills. This transformed my enquiry into praxis-action (Denzin & Lincoln 2011).

After the pre-primary teachers complete their teaching of young learners, they re-assembled at the workshop venue to discuss the classroom challenges and successes they experienced during implementation. An appraisal of the implemented programme was done, and this led the teachers and the researcher to uphold the success achieved in the course of the implementation while repeating the process in cases where success was not attained. This method gave rise to many opportunities for data collection.

Data collection methods
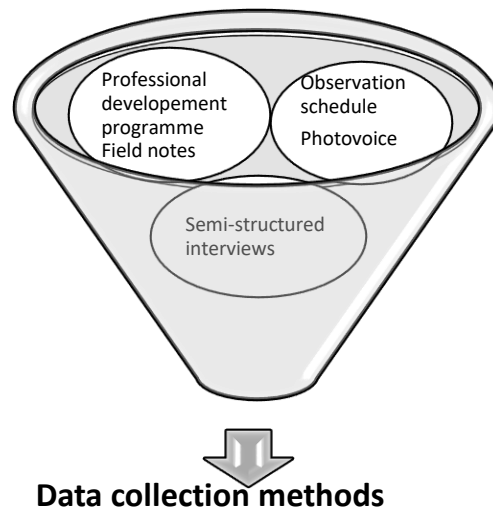
Figure 1.3: Data collection methods

1.8.3.4 Data analysis

Data collected were organised and analysed in segments of text, themes and sub-themes assigning words or phrases to each section of a generally related phenomenon (Creswell, 2014). The following procedure was used for data analysis presentation. The researcher elaborated on the data analysis in chapter three.

Step 1
Reading through the data collected

Step 2
Organising the data

Step 3
Coding the data

Step 4
Identifying themes

Step 5
Interpretation of data
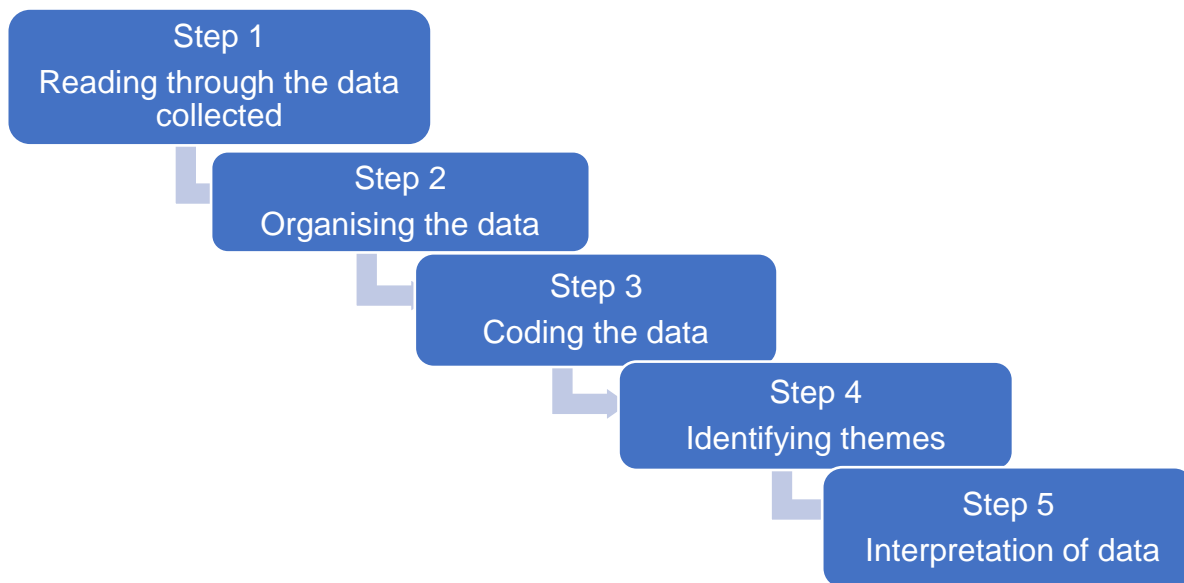
Figure 1.4: Steps of data collection analysis

1.8.3.5 Trustworthiness

Trustworthiness in qualitative research is used to establish credibility, transferability, confirmability and dependability of the findings (Burton et al., 2018; Creswell & Creswell, 2017). In quantitative research it is called "validity and reliability" (Burton et al., 2018; Creswell & Creswell, 2017).

Aspect of trustworthiness	Description	Application in the study
Credibility	this deals with how true, accurate, rich and quality the findings are.	accuracy of findings was ascertained through triangulation and member checking.
Transferability	this demonstrates how applicable the findings of the study can be in a similar context.	the procedure of the research was provided to external researchers and readers who want to apply same study in another context.
Dependability	this deals with the extent to which researchers attain consistency in their findings when the study is replicated.	the steps used in analysing the data were presented in a clear format that shows how consistency of findings was achieved.
Confirmability	this refers to the degree of neutrality in the research findings, hence the elimination of potential bias.	the researcher demonstrated how the data from the participants correleted with the interpretation of the findings, whilst eliminating bais.

(Burton et al., 2018; Creswell & Creswell, 2017)

Figure 1.5: Description of trustworthiness

1.8.3.6   Ethical consideration

The University of Pretoria ethics principles were applied throughout the study. Voluntary participation of my primary participants (pre-primary teachers) and my secondary participants (young learners) was secured through letters of consent and assent, respectively. Parents and school authorities gave their consent to conduct the research using their learners and schools. Creswell (2014) outlined ethical principles which include

honesty, privacy, confidentiality and avoidance of harm on participants. These principles were considered during the research process.

The study was aimed at strengthening teachers' capacity in using group work play-based pedagogy to enhance core skills in young learners. In doing this, one main research question and three sub-research questions were formulated. A semi-structured interview schedule was prepared, and a workshop for teachers' capacity development was organised. Participants were reminded of their free will to withdraw from the research if they wish to do so at any point of the study.

1.9   ROLE OF THE RESEARCHER

Denzin and Lincoln (2011) consider the researcher to be the research instrument in the data-gathering process when PAR is in use. Okeke and Van Wyk (2015) and Creswell (2014) opine that researchers' subjectivity in qualitative research could not absolutely be eliminated. The researcher's role in this study, however, includes that of an observer, interpreter, interviewer and a data analyst.

The researcher organised a semi-structured interview which served as a baseline assessment tool for the participants. The data generated was analysed, and its result gave the premise for a professional development programme. The researcher's experience as a teacher was a veritable asset in playing this role, as he was used to conducting exams, marking scripts and computing the results of learners. As a researcher, the responsibility to behave honestly and ethically during the research was never compromised.

1.10   CHAPTER OUTLINE

This study contains the following chapters:

Chapter one

This chapter gave the extensive direction and the contextual introduction of the problem under investigation. The problem and the aim of the study were stated as well as a brief highlight of the research methodology. Finally, the definitions of key concepts and the role of the researcher were outlined.

Chapter two

This chapter discusses a detailed review of the literature relating to group work play-based pedagogy and strategies for the enhancement of core skills in young learners. Applicable literature that links with the contemporary study was also discussed. Challenges, gaps and strengths of the subject matter were identified to establish a theoretical understanding of the study.

Chapter three

In Chapter 3, the researcher details and elaborates on the research design, the

methodology used and research processes that were followed. Elucidation of the data

analysis, participant sampling, quality criteria, data collection and ethical issues pertaining

to the study are also provided.

Chapter four

The researcher in Chapter 4, presents the analysis and interpretation of the research data. It comprises of an in-depth analysis and interpretation of the responses to the professional development programme, semi structured interviews, field notes and observation schedules.

Chapter five

This chapter presents an overview of the study findings, conclusions and discusses the

recommendation to teachers and policymakers for improving the use of group work play-based pedagogy to enhance core skills in young learners. The researcher made suggestions for further research based on the findings of the research.

1.11 SUMMARY

This chapter serves as a framework for the study as the synopsis in this chapter includes the rationale, problem statement, research questions and conceptual clarification. A literature overview, theoretical framework, and methodology were also considered and briefly explained in this chapter. A brief description of the ethical considerations was presented. Finally, the chapter outline was briefly discussed.

CHAPTER TWO: REVIEW OF LITERATURE AND THEORETICAL FRAMEWORK
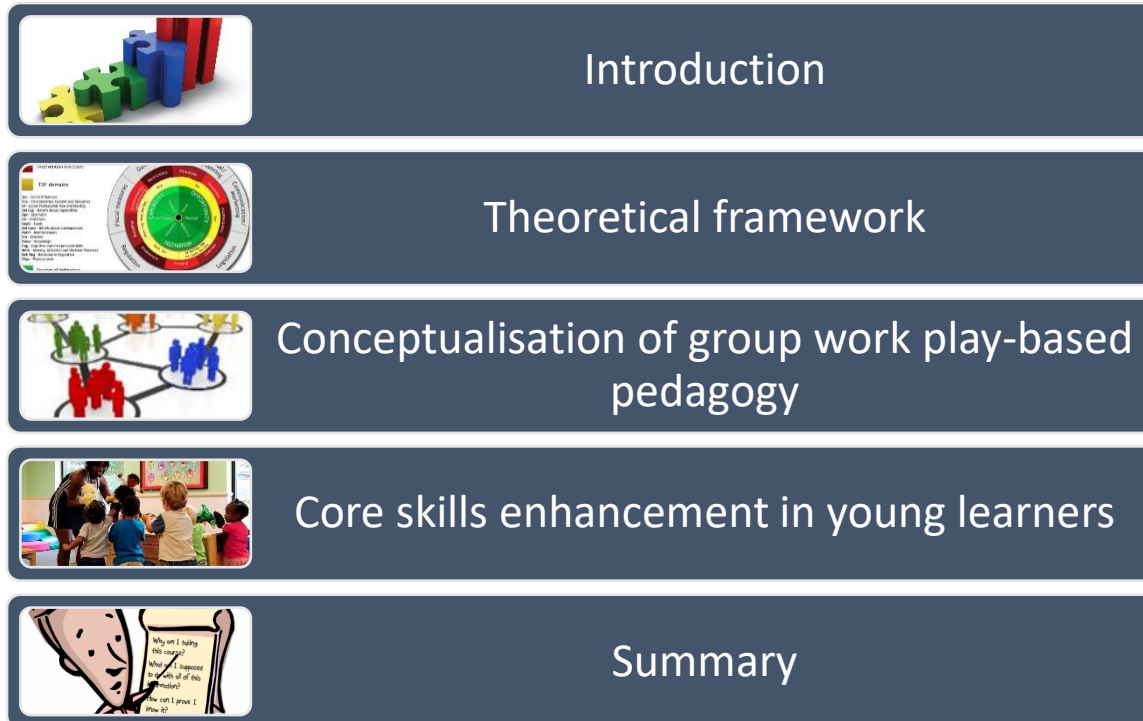
Figure 2.1: Outline overview of Chapter 2

2.1 INTRODUCTION

I provided the background to the study in Chapter 1. Other considerations in Chapter1 were discussions on the rationale, problem statement, research questions and conceptual clarification. A brief outline of the literature was also reviewed; while the theoretical framework, conceptual clarification and research methodology were among the other considerations in Chapter 1. In Chapter 2, an in-depth literature review and theoretical framework on group work play-based pedagogy and enhancement of core skills in young learners are the focus.

Vygotsky's sociocultural theory was the key foundational theory to this study and provided a lens for me when searching for the findings of the study. This is because the theory advocates social interaction among group members. Furthermore, it supports the interaction and relationship that exist in group work play-based pedagogy. The social constructivist theory was also valuable in the enhancement of core skills in young

learners, as discussed in the Zone of Proximal Development (ZPD). This chapter also discusses group work play-based pedagogy, the integration of core skills and play-based pedagogy, the importance of core skills enhancement in young learners and the strategies to enhance core skills in detail.

2.2 THEORETICAL FRAMEWORK

Lev Semonovich Vygotsky was one of the most influential seminal psychologists who was best known for his sociocultural theory and, hence, his belief that social interaction plays a critical role in learners' learning (Macy, 2016; Vygotsky, 1978; Wass & Golding, 2014). Born in 1896 in Orsha, a city in the western region of the Russian Empire, he attended Moscow State University where he studied sociology, linguistics, psychology and philosophy.

2.2.1 Social cultural theory and its integration in group work play-based pedagogy

Vygotsky's theory of social interaction explains the role of the fundamental development of cognition *vis-à-vis* social interaction. Vygotsky (1978) and McLeod (2014) suggest that cultural development emerges twice in every child: the first appearance is related to the child's social level and the second appearance is evident in the child's individual level. Furthermore, Vygotsky argues that the first cultural development appearance which exists between individuals is inter-psychological, followed by that which occurs inside the child, which is intra-psychological (Gajdamaschko, 2015; Marginson & Dang, 2017; Vygotsky, 1978).

The integration of sociocultural theory (inter-psychological development) in my study indicates that the enhancement of learning begins with the child's social level of interaction. The child begins to listen to the people around him before he starts speaking. As the child speaks, he builds his vocabulary with what he hears and things he interacts with in his environment (Fleer, 2016). The level of social interaction the child is exposed to plays a vital role in the wealth of knowledge the child acquires, hence, there is a limitation of acquisition and enhancement of core skills when a child plays alone (Pyle & Bigelow 2015). Therefore, the child's inter-psychological development is an integral aspect of group work play-based pedagogy.

Another aspect of the socio-cultural theory is the intra-psychological relationship which initiates higher functions in learners such as the formation of learners' voluntary attention, logical memory and the formation of concepts (Gajdamaschko, 2015; Marginson & Dang, 2017; Vygotsky, 1978). Intra-psychological development facilitates reflective and critical thinking because it leads to problem-solving. The inter-psychological relationship creates an enabling atmosphere for intra-psychological development. The enabling atmosphere results because logical reasoning, the formation of concepts and development of intrinsic values are prompted in group work play-based pedagogy during the inter-psychological interaction (Gajdamaschko, 2015; Marginson & Dang, 2017; Vygotsky, 1978).

Learning from known to unknown		
Known	**Zone of Proximal Development**	**Unknown**
• what is known to the learner	• Difficult skills for the child to master on his own but can be done through the guidance and encouragement from a knowledgeable person(s)	• what is unknown to the learner
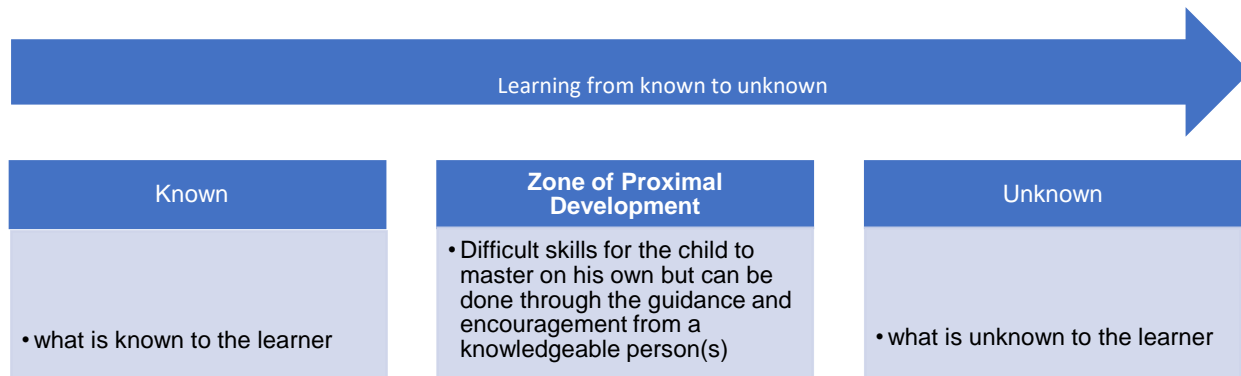
Figure 2.2: Vygotsky Zone of Proximal Development (ZPD)

Cognitive development in the socio-cultural theory of Vygotsky is traceable from intra-psychological development. However, it was specifically elucidated in the discussions around the Zone of Proximal Development (ZPD). ZPD is a level of development where learners engage in social behaviour while learning takes place from the known to the unknown. The ZPD is characterised by full social interaction with more knowledgeable persons or peers (Cole, John-Steiner, Scribner & Souberman, 1978; Eun, 2017; Gajdamaschko, 2015; Marginson & Dang, 2017). During group work play-based pedagogy, learners with varied learning abilities are integrated into groups where they learn from their peers who are more knowledgeable than they are. In the Zone of Proximal Development (ZPD) core skills—communication, collaboration, critical thinking and creativity—are enhanced as they interact with one another.

According to Vygotsky's sociocultural theory, learning is a process of accommodation and assimilation where individuals construct new knowledge from their experiences. When individuals assimilate information, they incorporate the new experiences into an already existing framework without changing that framework. Collaboration enables each member of a group to bring unique and individual strengths, talents and knowledge to the process of collaboration. Afurobi, Izuagba, Obiefuna and Ifegbo (2015) believe that when a teacher applies Vygotsky's theory in the learning process, it provides learners with tools to set the context for learning which results in problem-solving and enquiry learning activities. They believe that tasks are situated in a context where learners collaborate as they work. And this enables them to share perspectives; formulate and test their hypotheses and draw conclusions from the pool of knowledge that they generate. It has been suggested that collaborative learning that focuses on rich contexts and challenging questions produces higher-order reasoning. Tasks may include laboratory work, study teams, debates, writing projects, problem-solving and collaborative writing.

Vygotsky recognises that learning always occurs in, and cannot be separated from, a social context. Consequently, instructional strategies such as group work play-based pedagogy are aimed at promoting the distribution of expert knowledge where learners work collaboratively to conduct research. They share their results or produce a final project and help to create a collaborative community or team of learners. Knowledge construction occurs within Vygotsky's (1962) social context that involves learner-learner and expert-learner collaborations concerning real-world problems or tasks that build on each person's language, skills and experience, and is shaped by everyone's culture (McLeod, 2014; Joubert 2016; Vygotsky, 1978). Group work play-based pedagogy provided young learners with the opportunity to construct knowledge in the learning process, hence the freedom of group members to interpret concepts in their own meaning and understanding.

Learners are prone to make mistakes, especially when they do not have a clear understanding of the instruction given. However, those who operate within the description of the More Knowledgeable Other (MKO) of the ZPD as facilitators, parents, guardians and caregivers have the responsibility of correcting and enhancing learners' core skills when young learners make mistakes (Cossentino, 2017; Giardiello, 2014; Lillard & Eisen,

2017). Every mistake made by a group of learners is an opportunity to enhance their core skills and create learning. For example, if a group of learners fail in the task given to them, another group may be called up to teach the group that failed how best to carry out such a task. By so doing, learners will learn to collaborate, communicate, and learn from their peers (Aubrey & Riley, 2016; Lillard & Eisen, 2017).

Furthermore, Vygotsky opined that the mental structure of every child is wired differently, and this accounts for the differences in learners' personalities (Topçiu & Myftiu, 2015). Moreover, he maintained that the child's environment is an important factor in social interaction, which corroborates Montessori's (2018) view on the prepared environment as a key factor in active learning, cooperation and learning in harmony (Aubrey & Riley, 2016; Brock, Jarvis & Olusoga, 2014). The preparation of the learning environment is one of the essential aspects of Vygotsky's theory. A learning environment which may be physical or psychological must exist in the area of proximal development in terms of the More Knowledgeable Other (MKO) (Aubrey & Riley, 2016; Giardiello, 2014). Montessori (2018) supports Vygotsky's preparation of the learning environment, as she believes that the preparation of the environment is an indispensable link between learners and adults who help to facilitate learning (Giardiello, 2014; Lillard & Eisen, 2017; Montessori, 1959; 2018).

2.2.2 The rationale for the use of Vygotsky's theory

The fundamental role of the socio-cultural theory in the enhancement of core skills through social interaction was considered a key factor in this study. Group work play-based pedagogy is not an individualistic approach to learning but a cooperative learning venture (Aubrey & Riley, 2016). The rationale of using Vygotsky's theory in this study was because it supports learning in small groups of 3 - 4 in terms of social interaction and, thereby, a team of members with a More Knowledgeable Other (MKO) is formed (Eun, 2017; Gajdamaschko, 2015; Marginson & Dang, 2017). The concept of a More Knowledgeable Other (MKO) advocates that anyone with more knowledge about a phenomenon should share it with his peers in the ZPD.

Vygotsky's Zone of Proximal Development and constructivist approach to learning supports flexibility in the enhancement of core skills in young learners. The flexibility of

learning content also enhances core skills as facilitators learn to scaffold learners in their groups during the learning experiences (Aubrey & Riley, 2016; Giardiello, 2014). In the ZPD, it is the role of the facilitator to observe learners' areas of difficulty and scaffold the learners to the MKO using their peers. (Giardiello, 2014).

2.3   CONCEPTUALISATION OF GROUP WORK PLAY-BASED PEDAGOGY

Killen (2007) states that, group work ensues the working together of two or more learners to achieve the goal of a given task. Engelen, Wyver, Perry, Bundy, Chan, Ragen, and Naughton (2018) maintain that group work implicates learners working collaboratively on fixed tasks, in or outside the classroom. The research proposes that learners learn superlatively when they are enthusiastically involved in the process (Burke, 2011). Wasley (2006) opined that learners become more satisfied with their education when they partake in cooperative learning and scholastic activities outside their classroom. The term group work incorporates collaborative and cooperative learning and remains an important constituent of active learning, hence its suitability in the enhancement of core skills.

Play-based pedagogy, on the other hand, is a fun-filled interactive approach young learners employ while exploring the social worlds around them (Chen & Fleer, 2016; Fleer, 2013). Through play, young learners engage people and objects and acquire essential skills which they retain throughout their lifetime (Organization, 2003; UNICEF, 2012). Therefore, when play is used as an instructive method in facilitating learning for young learners, it becomes a pedagogical approach, hence play-based pedagogy.

2.3.1   Group work play-based pedagogy and learning environment

Facilitation of core skills requires a learning environment that is attractive, inviting, safe and conducive for learners to explore playfully. Montessori (1959; 2018) maintains that any activity that engages young learners is work for them, and most times, such activities are synonymous with play. Whereas play is a pleasurable activity for adults, play is difficult work for learners. Therefore, group work play-based learning environments must be provided (Giardiello, 2014; Lillard & Eisen, 2017; Montessori, 1959; 2018). Group work is suitable in a learning environment that accommodates small group clusters with child-friendly group-oriented tables, chairs, reading materials and corners (Giardiello, 2014; Lillard & Eisen, 2017; Montessori, 1959; 2018).

The social interaction theory of Vygotsky maintains that young learners learn from their interaction with people (inter-psychological), and after that, internalise what they have learnt in their personal development (intra-psychological). Environment plays a crucial role in the enhancement of core skills. A group work play-based environment fosters communication, collaboration, creativity and critical thinking, hence the need for group work play-based environment to be properly set up (Brooker et al., 2014; Lillard & Eisen, 2017; Montessori, 1959; 2018).

2.3.2 An in-depth explanation of group work play-based pedagogy

Group work play-based pedagogy is an instructional learning strategy that integrates play into group work during the learning process. When appropriate (dramatic, competitive, physical, constructive, symbolic), playful activities are integrated into group work, learning becomes interesting and engaging for young learners. Over the years, the concept of play has evolved from a mere recreational activity to a philosophical stance of a medium for instruction, an avenue for young learners to express their feelings and understanding of the world around them (Fleer, 2013; 2017).

Young learners are philosophical, hence the curiosity for everything they come across as they explore their environment (Fleer, 2013; 2017). Through playful activities, young learners engage in collection of data and data analysis as they ask the "why", "where", "how", "did" (WHD) questions. Fleer (2017) maintains that play transcends formal learning which implies that learning goes beyond the four walls of the classroom. Integration of play into group work play-based pedagogy can take the shape of group assignment, group project, group competition etc.

Group work play-based pedagogy is an effective learning method that encourages the development of core skills. Still, if not properly planned, the facilitation of group work can be very frustrating and time wasting for learners and facilitators (Hedges & Cooper, 2018; Howard, Miles, Rees-Davies & Bertenshaw, 2017; Wood, 2004). In preparation of group play-based pedagogy, the facilitator needs to consider the physical arrangement of learners, insist on ethical principles that govern the group, discuss their previous experience in group work and the present expectations of the task given to them with

learners (Hedges & Cooper, 2018; Howard, Miles, Rees-Davies & Bertenshaw, 2017; Wood, 2004).

2.3.3 Designing group work play-based pedagogy

Facilitators are to identify the instructional objectives for the learning task. Group facilitators should set out desirable goals they want to achieve through the small group. Group activities should be an excerpt of a scheme of work or class subject contents (Edwards & Cutter-Mackenzie, 2013; Howard, Miles, Rees-Davies & Bertenshaw, 2017; Wood, 2004). Roberson and Franchini (2014) maintain that for group work to be successful, learners in the group must have clarity on the stated learning objectives and the rules that guide group activities.

The learning task of any group must be challenging. Starting with a less difficult task is good in arousing the interest of the learners. However, more challenging tasks should be presented as they progress (Edwards & Cutter-Mackenzie, 2013; Walsh, McGuinness, Sproule & Trew, 2010). Learning becomes more engaging when learning progresses from simple to complex (Edwards & Cutter-Mackenzie, 2011; Walsh, McGuinness, Sproule & Trew, 2010; Wood, 2004). When group members pool their ideas and synthesise their different opinions, it eventually results in a more sophisticated product than it would when done individually (Edwards & Cutter-Mackenzie, 2013; Wood, 2004).

Another important consideration necessary for group work play-based pedagogy is the assigning of a group task that encourages interdependence, involvement and a fair division of labour (Edwards & Cutter-Mackenzie, 2011; Walsh, McGuinness, Sproule & Trew, 2010). Involvement and interdependence of group members give each group member the sense of responsibility as they contribute to the success of their group (Johnson, Johnson & Smith, 2014). The interdependence of group members serves as a motivating factor for group work. During group work, play-based pedagogy, learning materials must be equitably distributed among different learning groups. Facilitators are expected to consider a common reward as an extrinsic motivating factor to promote interdependency in group work (Walsh, McGuinness, Sproule & Trew, 2010; Pyle & Danniels, 2017).

A decision on the size of the group is an important factor while designing group work play-based pedagogy. Ideally, a viable group ranges from 3 - 5 group members. Whereas a 3-member group is suitable for a less complex task, a 5-member group is suitable for a more complex task. However, the key determinant factors for group size are the subject content, learning materials, number of learners in the class, and the size of the classroom (Edwards & Cutter-Mackenzie, 2011; Walsh, McGuinness, Sproule & Trew, 2010; Wood, 2004). Groups of 3 - 5 members strike a balance for diversity, productivity, active participation and cohesion. If group members are less skilful, then group size should be smaller to enable group members to grasp the subject content properly (Burke, 2011).

Facilitators should consider allocating enough time for group work play-based pedagogy. Most teachers complain that group work is time-consuming; however, it is learner-centred and more effective than the lecture method (Edwards & Cutter-Mackenzie, 2013). When group work play-based pedagogy is properly facilitated, it covers a significant subject content better than the teacher-centred method. Therefore, considerable time should be given to group work play-based pedagogy (Edwards & Cutter-Mackenzie, 2013; Wood, 2004).

2.3.4 Monitoring group work play-based pedagogy

Monitoring is another crucial aspect of group work play-based pedagogy. Facilitators are expected to move around the groups to address questions raised by groups and observe the emerging trends from the groups (Edwards & Cutter-Mackenzie, 2013; Walsh, McGuinness, Sproule & Trew, 2010). Emerging trends from groups can become sources of discussion during plenary sessions. Facilitators should avoid interference during group work; the learners should be given enough time to solve the problem given to them (Jaques, 2000).

Facilitators are meant to scaffold learners to the solution of their problem instead of directly giving them the answer to their problem. Do not be in a hurry to share your knowledge about the learning activity as a facilitator. Learners should be allowed to critically think, collaborate and communicate among themselves about what they understand in the task given to them (Paul & Elder, 2019).

The learners must clearly understand your role as a facilitator; or else they will expect you to do their task. The facilitator needs to make them understand that they can solve self-allocated/generated task. The facilitators are expected to build a strong sense of confidence in group members so that they will consider themselves in charge of their group work. Your expertise only comes in during the plenary session, and in providing it, give full credit to what the learners have done, and it will boost/motivate them towards hard work (Edwards & Cutter-Mackenzie, 2011; Walsh, McGuinness, Sproule & Trew, 2010).

2.3.5 Benefits of group work play-based pedagogy in young learners

The use of group work play-based pedagogy increases the productivity and performance of group members. When group members work collaboratively, their output is usually more impressive than that of an individual (Edwards & Cutter-Mackenzie, 2011; Walsh, McGuinness, Sproule & Trew, 2010; Wood, 2004). A wide range of skills can be acquired and developed during practical group activities. Sharing and discussing ideas play a pivotal role in deepening learners' understanding of subject content.

Group work play-based pedagogy develops core skills faster and easier (Walsh, McGuinness, Sproule & Trew, 2010). Interpersonal skills such as speaking, listening, creativity and critical thinking are put to task during group work. When young learners get used to working in groups, it becomes easier for them to adjust and integrate into the society easily. Self-realisation sets in during group work play-based pedagogy. Learners begin to see their strengths and weaknesses as they collaborate with others in the group. Learners are challenged to improve in their areas of weakness as they admire and emulate their peers when doing a particular task (Caruso & Wooley, 2008).

Group work play-based pedagogy helps in breaking down complex content into smaller teachable units for easy comprehension. It helps to conserve energy for the teacher as learners become more active (Caruso & Wooley, 2008). Learners in their creativity provide novelty in problem-solving as they present diverse ideas during group work (Caruso & Wooley, 2008).

Group work gives each member of the group a sense of team commitment. A committed group member supports and encourages the performance of the group and feels involved

in the whole task. However, it is challenging to arrange young learners into groups while managing time appropriately (Caruso & Wooley, 2008).

2.3.6 Strategies to promote group work play-based pedagogy in early grades

Most of the time, the implementation of group work play-based pedagogy can create anxiety in facilitators because working individually is different from working in groups. Group members should be taught how to manage group dynamics as it aids positive experience (Edwards & Cutter-Mackenzie, 2011; Howard, Miles, Rees-Davies & Bertenshaw, 2017; Wood, 2004). According to Martlew, Stephen and Ellis (2011) and Pyle and Danniels (2017), the strategies set out below should be considered for the promotion of group work play-based pedagogy.

Prior to the implementation of group work play-based pedagogy, there should be a pre-plan for that group work. Facilitators need to prepare the group work activity in sequential order. The preparation of group activities should carefully consider who, what, when, where, why and how the group work must be administered (Howard, Miles, Rees-Davies & Bertenshaw, 2017; Wood, 2004). Classroom, playgroup and learning areas should be properly set up, and information about the setting should be communicated to young learners (Edwards & Cutter-Mackenzie, 2011; Howard, Miles, Rees-Davies & Bertenshaw, 2017).

During the implementation of group work play-based pedagogy, facilitators are expected to do group work on time, introduce group members, clearly define roles of group members, focus on one learning activity at a time, review, reverse and arrange the activity sequence (Hedges & Cooper, 2018). Furthermore, time limits should be clearly set; previous group activity should be reviewed if necessary. If the previous group activity is relevant to the present group activity, then it could be used to induce learners to the present group activity (Pyle & Danniels, 2017).

According to Martlew, Stephen and Ellis (2011) and Pyle and Danniels (2017), during the implementation of group work play-based pedagogy, facilitators are expected to motivate the participation of group members, summarise the ideas of young learners, discourage domination of the group by a group member and encourage decision making among group members. Furthermore, facilitators must be assigned the responsibility of

maintaining the focus of the group activity, making conclusive decisions if necessary. They must elucidate ideas and resolve conflicts where necessary, sharing roles and tasks between group members as well as energising group members to face a particular task.

Finalisation of a group work play-based pedagogy activity requires a brief summary of activities done in the group. Record keeping is necessary at this point; therefore, facilitators should help young learners to write down a summary of their group activity while they replicate it in their books (Howard, Miles, Rees-Davies & Bertenshaw, 2017; Pyle & Danniels, 2017). Facilitators are to evaluate learning outcomes and get feedback from learners. Group work activities should be summarised positively by facilitators while preparing the hearts of young learners towards expectation of the next group activities (Hedges & Cooper, 2018; Howard, Miles, Rees-Davies & Bertenshaw, 2017).

Whereas this study concentrates on the enhancement of core skills though group work, Martlew, Stephen and Ellis (2011) and Pyle and Danniels (2017) support this approach as they maintain that effective group work promotes skills such as good communication, flexibility, accountability and respect for other contributors. It helps others to master content, participation, giving and receiving constructive feedback, patience, managing disagreement, motivation and keeping deadlines.

2.3.7 Teachers' challenges in using group work play-based pedagogy for young learners

Teachers are responsible for stimulating constructive interaction among group members. A poorly motivated and rigid teacher who is used to teacher-directed learning finds it difficult to facilitate interactive learning (Gillies & Boyle, 2010). Meanwhile, for some desired learning outcomes, group work play-based pedagogy remains the ultimate teaching strategy for learners (Gillies & Boyle, 2010). However, every teaching strategy has its own strengths and limitations. The challenges facilitators experience in the use of group work play-based pedagogy are usually linked to the teacher, the learner, learning content or environment, among others as discussed below.

Buchs, Filippou, Pulfrey and Volpé (2017) noted that every group work play-based pedagogy activity has its rules, principles and procedure of implementation. Some teachers are not conversant with these principles, whereas others find it difficult to adhere

to the procedural guidelines associated with the implementation of each group work play-based pedagogy (Koutselini, 2009; Sharan, 2010). The role of the traditional teacher also changes to that of a facilitator in group work play-based pedagogy who now monitors groups in action (Brody, 2018; Johnson, Johnson & Holubec, 2008; Sharan, 2010). These facilitators sometimes become anxious about disciplinary problems in groups, as they are not fully in charge of each group (Brody, 2018; Johnson et al., 2008; Sharan 2010).

Group work play-based pedagogy implies that the teacher designates responsibility to learners and delegates leadership to learners in the creation of learner-centred environments (Buchs et al., 2017). The implication of this is that teachers need to develop confidence in the ability of their learners to learn cooperatively. The development of such confidence poses a challenge to some teachers who do not believe in the learners' ability to learn efficiently without their frequent intervention (Baines, Rubie-Davies & Blatchford, 2009)

The integration of group work play-based pedagogy and the curriculum do pose a challenge to teachers. Some school curricula are rigidly structured, and teachers are expected to follow the rigid plan (Gillies, 2008). This is evident in the school time-table allocating slots for all learning activity and learning content and the demand for content coverage before the end of the academic session as it does not encourage the use of group work (Koutselini, 2009; Sharan, 2010). The time necessary for the implementation of play-based group work is seen as excessive (Abrami, Poulsen & Chambers 2004; Koutselini 2009). Teachers report that group work play-based pedagogy is excessively time-consuming as they complain of difficulties in managing time effectively (Gillies & Boyle 2010).

Further challenges teachers face is learner-related. Killian (2009) noted that learners who come from diverse teaching backgrounds and are used to the traditional teacher-centred method struggle to adapt to group work pedagogy. Some learners who are rejected from their group, experience withdrawal, depression and learning inhibition. Learners may find it difficult to contribute meaningfully to group tasks while others may be overbearing in the group. Time may be wasted if the facilitators do not monitor the group effectively. The teacher is therefore expected to consider these learner-related challenges while

preparing and during facilitation. In the next section the researcher elaborated on play-based pedagogies as the second concept of the phrase; group work play-based pedagogies.

2.3.8 Play-based pedagogies and integration of core skills in classrooms

Across the globe, educators have embraced the idea of play in the teaching-learning process; however, its implementation has been a challenge. Fleer (2015), stressed that using play pedagogy in early childhood education is a long process. However, she maintained that there is a need for proper positioning of play pedagogy because teachers are outside learners' imaginary play. Her findings agree with those of Singer, Nederend, Penninx, Tajik and Boom (2004), who suggest that, although there are available studies in the literature on learners' play, little research has examined the role of teachers in the implementation of play pedagogy.

Fawcett and Garton (2005) conducted a study on the effect of peer collaboration on learners' problem-solving ability in Australia. The result indicated that learners who collaborated collectively obtained a significantly higher number of correct sorts than learners who worked individually. However, post-testing indicated that only those learners with a lower sorting ability who collaborated with higher sorting ability peers showed a significant improvement in their sorting ability when compared with the pre-test score. This shows that facilitation of learning using group work play-based pedagogy yields a positive outcome.

In another study conducted by Tolmic et al. (2010) on the social effect of collaborative learning in primary schools in Scotland, it was hypothesised that learners would show improvement in pre- and post-interaction with the several classmates with whom they liked working and playing. The improvements were subjected to the effects of their social context, and it was anticipated that the gains would be greater in single-age classes and rural classes as far as work and relationships were concerned.

Pyle and Bigelow (2015) conducted a research project on play in three Canadian kindergarten classrooms using three class profiles of play-based learning approaches. It was discovered that play was peripheral to learning because of the development of skills mandated by curricular standards. In another classroom, the play was a means for social

and emotional development where the priority was more related to social and emotional development, and in a third class, play was a medium for academic learning. Pyle and Bigelow (2015) concluded that play-based pedagogy was applicable for different purposes in early childhood classrooms in Canada. While junior kindergarten classes emphasised social and emotional development in helping learners achieve independence, senior kindergarten classes had already attained a level of social and emotional development and, therefore, the focus was on academic issues.

Two definitions of play emerged in another Canadian research study on conceptualising play-based learning from kindergarten teachers' perspectives. The first definition was related to social development, while the second one considered both academic and social development through play (Fesseha & Pyle, 2016; Pyle, DeLuca & Danniels, 2017). The findings of Pyle and Bigelow (2015) suggest that even though several participants separated play from learning, learning could be facilitated through play. In addition, participants expressed the concern that the Ontario curriculum did not allow for the full integration and implementation of play-based pedagogy in the kindergarten classrooms.

In Iceland, play-based pedagogy is threatened by "schoolification" or what is called "academisation" in playschool and kindergarten (Gunnarsdottir, 2014). The pressure for play teachers to produce school-ready learners has made them more academic-minded because of the increase in standardisation in learners' evaluation and learning. Whereas "schoolification" or "academisation" advocates the evaluation of learners' development through ready-made fill-out sheets, it has been argued that the use of a systematic format of learner performance ignores the value of teachers' observation of learners during play (Turner, Cawley, Richard, Kirk & Stone, 2018).

In Kuwait, it was found that early childhood teachers are hesitant to integrate digital technologies into play-based pedagogy even when they are competent in using the technologies (Aldhafeeri et al., 2016). Aldhafeeri et al. (2016) studied the integration of digital technologies into play-based pedagogy in Kuwaiti early childhood education. The study found that digital technologies were common in Kuwaiti households as learners of three years of age were already using them, hence, their integration in the early childhood curriculum. However, the teachers were reluctant to integrate and use digital technologies

to facilitate play-based learning because of their personal belief that digital technologies did not belong in a play-based pedagogy.

In South Africa, the importance and integration of play-based pedagogy are on the rise, and this has been recognised by the South African president, President Ramaphosa, in an article entitled *Building the Workforce through Play-Based Learning* (Saturday Star, 2019). Ramaphosa acknowledged that play was not just a right of learners but an instrument that creates space for learners to freely experiment, explore, analyse, tackle and solve problems using their inherent abilities of curiosity and imagination. He believes that the inclusion of play-based learning in the South African curriculum makes South Africa a trailblazer on the African continent. In addition, the Minister for Basic Education in South Africa expressed the government's commitment to ensuring that young learners are prepared for 21st century challenges through the acquisition and enhancement of the 4Cs—collaboration and team-work; creativity and imagination; critical thinking; and communication (Saturday Star, 2019).

There is an increased awareness of play-based pedagogy in South Africa. However, a study concerning play in Grade R classrooms conducted by Aronstam and Braund (2016) in the Western Cape Province revealed that some teachers have little knowledge of play-based pedagogy as they indicated that outdoor play is not assessed. According to them, their responsibility is to monitor learners' play for safety purposes. Ten per cent of the teachers reported that during informal play learners use their imagination in play as they make sand cakes and build castles in sandpits. However, more than 60% of the teachers felt they should guide the play because of its benefits to the learners (Aronstam & Braund, 2016).

In 2010, Edu (2010) was challenged with the quest to find out what was responsible for the poor performance of communication skills among Nigerian school students. His findings showed that there were no diversifications of approaches used in teaching the English language to students. He also noted that the instructional materials were inadequate, besides a poor learning environment in public schools. It is, therefore, necessary for teachers to be capacitated in other teaching approaches that foster learner centredness (Edu, 2010). Similarly, research conducted by Muhammad, Bala and Ladu

(2016) on the appraisal of Primary 6 communication acquisition, indicated that learners' performance in examinations had deteriorated despite the emphasis of government on basic science education. The findings of the research revealed that there was no significant difference between government school pupils and private school pupils or between male pupils and female pupils in the Sokoto metropolis in the acquisition of the basic science skills. It was recommended that science, being regarded as a continuous process, should provide a close relationship and measurement between its process and product. This, however, shows that the acquisition of core skills in Nigeria is on the decrease whilst we are already in the 19th year of the 21st century.

Onu, Eskay, Obiyo, Igbo and Ezeanwu (2012) undertook research on innovation for transformation in Nigeria. The descriptive survey of the research focused on innovation for transformation in Nigerian university education; the implication being to produce critical and creative thinkers. The results showed that most of the current teaching in Nigerian universities were left-brain oriented. Teachers relied more on written and oral modes of testing than on projects and predominantly used the lecture method of delivery rather than technology-associated means. It was recommended that both the curriculum of the tertiary institutions and the retraining of the teaching staff to use right-brain orientation and technology in teaching should be urgently reviewed and that students should be trained to embrace the changes. This research affirms the study of Edu (2010) who noted that some Nigerian teachers do not diversify their teaching strategy, hence the poor performance of students in communication skills.

2.4   CORE SKILLS ENHANCEMENT IN YOUNG LEARNERS

There is no contradiction in saying that life becomes more challenging with the speed of development in the twenty-first century. The high demand for skilled employers and the envisaged effect of the fourth industrial revolution in the workforce has necessitated the acquisition and enhancement of the 21st century skills (Allen & Williams, 2012; Fischer & Zigmond, 2001; Goodspeed, 2016; Siraj, 2017). Young learners are not left behind because, the complex nature of the 21st century demands the enhancement of core skills, which include: communication skills, listening skills, collaboration skills, negotiating skills,

creativity skills and thinking skills (Allen & Williams, 2012; Fischer & Zigmond, 2001; Goodspeed, 2016; Siraj, 2017). A closer look at each of these skills follows.

2.4.1 Communication skills

Communication is simply considered as an act of transferring information from one person to another (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017). The importance of communication skills cannot be overemphasised because life becomes meaningless without interaction. Beginning from conception, the foetus begins to communicate (non-verbally) with her mother. And even when the child is born, everyone expects the first verbal communication—a cry. However, communication develops consciously or unconsciously into a more sophisticated form as learners interact with people and the environment. Njoku (2015) asserts that communication is said to have occurred when agreed symbols are processed and understood between the sender and the receiver (coding and decoding). Communication involves a process that incorporates four major components: sender, channel, receiver and feedback.

The sender is a person who has the message or information in a communication process that needs to be transferred to another person or group. The channel refers to the method or means, such as speaking or writing that the sender prefers to use in transferring message or information. Furthermore, the receiver is the person or group at the receiving end of the process who receives the message from the sender through the selected channel, interprets it and determines if the message or communication is effective in terms of feedback (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017). The need for effective communication demands verbal communication skills which may be spoken skills used in face-to-face discussions, on the telephone, over the radio and on television, whereas non-verbal communication skills are those that refer to body language, gestures and dress (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017). Written communication skills include writing letters and e-mails; printed in books and magazines; digital on the internet; and via other media, while visualisation skills refer to the ability to decipher figures such as graphs, charts and maps.

Learners' self-concepts and social lives develop as they interact with peers, instructors, teachers and facilitators (Sadulloyevna, 2018a, 2018b). Learners who experience

difficulties in communication are more likely to have behavioural problems (Ansari & Gershoff, 2015; Apache, 2005). Many learners with known behavioural problems have been found to have experienced earlier unidentified speech, language and communication challenges (Ansari & Gershoff, 2015; Apache, 2005). Friendships are significant for learners but keeping friends may be problematic if they have poor communication skills (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017). Learners habitually select friends who are good at communicating; those who have difficulty in communication are disadvantaged because they tend to be avoided and their self-esteem and confidence are affected (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017).

The interpersonal dimension of Vygotsky's theory helps people in their recognition and cultivation of quality and effective communication, which in turn yields benefits for them. Cognitively, complex communicators tend to be very successful in life; they enjoy deeper relationship and faster career advancement. Skilful communication also improves the lives of listeners by effactually relaying life-enhancing information that leads to healthier behaviour. Griffin (2001) believes that people who are cognitively complex in their perceptions of others have a greater capacity to communicate effectively to achieve positive outcomes. They can use a rhetorical message or design logic that creates person-centred messages that simultaneously pursue multiple communications. Vygotsky's theory seeks to explain how some people can communicate more skilfully than others to achieve certain goals. It explores social, behavioural, cognitive and linguistic aspects that influence message formation and reception, and it identifies the skills of highly effective communicators and examines how these skills are acquired.

Intra-personal perspective in communication accounts for some advanced forms of social thought and human communication, which are evident when individuals possess cognitive structures that make social thought and action possible. Attention to the thoughts, feelings and needs of others is possible when communicators possess cognitive structures that allow them to recognise the thoughts, feelings and needs of others as relevant impediments to the accomplishment of their own communicative goals (Ansari & Gershoff, 2015; Apache, 2005). Intra-personal aspects of the cognitive theory of human communication describe how human perception deals with encoding, retrieval

and the use of social information which influences the skilful production and interpretation of a variety of social influence messages (Waltman, 2002).

2.4.2 Listening and attention skills

Language is an important tool in every learning process because it is the medium through which teachers and learners interact. Communication skills are important in learners' development because they permit them to function appropriately in society. It is necessary for young learners to be active listeners when developing their communication skills because listening precedes speaking, and it affords learners some academic and social advantages in the future (McPake et al., 2013; Pangaribuan & Manik, 2017).

The importance of communication skills is further emphasised by various researchers in that learners store information as they interact with others, and this cumulates in language skill development. The capacity to communicate is the ability and desire to connect with others by exchanging ideas and feelings, both verbally and non-verbally. Greater development of learners' listening skills resulted in improved vocabulary and communication (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017). Assisting learners to develop listening and attention skills makes it easier for them to communicate with others. Most learners learn to communicate to meet a need or to establish and maintain interaction with a loved adult. As learners develop, they begin to build their vocabulary and improve their grammar and reading abilities. However, it has been shown that a lack of listening skills delays learners' speaking skills because of their inability to listen to what others have to say and make corrections, where necessary (Engdahl, 2011; Hong et al., 2017; McPake et al., 2013; Pangaribuan & Manik, 2017). Writing skills are a challenge for young learners when speaking or reading skills have not been appropriately developed (Pangaribuan & Manik, 2017).

When a child struggles with listening and attention skills, it could signal problems with hearing (Riera & Tenesaca, 2017; Masterson, Themann, Luckhaupt, Li & Calvert, 2016). Such challenges give rise to being hard of hearing; inattentiveness; challenges in taking and following instructions; difficulty in conversing with others; and learning new words (Masterson et al., 2016; Yang, Fang, Xin, Lu & Chun-yan, 2016). Many learners begin to overcome these problems as soon as they start receiving learning support, while others

will need interventions from language specialists (Masterson et al., 2016; Yang et al., 2016). As a result, learners with speech and language problems are at a high risk of experiencing difficulties with reading, writing and spelling (Masterson et al., 2016; Yang et al., 2016).

2.4.3 Collaborative skills

Collaboration is the ability to work efficiently with others on joint tasks; take action with respect to the needs and contributions of others; support and uphold consensus; and co-operate in a win-win situation to achieve a common goal (Kropp et al., 2016; Sawyer, 2017). Darnis (2020), Semenchuk and Samoylyukevych (2020) and Theodosiadou (2019) consider collaboration to be the mutual engagement of participants in a coordinated effort to solve a problem together while Roschelle (2013) believes that collaboration is a coordinated synchronous activity that is a result of a continued attempt to construct and maintain a shared conception of a problem (Sawyer, 2018; Terrazas-Arellanes, Strycker, Walden & Gallard, 2017). According to Lai (2011), collaboration involves participants working together on the same task rather than in parallel on separate portions of the task. In addition to learning collaboratively, classroom norms assist and facilitate learning and represent the behavioural expectations that support the core concepts of trust, sharing, belongingness and respect. A collaborative skill is considered as a specific way in which learners should behave to succeed in learning.

Lamb, Annetta, Firestone and Etopio (2018) believe that collaborative skills are behaviours that help people to work and function properly. It is suggested that teachers should train their learners in the skill of collaboration to enable them to accomplish group tasks. Educators in a variety of educational settings use collaborative approaches in teaching and assessing learners. More recently, educators and policy-makers have acknowledged that the ability to collaborate is an important outcome of learning rather than a mere means to an end (Kropp, Meier & Biddle, 2016). For example, in the 21st century, the ability to collaborate has been identified as one of several learning and innovation skills necessary for post-secondary education and success in the workplace (Lai, Chen, Chiu & Pai, 2011). Collaboration is an idea of engaging people to work together for their mutual benefit to achieve a common goal; it is the cooperation that exists

between two or more people where they learn from one another in the process of working together (Ogunyemi & Ragpot, 2015).

Lamb, et al. (2018) further maintain that collaborative skills are behaviours that help people work and function properly in a team; maintain group ethics, enable team members to absorb and handle pressure and manage disputes (Afurobi et al., 2015). Darnis (2020), Semenchuk and Samoylyukevych (2020) and Theodosiadou (2019) confirm sets of skills that enable collaboration to succeed. believe that the ability to understand other people's view, synthesise questions, reflect on opinions and generate reasons for an action, be patient while listening to other people, integrate ideas and take decisions after proper analysis of a situation, all help in collaborating successfully (Darnis, 2020; Semenchuk & Samoylyukevych, 2020; Theodosiadou, 2019).

Collaboration supports the development of skills that are required from learners for their imminent life accomplishments. School learners can develop many essential skills by engaging in group-work and other forms of collaboration (Curtis & Carter 2017). Collaboration precedes higher retention, better academic attainment, improved self-confidence, and metacognition used to facilitate active learning and promote inclusion among diverse groups (Bowman, Frame & Kennette, 2013; Imperial & Hennessey, 1999; Kennette & Frank, 2010; Kramarski & Mevarech, 2003; Rajaram & Pereira-Pasarin, 2007). Irrespective of what is taught, teachers are likely to encounter some resistance from learners when group-work projects are introduced. Some learners may complain about or criticise the validity of the method of instruction. The effective implementation of group-work requires an adjustment by learners and instructors (Bowman et al., 2013; Imperial & Hennessey, 1999; Kennette & Frank, 2010; Kramarski & Mevarech, 2003; Rajaram & Pereira-Pasarin, 2007; US Department of Education, 1992).

Learners and instructors learn from one another through collaboration in the learning process; facilitating learning through group-work helps develop skills in all learners. Collaboration ensures that learners obtain better support. Instead of reverting to the teacher for answers to every challenge they encounter, learners turn to their knowledgeable peers to help them find quicker solutions to their problems (Terrazas-Arellanes, Strycker, Walden & Gallard, 2017; Sawyer, 2018). Learners also have a shared

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sense of purpose because they work towards a common goal in the group. When learners team up to investigate problems and give an account of their discoveries to the class, they seek evidence to sustain or refute their claims or collect personal experience data on campus in informal surveys (Sawyer, 2018; Terrazas-Arellanes, Strycker, Walden & Gallard, 2017). Learners are also able to generate their own problems or case studies using course content or external scholarly sources.

Alber (2015) suggests steps for supporting deep, meaningful collaboration among learners like establishing group agreement while helping learners collaborate. This implies that there is a need to establish rules and regulations that will guide groups and provide each learner with a voice and a right to speak. Listening is an important collaboration skill because it indicates how each member of a group values the other members. When group members listen, they do not just hear what others are saying but also what they are not saying. The class should learn to generate questions related to any given topic and write them on the board; they decide on the most pressing and interesting ones and discuss with others what makes them important. The types of questions that more often yield the best responses are open-ended, thoughtful and sometimes even daring ones (Alber, 2015).

As discussed earlier, in a group work play-based classroom, the focus shifts from the teacher to the learners. The classroom is no longer a place where the teacher is the expert who pours knowledge into passive learners like empty vessels waiting to be filled, but the learners are urged to be actively involved in their own process of learning. Both teachers and learners should think of knowledge as reflecting a dynamic ever-changing view of the world and their ability to successfully stretch and explore that view (Driscoll, 2005). Nutbrown, Clough, and Atherton, (2013) believe that learners should be much more actively involved in a joint enterprise with their peers and that teachers should create new meaning in the learning process. In support of this, Driscoll (2005) states that in a social constructivist classroom, collaborative learning is a process of peer interaction that is facilitated and structured by the teacher. Discussion is promoted by the presentation of specific concepts, problems or scenarios and is guided using effectively directed questions. Driscoll (2005) believes that teachers should not take the role of the "sage-on-

stage" but that they should act as a "gild on the side", providing learners with opportunities to test the accuracy of their current understanding.

Clifford (2012) upholds that actual collaborative learning should comprise forming group objectives as well as retaining distinct accountability of individuals. Groups become absorbed in tasks if the purpose of the collaboration is properly explained to the understanding of group members. Consideration should be given to group size and diversity of learners to spur on divergent thinking in the learning process. An ideal group size ranges from 4-5, hence a large group creates "freeloading" where not all the members participate. Driscoll (2005) corroborates Vygotsky's theory of social construction while recommending educators to consider the knowledge and experiences that learners bring to the classroom. He further directs educators to allow learners to construct their knowledge through a process of active enquiry, while discovery should be facilitated by providing necessary resources.

Driscoll (2005) advocates active construction of knowledge while scaffolding learners into discovery of concepts. In planning the curriculum for young learners, flexibility should be considered as a rigid curriculum or educational programme will constrain the enhancement of potential core skills in young learners. Learners are to be allowed the time to reflect on their performance and the day's activity because, through reflection, strength and limitations are identified and addressed. Group work allows for reflection, appraisal and construction of knowledge by learners. Driscoll stressed that learners must actively participate in their education, begin their study with pre-conceived notions and know-how to learn or change their learning/thinking style.

Available research suggests that interaction and negotiation are key factors in collaboration skills. The quality of collaborative learning is directly proportional to the quality of interaction and negotiation existing among group members. In facilitating group work play-based pedagogy, members are expected to build a relationship that enhances teamwork. Characters such as trust, tolerance, love and truthfulness are factors that aid the effectiveness of collaboration during group work. Interpersonal problems that arise from disagreements should be handled and settled immediately to avoid strive and friction in the group.

The use of some group work instructional strategies such as jigsaw is a veritable tool for divergent learning and social interaction. This strategy ensures equitable participation of learners as they are grouped first at the home base and progress into the expert group. After that, they regroup in their home base for discussion. The mix of group members that exist in jigsaw allows for an integration of group members from different backgrounds, learning styles, talents, ideas and experiences. Studies have shown that mixed aptitude groups tend to learn more from each other and foster the achievements of low performers. Groups should be rotated in order for learners to have further opportunities to learn from others.

2.4.4 Negotiation skills

Group members should learn to negotiate amongst themselves. Members who speak the loudest and frequently assert themselves may say the most, but that does not mean they will convince the group of anything. A good negotiator listens well; is patient and flexible; points out shared ideas in group agreement; and thinks under pressure (Alber, 2015). In terms of creating a highly collaborative classroom, teachers should model listening, paraphrasing, artful questioning and negotiation at every opportunity. In a teacher-centred classroom, the teacher produces learning experiences for the learners; but in a learner-centred class, the teacher only facilitates learning experiences. It is, therefore, expected that learners should be taught the skills that will help them follow the guidance of the teacher.

2.4.5 Creativity skills

Creativity is considered to be an act of turning new and imaginative ideas into reality (Bloom & Dole, 2018; Goodliff, Canning, Parry & Miller, 2017). It is characterised by an ability to perceive the world in different ways to connect with hidden patterns in the phenomena under study which seem to be unrelated but generate solutions (Goodliff et al., 2017; Sawyer, 2014). Two processes are involved, namely thinking and then producing. If a person has ideas but does not act on them, that person is imaginative but not creative. Robson (2014) asserts that creativity encompasses identification of a problem, solving the problem or searching for solutions through formulating hypotheses, adapting and retesting of hypotheses before final communication of results. The process

of bringing something new into being requires passion and commitment to create an awareness of what was previously unknown, and points to new life (Naiman, 2014). According to Mumford, Giorgini, Gibson and Mecca (2013), over the last decade scholars have reached general agreement that creativity involves the production of a novel, useful product. Kaufman and Sternberg (2010) maintain that creativity is the production of something original and worthwhile. Creativity is the process of bringing an imaginative idea to life that is beneficial to individuals in society and satisfies creative minds (Mansy, 2015).

Montessori (2018) and McMahun (1997) maintain that learners learn best through hands-on real-life experiences grounded in a social context. Piaget (1973) asserts that learners must constantly create learning experiences. To do this, they must use the most innovative and creative techniques as they construct invisible ideas and relate them to other ideas in their minds. Smith (2012), on the other hand, emphasises that creativity is an aspect of the learning process that encourages learners to experience first-hand environments or practices. These experiences provide them with consistent, reliable knowledge which they may use to design, interpret, plan and investigate in terms of hands-on learning. The learning process, according to Smith (2012), begins with carrying out a particular action and then observing the effects of the action.

2.4.6 Thinking skills

Critical thinking is thinking about things in specific ways to arrive at the best possible solution to problems in the circumstances of which the thinker is aware (Michael, 2014). It is a way of thinking about whatever presently occupies individuals' minds so that they may come to the best possible conclusion (Michael, 2014). According to Robson (2014), critical thinking is a way of thinking about different things simultaneously; it is not just the accumulation of facts and knowledge or something that can be learnt once and then used in that form forever, such as the multiplication tables learnt and used in school. Halpern (2014) believes that critical thinking is the ability to think clearly and rationally and understand the logical connections between ideas. Critical thinking may also be described as the ability to engage in reflection and independent thinking.

Furthermore, critical thinking is referred to as a personal or independent way of thinking that involves analysing ideas, connecting dots, reflecting on evidence or facts and deductively arriving at a best believable conclusion (Halpern, 2014). Critical thinking is also considered to be deep thoughts as a means to find the best solution to a pressing problem or need. Scheffer and Rubenfeld (2001) see critical thinking skills as analysing and separating or breaking a whole into parts to discover its nature, functions and relationships. It is also applying standards; judging according to the establishment of personal, professional, or social rules or criteria; discriminating; recognising differences and similarities in things or situations; and distinguishing carefully between categories and ranks.

Hove (2011) researched developing critical thinking skills in the high school English classroom in Menominee, a township in a native American tribal area in the US. The study aimed to analyse the current literature on the topic and to explore strategies for developing critical thinking skills in high school learners. The research was undertaken to assist in implementing a structured approach to teaching critical thinking skills in high school English classrooms. Sophomore students in Grades 9 to 12 who had enrolled for ten courses participated in the study. The instrument used for measuring critical thinking ability and progress was an assessment after they had read Chapters 5 to 8 of a novel, *Snow Falling on Cedars* in class. The data collected turned out positive as students' responses in terms of a critical thinking strategy of instruction using an inferential instrument were significant.

In 2013, Agboze, Onu and Ugwoke (2013) researched the enhancement of critical thinking skills of vocational and adult education students for entrepreneurship development in Nigeria. The findings of their study showed that business and occupation are becoming more reliant on the cognitive capacity of workers who are well-grounded in critical thinking skills. Furthermore, it was found that the ability to analyse, evaluate and challenge assumptions, information and opposing points of view are important critical thinking skills required by students. The study also identified many strategies for enhancing critical thinking skills of students to include debate, group discussion, solving numerical problems and puzzles, among others. Based on the findings of their study, the

researchers recommended that capacity-building programmes should be regularly organised for lecturers so they can teach their students critical thinking skills effectively.

Critical thinking learners are presented with rich opportunities to solve problems and exercise their own independence daily, during which they can safely explore the world (Clarence, 2018; Robson & Hargreaves, 2005). Problems, such as physical challenges, social relationship issues and understanding how things work are often seen to be minor, but they provide excellent opportunities for using practical critical thinking skills. Critical thinking should be purposeful, self-regulatory and judgment which results in interpretation, analysis, evaluation and inference. It should also allow the explanation of evidential, conceptual, methodological, soteriological and contextual considerations upon which that judgment is based (Gokhale & Machina, 2018; Halpern, 2013; McPeck, 2016). Critical thinking is a liberating force in education, and it is a powerful resource in personal and civic life as it seeks or searches for evidence, facts and knowledge by identifying relevant sources and gathering objective, subjective, historical and current data from those sources.

Critical thinking is the catalyst for mind transformation because humans eventually act out what they think in their minds. The ability to take charge of the mind is a pointer to the sustainability of life itself (Gokhale & Machina, 2018; Halpern, 2013; McPeck, 2016). Critical thinking plays an essential role in education as it facilitates and coordinates every learning outcome in education. When learners begin to think critically, some cognitive perspectives and aptitudes such as proficiency in history, science and mathematical values, which are necessary for everyday life, are developed (Gokhale & Machina, 2018; Halpern, 2013; McPeck, 2016). Whereas critical thinking is not an intrinsic part of an educational system, educators are encouraged to harness the critical thinking abilities of learners through systematically designed learning (Robson, 2014).

2.4.7 Strategies to develop critical thinking skills

Young learners are capable of learning some fundamental critical thinking concepts and skills despite being largely egocentric; learners can begin to think about how their behaviour affects other people (Halpern, 2013). Thinking divergently has to begin in young learners as they start applying intellectual standards to their thinking, such as

clarity, accuracy, reference and logicality (Dayton, 2009). Intellectual virtues that include intellectual perseverance, intellectual humility and intellectual integrity are developed in the process (Elder, 2009). Fran and Elder (2010) suggest the following ways to develop critical thinking in learners:

- Encourage young learners to play in such a way that it avails them the opportunity to put their thinking to test. Young learners do carry out experiments to satisfy their curiosity about a phenomenon around their environment when they play. Such experimentations include dropping a rubber and metallic spoon in a basin of water to see why the rubber spoon is not sinking. They observe and ask questions on what makes the kite fly high. Critical thinking fosters philosophical questions in the minds of young learners that can easily be triggered when they are engaged in play.

- Assist young learners in seeing themselves as problem solvers and thinkers by asking open-ended questions rather than automatically giving them answers to questions they ask. Help them think critically by asking questions in return, such as: "What ideas do you have on this?" "What do you think is happening here?" Respect their responses, whether they are considered correct or not and use phrases like: "That is interesting. Where do you think we might get more information about that?" Do not solve all problems for learners immediately; ask questions that will provide sufficient information, so that learners do not get frustrated, but not enough information to solve the problem for them.

- Help them develop hypotheses by enabling them to reason about possible outcomes to a problem if they apply a certain solution. For example, ask questions and make suggestions, such as: "What do you think will happen? Let's predict what we think will happen next." Encourage learners to think in new and different ways by allowing them to think differently so they can develop their creative problem-solving skills. Ask questions like: "What other ideas can we try?" Encourage them through their suggestions, like: "Let's think of other possible solutions."

- Support their development of critical thinking skills by guiding them to look for more information. Pose further questions, such as: "How can we find out more? Your

dad knows a lot about this, will we ask him?" "Let's try searching on the computer?" Of course, there are times when teachers are not able to spend much time with learners to help them reach an answer on their own. At those times, it is permissible to take shortcuts. Learners also learn from observing how teachers solve problems; however, when they take time to allow the learners to think through problems, that strategy will be hugely helpful in developing the learners' critical thinking skills in the long term.

2.4.8 Summary of strategies to enhance core skills

For young learners to be creative and innovative, appropriate strategies should be provided as a focus on learners' education. Elmansy (2015) suggests that while educationalists vary in their capacity to institute and implement creative teaching methods and curricula, they could easily adapt their teaching methods in terms of promoting creative thinking.

Teachers should encourage learners to find answers to problems on their own—this is also called the Pestalozzi method—which is unlike the general model of giving them direct answers to questions. This approach helps learners observe, imagine, judge and reason. Learners should learn, and teachers should observe. However, the current Nigerian educational system depends on teacher-driven lessons, where teachers lead the class learning with no opportunities for learners to develop their skills and capacity to be innovative (Afurobi, Izuagba, Ifegbo & Opara, 2017). In contrast, the Montessori method aims to give learners a space for self-learning while the teachers observe their progress (Cossentino, 2017; Montessori, 2013).

Learners should sit at round tables, known as the Harkness style of teaching, that aims to turn the classroom into an open conference style of interaction rather than the traditional one-way seating on desks (Cossentino, 2017; Montessori, 2013). Learners should sit around tables to encourage them to take responsibility and share their opinions, instead of following the linear teacher-driven class.

There should be a focus on one project instead of multiple projects; this will enable learners to put their knowledge in the form of questions and lead to an assessment of the

project or problem. This model, called project-based learning, combines knowledge in one large practical project. Providing knowledge in the form of facts positions learners' thinking without inhibiting creativity and the ability to imagine. Project-based learning focuses on concepts that help learners find solutions through exploring ideas and evaluating the best answers (Bloom & Dole, 2018; Sawyer, 2014).

Designing thinking tools and methods that aim at unleashing creativity and exploring innovative solutions in the context of group discussion and brainstorming should be used (Sawyer, 2018; Siraj, 2017). Educators should select the proper design thinking method based on learners' ages and the targeted outcome of each brainstorming discussion (Chien, 2017; Clarence, 2018; Mortimore, 1999).

2.5   SUMMARY

The review of the literature in this chapter explored themes, such as the preparation for group work play-based pedagogy and the integration of core skills and play-based pedagogy in classrooms; the importance of core skills enhancement in young learners, Vygotsky's theoretical framework and its rationale for the study. In terms of these themes, an in-depth review of the literature that is related to the study was given.

From the relevant applicable literature that was reviewed, there was evidence of studies related to group work in high schools and universities as well as research on play-based pedagogy that was done in areas such as ICT, the role of teachers and theorising about play-based pedagogy. However, it was evident that there were no studies on capacity building for pre-primary and primary school teachers concerning the use of group work play-based pedagogy to enhance core skills in young learners. This study, therefore, aims at bridging the gap in knowledge concerning teachers' capacity building, more particularly, Nigerian teachers' teacher-centred learning approaches by suggesting ways and means of preparing pre-primary and primary school teachers in the use of the learner-centred teaching approach.

CHAPTER THREE: METHODOLOGY
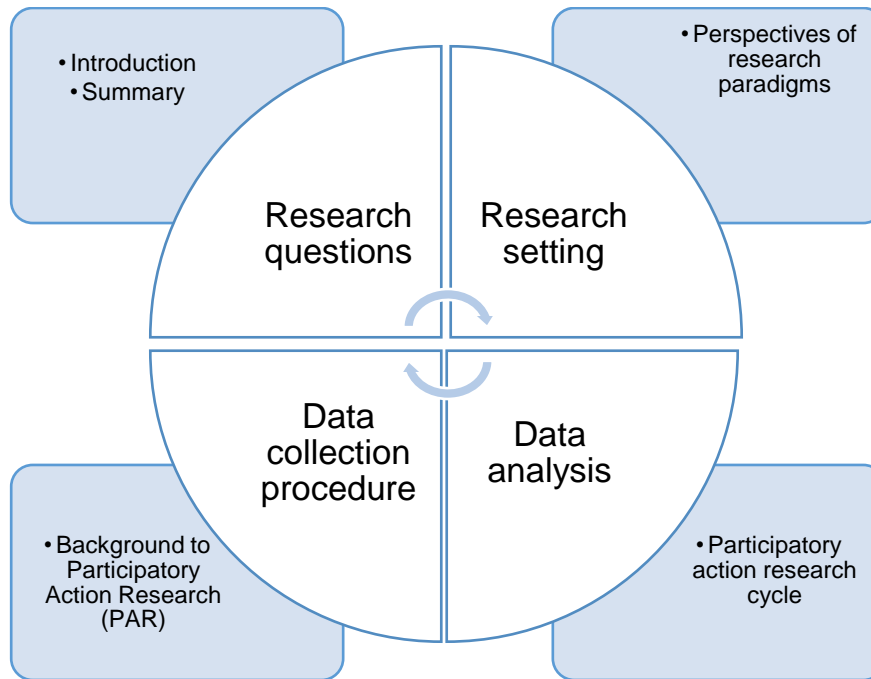
Figure 3.1: Outline of Chapter 3

3.1 INTRODUCTION

In Chapter 2, the theoretical framework for this study was described on the premise of strengthening teachers' capacities to use group work play-based pedagogy to enhance the core skills of young learners. Core skills that lead to group work such as those given in Figure 3.2 were already described in Chapter 2.
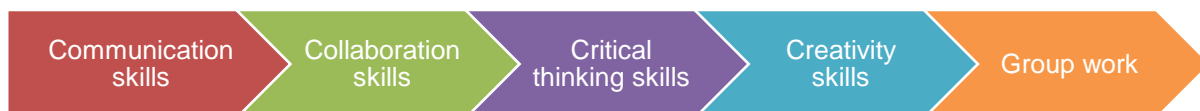
Figure 3.2: Core skills in group work

In terms of the literature reviewed, it was noted that young learners should be at the centre of the learning process (Aronson & Patnoe, 2011; Brame et al., 2016; Brock et al., 2014;

Henson, 2003). Therefore, this requires the active participation of young learners using group work (Fleer, 2013; Joubert, 2016).

A research methodology is a systematic procedure that researchers adopt to help them identify, select, process and analyse a study's collected data (Creswell, 2014; Maree, 2010). Fundamentally, a research methodology seeks to explain how data was generated and analysed. The importance of a research methodology cannot be overemphasised because it determines the mechanism for data collection. This chapter, therefore, examines the research design, the processes of how data related to the research topic was collected, collated and analysed. Related to the focus of this study, the research questions guided my investigation.

3.2 RESEARCH QUESTIONS

The main research question and sub-questions provided the focus for the methodology used in this study.

3.2.1 Main Question

The main research question was:

How can teachers' capacity be strengthened to use group work play-based pedagogy to enhance the core skills of young learners?

3.2.2 Sub-Questions

The sub-questions that supported and informed the main question were the following:

- What previous knowledge, skills and practice do teachers have and demonstrate in implementing group work play-based pedagogy?
- What strategies can enhance teachers' knowledge and skills to implement group work play-based pedagogy in their lessons?
- How would a professional development programme assist teachers to implement group work play-based pedagogy to enhance core skills in young learners?

A semi-structured interview was conducted with all the teacher participants, individually, to prompt responses to answer the first sub-question. At the same time, a professional

development programme and workshops for teachers were used to generate data as guided by the second and third sub-questions. From the emergent findings, the researcher was able to answer the three sub-research questions and the main research question.

3.3 PERSPECTIVES OF RESEARCH PARADIGMS

The perspective of the research was qualitative with an interpretivist paradigm. A research paradigms may be viewed as sets of assumptions, propositions and beliefs that represent the worldview of the researchers' approaches to research (Maree, 2010; Okeke & Van Wyk, 2015). There are two main lenses through which research paradigms are viewed, namely: the positive ideology and the interpretivist paradigm. In the positive ideology, researchers believe that a research phenomenon that is being investigated should be measurable, objective and possess a single truth (Creswell, 2014; Okeke & Van Wyk, 2015). The interpretivist paradigm on the other hand, argues that there is no single truth to a phenomenon, but it is subjective because people view things differently. Researchers who favour the interpretivist view do not expect uniformity, coherence and stability in people's perceptions of any phenomenon (Creswell, 2014; Maree, 2010; Okeke & Van Wyk, 2015). This researcher, therefore, adopted the interpretivist paradigm.

3.3.1 Ontology

Ontology is a branch of metaphysics in philosophy, which deals with the nature of reality or the overall nature of how real something is (Creswell & Creswell, 2017; Creswell, 2014; Denzin & Lincoln, 2011). Ontology seeks to establish the true state of the existence of things and therefore, asks such questions as; what things exist? In what category does the existing thing belong? Is the reality of an existing phenomenon quantifiable or qualifiable? (Creswell & Creswell, 2017; Denzin & Lincoln, 2011).

The positive ontology belief is that there is a single truth to a phenomenon which may be quantified and measured (Denzin & Lincoln, 2011; Lincoln, Lynham & Guba, 2011). In contrast to the positive ontology, belief is the social aspect of ontology which deals with the existence of human phenomenological levels that are created through social interaction which transcends individuals' motives and actions (Frey & Cox, 2015; Bickhard, 2014).

Social reality is characterised by the activities in which humans engage, such as cocktail parties, football games, political rallies and activities in schools (Burrell & Morgan, 2017; Gergen, 2012). The implication of the ontological assumption to this study is that the phenomenon under investigation deals with the reality that surrounds human existence. As such, it is classified in the context of social reality. This is supported by Vygotsky's theory of social interaction and development (Joubert, 2016; Vygotsky, 1968).

3.3.2 Epistemology

The epistemological aspect of philosophy takes the nature of knowledge itself as well as its possibility, scope and general basis into consideration (Denzin & Lincoln, 2011; Schmitt, 2017). In search of knowledge, it seeks to discover how and with what method researchers approach their search for knowledge. Epistemology considers how researchers systematically separate true ideas from false ideas and how they uphold and support what is and what is not true knowledge (Bryman, 2016; Denzin & Lincoln, 2011; Schmitt, 2017).

Furthermore, epistemology, through critical thinking, synthesises the truths which researchers seek from their assumptions and the beliefs that they hold (Denzin & Lincoln, 2011; Lincoln et al., 2011). Therefore, the role of epistemology as a philosophical assumption in this study was that it enabled me to systematically collect and synthesise data that resulted in adding new knowledge to the existing body of knowledge.

3.3.3 Axiology

Etymologically, axiology comes from two Greek words "axio and logy" which translate to the study of value. As a branch of philosophy, it judges the value of the phenomenon being investigated (Brooker et al., 2014; Denzin & Lincoln, 2011; Dudovskiy, 2018). The value axiology place on research determines the quality accorded to the research. The axiological assumption for this study hinges on the value and quality ascribed to the research. This is done when the research is viewed through the lens of the findings, the outcomes emanating from the main research question and sub-questions. The value added to the pedagogical approach used in facilitating learning with young children automatically indicates its axiology.

3.3.4 Ethics

The term ethics is traceable to the Greek word *ethos*, which means custom or habit. It deals with inter-human behavioural relationships which are imbedded in principles, moral values or moral philosophy, and acceptable practices concerning how people are expected to behave or act (Haynes, 2016; Peters, 2015). Ethics involves systematising, defending and recommending right and wrong conduct (Haynes, 2016; Peters, 2015).

In this study, ethical principles and considerations were duly followed and, therefore, ethical approval was obtained from the University of Pretoria with letters of assent and consent from participants being approved before the commencement of the research.

Table 3.1 contains a summary of the philosophical characteristics of research paradigms. Though quantitative research paradigm was not employed in this study, it was however included in table 3.1 to give credence to the researcher's choice for the qualitative paradigm and how they related to this study (Creswell, 2014; Maree, 2010; Okeke & Van Wyk, 2015; Zhang & Wildemuth, 2016).

Table 3.1

The philosophical characteristics of research paradigms

Beliefs and assumptions	Positive approach (Quantitative)	Interpretivist approach (Qualitative)
Ontology **(Nature of reality)**	Belief in single, tangible, neutral, impartial and objective reality.	Belief in multiple dimensions to reality. Reality is socially constructed and is subjective.
Epistemology (Nature of knowledge)	Researcher and participants are independent of one another (dualism) in the course of research leading to knowledge.	Researcher and participants interact and relate with one another in the course of research leading to knowledge.
(Aim of knowledge)	To increase predictive understanding of the phenomenon.	To provide a deep insightful understanding of the phenomenon.
Axiology (Roles of values)	Values are placed on observable phenomena that are different from personal ideas and values.	Values are placed on personal ideas and are integrated into the phenomenon under investigation.
Ethics (Interaction between researcher and participants)	There is a distant interactive relationship between the researcher and the participants. Participants' consent was sought and obtained.	There is a closer interactive relationship between the researcher and the participants. Participants give their consent before their involvement.
Methodology	Quantitative in nature.	Qualitative in nature.

(Creswell, 2014; Maree, 2010; Okeke & Van Wyk, 2015; Zhang & Wildemuth, 2016).

3.4 RESEARCH SETTING

Three schools were purposively sampled from public pre-primary and primary schools in the Owerri educational zone of Imo State, Nigeria. Imo State is one of the thirty-six (36) States in Nigeria. There are three (3) educational zones in Imo State, namely, Owerri, Orlu and Okigwe. The Owerri educational zone has the highest student concentration because it serves as the capital of the State, hence, more civil servants reside in the area. The State is located in the rain forest zone of Nigeria, West Africa. It can be located between latitude 50 12' and 50 56' North of Equator, and longitudes 60 38' and 70 25' East of the Greenwich Meridian. The Owerri Educational Zone stretches into the Eastern, Western and Southern areas of Imo State. The maps below show more details of the research site location as seen through the lens of map indicators.

Adapted from google.com

Figure 3.3: Map of Africa, with the geographical position of Nigeria indicated with red

Adapted from google.com

Figure 3.4: Map of Nigeria, with the geographical position of Imo State, indicated with red

Adapted from google.com

Figure 3.5: Map of Imo State of Nigeria
UIODF

3.5 SAMPLING OF PARTICIPANTS

The researcher purposively sampled three teachers from each of three public pre-primary and primary schools that were selected in the zone. Incidentally, all nine teachers were females. The criteria used to purposively sample teachers in the selected school was that they teach young learners aged 5 - 8 years. The selected teachers participated in the semi-structured interviews and the participatory action research (professional development programme). The lowest qualification of these teachers was the Nigeria Certificate in Education (NCE) with the maximum being a Bachelor's degree (B.Ed. Hons). Some of the teachers, however, were not specialists in early childhood education but did some compulsory courses (modules) of early childhood education during their training as teachers. The participants' years of teaching experience ranged from 5 - 30 years.

3.6 BACKGROUND TO PARTICIPATORY ACTION RESEARCH (PAR)

The ingenuity of action research is largely accredited to Kurt Lewin who was a social scientist in the 1940s. Lewin (1890-1947) maintains that careful, collaborative enquiry by

researchers is the best approach to facilitate and improve their practice. As a social scientist, Lewin was apprehensive about the problems that characterised his society in the 1940s, especially the crises and conflicts that were associated with immigration in the United States (US); thus, he looked for a possible solution to the problem (Okeke & Van Wyk, 2015).

Lewin believed that a problem could be solved if the problem-solver/researcher completes the cycle of identifying the problem; formulating a plan to solve the problem; observing the outcome of the plan and then determining if any further action is required. This three-step spiral process of planning by a single researcher or teacher which consists of (a) investigation or fact-finding, (b) taking-action and (c) evaluating the results of the action – which determines if further action is required—is what is considered to be action research. However, when practitioners, such as teachers, collaborate with the researcher in the planning and implementation of a plan, it becomes participatory action research (Creswell, 2014; Okeke & Van Wyk, 2015).

3.6.1 Participatory Action Research (PAR)

Participatory action research is collaborative research that involves a group of people researching a specific topic. In collaborative research, more than one person is involved in the implementation of the new programme. Typically, a group of learners—larger than just one class–is tested, and the results are analysed. In many instances, collaborative research involves both the teachers and the principal of the school (Gingerich, Kim, Stams & Macdonald, 2012). This type of research is characterised by the collaboration of many people working jointly on one project. Joint collaboration often offers more benefits to the participants.

Participatory action research (PAR), which some researchers refer to as collaborative action research, is one of the branches of a qualitative research methodology which is a sub-set of action research (Gingerich, Kim, Stams & Macdonald, 2012). As a branch of qualitative research, it synchronises techniques of observing, documenting, analysing and interpreting characteristics, patterns, attributes and the meaning of a human phenomenon under investigation (Gingerich, et al., 2012).

As a sub-set of action research, participatory action research is geared towards learning-by-doing that involves the identification of the problem, reflection and brainstorming on the problem with others as well as charting a plan for the possible solution to the problem. This is followed by acting on the plan and observing the implementation of the plan with others to see how successful it was. If it is deemed unsuccessful or unsatisfactory, then the group will re-plan and repeat the whole cycle until the desired outcome is achieved (Ary, Jacobs, Irvine & Walker, 2018; Herr & Anderson, 2014).

In this study, the researcher chose to use participatory action research because it helps teachers discover a more effective pedagogy that they can use in developing core skills in young learners. The pedagogy brought about a positive change and improved the phenomenon under investigation. It enhanced collaboration, discussion, polling skills and collective reflection that are indicators of core skills. PAR gave the participants opportunities for self-realisation, contribution and the production of new knowledge in terms of its democratic nature. It allowed participants who had a common stake in the phenomenon being investigated to engender it.

3.6.2 Characteristics of Participatory Action Research

According to Creswell and Creswell (2017) and Glanz (2014), participatory action research is characterised by practical discussions; it deals with real-life situations and, therefore, solves concrete problems. The development of partnership brings researchers, teachers, learners and those who are working towards achieving a set goal together. It deals with significant needs and therefore focuses on improving the status quo. It develops a systematic and organised approach through which researchers can establish a theory (Creswell & Creswell, 2017). PAR uses different and appropriate methods to address social issues while considering the participants.

The cyclical nature of participatory action research allows for the clarification of issues that leads to a deeper understanding of the problem and more meaningful outcomes (Creswell & Creswell, 2017). The active process of PAR has been designed to generate change in small steps. Its flexible methods of data collection and interpretation are refined in terms of the understanding gained during the research process (Glanz, 2014). PAR usually forms an integral part of a teacher's normal daily practice.

3.7 DATA COLLECTION PROCEDURE

In this study, data collection was done through semi-structured interviews and participatory action research workshops. The semi-structured interview questions were formulated to elicit responses to Sub-Question 1 which gave credence to the true situation of the phenomenon being investigated; while the participatory action research allowed for a programme plan that was used in solving the identified problem. In addition, observation, field notes and photovoice were considered indispensable during the data collection process.

3.7.1 Semi-Structured Interview

Generally, interviews are aimed at eliciting responses from participants concerning their knowledge or perspectives of understanding of the phenomenon being studied (Barnes, 2018; Zhang & Wildemuth, 2016). The researcher was goal-oriented in the semi-structured interview process. The implication of this was that the researcher structured the interview in a way that addressed the research phenomenon under investigation (see Appendix B: Semi-Structured Interview Schedule). The semi-structured interview which formed the baseline assessment was done once and thereafter, workshops on professional development of teachers on the use of group work play-based pedagogy followed. The workshops were done within the interval of three (3) weeks for a period of four (4) months. In this research, there were six different stages involved during the facilitation of the interview with the participants. The stages are reflected in Figure 7 below – followed by a discussion of each stage.

Figure 3.6: Semi-structured interview procedure

3.7.1.1   Stage 1: Arrival, familiarisation and courtesy

The first stage was the arrival stage—the participants and the researcher arrived at the research site where the semi-structured interviews took place. This first contact was characterised by familiarisation between the group of participants and the researcher, and conversation amongst participants. This helped the researcher to lay a sound foundation for the intended research. It was done in a friendly way; the researcher assured the participants and informed them that they were in-charge since their wealth of experience was needed in the research. The researcher tactfully avoided giving any impression that may have connoted participants facing interrogation by a critical panel. This first stage was very important as it further determined the tone of the teacher-participant responses in the research process.

3.7.1.2 Stage 2: Introducing the research

In this stage, the researcher interacted more closely with the participants and introduced the research topic to them. The nature and purpose of the research was made clear to the participants, and they were given the opportunity to ask questions where necessary. the researcher also used the opportunity to request maximum support from the participants in the research process while reaffirming to them our adherence to ethical procedures - as stated in the letters they had received and signed earlier.

3.7.1.3 Stage 3: Semi-structured interviews begin

At this stage, participants settled down in their seats while the semi-structured interview questions which were meant to elicit a response of their previous knowledge on the use of group work play-based pedagogy and answer booklets were handed to them. The semi-structured interview questions that were used passed through quality control measures and, therefore, no misinterpretation of the interview questions was anticipated. However, there was an opportunity for further clarification of questions in Stage 4 if there was any need to do so from individual participants. There were no personal data questions that might have inhibited participants' responses or have caused them any emotional or psychological stress or discomfort. Even though they were to respond to the questions within two hours, they were allowed to take as much time as they would require in responding to the questions.

3.7.1.4 Stage 4: Body of the interview

This stage dealt with further guidance and responses to questions that were not clearly understood by the participants. There were no obstructions, barriers and challenges that the participants faced during the interview process; hence the interview session was successful. Also, the researcher collected both the completed answers of the interview questions as written in the answer booklets at the end of the interview session.

3.7.1.5 Stage 5: Ending the interview and appreciation

After collecting the interview materials, the researcher warmly thanked the participants for their time and for responding to the questions, and also expressed gratitude for their

support. In doing this, the researcher helped them move away from the interview mode by giving them a further opportunity to discuss and share their thoughts with one another.

3.7.1.6   Stage 6: End of Interview

During this final stage of the interview session the researcher called for a volunteer from the participants to give a vote of thanks on their behalf and with the vote of thanks, the semi-structured interview ended.

The semi structured interview session wherein the previous knowledge of the participants on the use of group work play-based pedagogy was examined, formed the baseline assessment into the introduction of the participatory action research.

3.8   PARTICIPATORY ACTION RESEARCH CYCLE

In this research, the participatory action research cycle was seen as a unique data collection strategy as it involved a whole process. The process of data collection involved different stages and several workshops for discussion concerning the on-going research investigation. In the participatory action research cycle, six working phases, which are described in Figure 3.7 below, were adopted. These six stages were adopted for the workshop sessions wherein teachers were capacitated on group work play-based pedagogical approach.

Adapted from **https://www.semanticscholar.org**
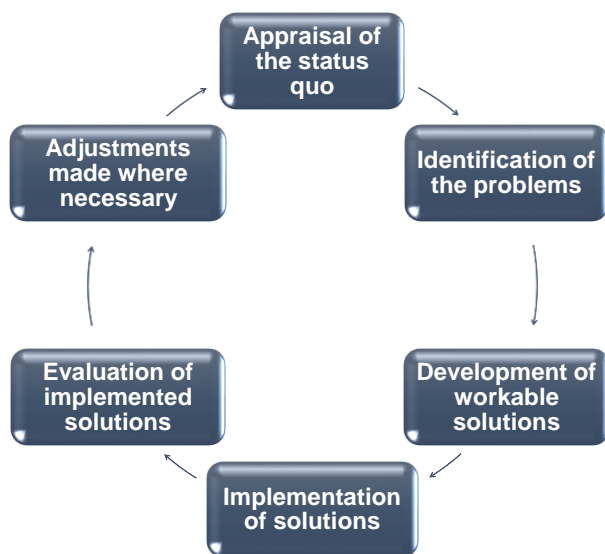
Figure 3.7: Participatory Action Research (PAR) cycle

3.8.1 Introduction and setting the research pace

With the arrival of participants at the workshop venue, the workshop commenced with greetings and warm introductions. The researcher also highlighted the research topic and background information related to the purpose of the study. The participants were requested to introduce themselves, stating their names and the schools they represented. The researcher encouraged some light interjectory while the individual introductions continued; this helped to keep the group warm, friendly and alert. For proper coordination during workshops, rules guiding the workshops were anonymously generated and agreed upon by all the participants. The participants were further motivated by informing them of the benefits they stood to gain as teachers by their full participation.

3.8.2 Phase 1: Appraisal of the status quo of the research problem

The participants were introduced to the research problem under investigation. This was done by prompting them and by raising questions that made them reflect on their previous knowledge about play when they were young. Participants were able to differentiate between play during their time as young learners and what play is for the young learners of today. The group then identified the gap that the research topic is meant to address— strengthening group work play-based pedagogy to enhance core skills in young learners.

3.8.3 Phase 2: Identification of the problem

The outcome of the semi-structured interview that was responded to in Stage 3 (see section 3.7.1.3), was that, the need for strengthening group work play-based pedagogy to enhance core skills in young learners was clearly identified. There was a consensus among participants that the core skills of young learners needed to be enhanced. This led the participants to the next point of asking "how" these core skills could be enhanced, considering the gaps created by an inadequate pedagogy.

3.8.4 Phase 3: Development of workable solutions

This was the phase where the participants were expected to brainstorm workable solutions to the identified problem. Although the researcher planned to prepare for group work activities that would address the problem under investigation, the participants were

given the opportunity to suggest possible solutions. Their suggestion on the need to enhance core skills of young learners led the researcher to introduce group work play-based activities (jigsaw, think-pair-share, and buzz group) that could practically enhance core skills among young learners.

3.8.5 Phase 4: Implementation of solutions

The participants were divided into groups to participate in group work activities, such as think-pair-share, jigsaw and buzz group. Subject content such as sources of water supply (health sciences curriculum), transportation (civic education curriculum), mathematical puzzles and generation of words from a single word (English language curriculum) were used during group work play-based activities.

3.8.5.1   Jigsaw

The jigsaw classroom technique is an approach to learning that Aronson and Patnoe (2011) and his graduate learners developed to solve the problem of violence between schools in Austin, Texas, in the US. The technique was designed to defuse inter-group tension and promote self-esteem among learners (Aronson & Patnoe, 2011; Drouet, Saugy, Millet & Lentillon, 2018; O'Leary, Barber & Keane, 2018).The researcher deemed this technique relevant to the study because it enhances collaboration, communication, creativity and critical thinking. The application of jigsaw in the classroom involves learners being divided into small mixed-ability groups that work co-operatively on a given task.

3.8.5.2   Plan for implemented of jigsaw

The plan for the implementation of jigsaw was first implemented in the workshop with the teachers who are the primary participants and thereafter, teachers replicated same in their classrooms with young learners. Teachers were at liberty to use the jigsaw method and the other methods which they learnt from the workshops to facilitate any learning content of their choice. Details of the various learning contents teachers used while facilitating learning with jigsaw, think-pair-share and buzz group are appended in (see CD Appendix H, I and J). The implementation of jigsaw with teachers was as follows:

1. **Preparation**—the researcher selected the Mathematical topic "Addition" to be taught from the scheme of work (curriculum). The researcher prepared the

instructional materials in a way that enabled the researcher to generate sub-topics that teachers could brainstorm concerning the phenomena for in-depth discussions.

2. **Introducing the homegroups**—teachers were divided into three learning groups which was called the "homegroup". Each member from the homegroups became the representative of that homegroup in the expert group. They were to be responsible for discussing and noting new knowledge gained in the expert group. Example, a home group had three (3) teachers, these three (3) teachers were given numbers 1,2, and 3. When breaking into the expert group, all the teachers in their home groups with the number 1, were regrouped into expert group 1, teachers with the number 2 at their home groups, were regrouped into expert group 2, same was applicable for teachers with the number 3 in home group.

3. **Breaking into expert groups**— at this point, teachers were settled for learning in expert groups 1, 2 and 3. Different mathematical puzzle as could be seen in (Chapter 4, section 4.7.1, task 1 and 2) were given to teachers in their expert groups to solve within a period of time. When the allocate time was over, teachers were asked to leave their expert group to share and learn from one another by discussing how they solved the mathematical puzzles at their expert groups. The implication of this was that, the representatives of home groups went back to their home groups to share their learning experience from the expert group.

4. **Re-grouping with the homegroup**— re-grouping in their home groups, group member number 1 shared and taught the rest of the members what she learnt at the expert group. Thereafter, group member number 2 also shared and taught the rest of the members the sub-topic that she learnt in her expert group, same applied to group member number 3. At this point, each member of the homegroup listened to each of the other members of the group as they take turns to report what they have earned in their expert group.

Teachers were grossly involved and active in their own learning during the workshop. This learning method facilitated a cross breeding of creative ideas through critical thinking, collaboration and effective communication among themselves.

3.8.5.3 Think-pair-share

This is one of the critical thinking learning strategies that were used during group work play-based activities. The researcher used think-pair-share to facilitate word generation in English language during one of the workshops. From the word "GENERATION", teacher participants generated 30 words within 15 minutes time. Examples of the words they generated include; GENERATE, IT, ON, NATION, NO, NET, TEN, RAT, NEAR, RATION, GEAR among many others. Individual teacher participants had to **"think"** and generate words within 25 minutes and thereafter, they "**paired'** themselves and **"shared"** the answers they were able to generate with that of their peers. After the first paring, they changed and paired with another participant to cross check what answers the participants got as well. In the process of doing this, they were able to add new words, which they got from their peer's answer to what they already had, after comparing notes with their peers. Other task used in facilitating learning for teacher participants are presented in Chapter 4. This involved brainstorming ideas, creating new ideas followed by the sharing or discussing of results generated in the brainstorming process.

3.8.5.4 Buzz group technique

The buzz group learning technique uses small discussion groups of 3-8 young learners to help them develop and generate ideas, solve problems and think critically (Balslev et al., 2015; Boudreau, 2008; Clarence, 2018). Donald Philips from Michigan State University was the first to use the buzz group technique. He applied it by dividing his class into clusters of six learners and asked them to discuss certain problems within six minutes, which was found to be very effective.

The researcher used the buzz group technique in this research by splitting the teacher participants into groups of three while asking them to identify one word that fits into the four blank spaces that were presented in a task. This was an example of the task that was given to them: "A rich man wants _____, a poor man has _____. If you eat _____ you die, when you die you can take _____ with you. Answer (NOTHING)". The task was meant to set the participants into critical thinking for some time. It helped in the development of their critical thinking and creativity skills.

After each workshop, teacher participants went back to replicate the pedagogical activities in their classrooms for three weeks and then return for appraisal or evaluation of the implemented solutions. Details of classroom implementation by teacher participants were discussed in chapter 4 and appended in (see CD Appendix H, I and J).

3.8.6 Phase 5: Appraisal and evaluation of implemented solutions

After the three weeks of implementing solutions, the participants reconvened for evaluation. If at this point, each teacher participant reflected and shared their classroom implementation experiences on the group work play-based implementation. From the reports, there were remarkable positive changes in young learners, teacher participants and the researcher then upheld that the group work play-based pedagogy that was used for the period of three (3) weeks was successful because the outcome was satisfactory. There were no case of dissatisfaction of programme implementation by teacher participants as observed by the researcher, who went from school to school to observe the classroom implementation. Similarly, there were no report from the teachers indicating dissatisfaction during their classroom implementation; hence, there was no need for adjustments of implemented solutions. On the contrary, if there were a case of dissatisfaction during the classroom implementation, there would have been a repetition of the whole process of implementation. However, all the programmes implemented were both successful and satisfactory.

3.8.7 Phase 6: Adjustment of implemented solutions

Phase 6 provides for adjustment of program implementation in areas of dissatisfaction. In such situation, corrections and reimplementation of the programme will be necessary as required by PAR cycle. However, there was no need for a redo or a reimplementation of any of the programmes that capacitated the teacher participants. This was because the appraisal and evaluation (see Chapter 4) of the implementation of solutions were all successful and satisfactory.

This whole process of participatory action research, as anticipated, provided the researcher with a large database for the research.

3.8.8 Other data collection strategies

Other data collection strategies that were used in this study include observation schedules, field notes and photovoice.

3.8.9 School observation, observation schedule and field notes

The researcher visited each teacher participant in their school to observe how they implemented each group work play-based pedagogy, that was facilitated during the workshop. An observation schedule was prepared to aid data collection. Data collected through the observation schedule for each of the group work play-based pedagogy was appended (see Appendix E, section 7.4.1). The observation schedule was used by the teachers to evaluate learners' responses as the classroom implementation of the research unfolded. Teachers' observations included the expected outcome of programme implementation which was enhancement of core skills. Furthermore, field notes were generated from the notes of participants where they recorded the unstated expected outcome in the progress of the research. Participants recorded what they saw and heard during the research—which was related to the phenomenon under investigation (Barnes, 2018; Lewis, 2015).

3.8.10 Photovoice

Photographs of different stages of progress in the research process were taken, bearing ethical principles in mind. The photographs formed part of the data that was complemented with a written text. The written text explained the graphics in relation to the research. The researcher through the photographs also identified, represented and enhanced an understanding of the work done in the field during the research process.

3.9 DATA ANALYSIS

In contrast to quantitative data analysis, there was no specific or rigid method to analyse qualitative data. Qualitative data analysis is a process that is aimed at synthesising the large amount of information generated from different sources during the data collection process (Barnes, 2018; Creswell, 2014; Creswell & Creswell, 2017; Lewis, 2015). This process allows participants' contributions e.g. impressions of the topic being investigated to lead to the emergence of new knowledge (Barnes, 2018; Creswell, 2014; Creswell &

Creswell, 2017; Lewis, 2015). Qualitative data analysis is also considered to be a process of describing and interpreting the responses of the participants; it pays attention to consistency and contradictions of views, frequency and intensity of comments, context and relevance of the spoken words (Barnes, 2018; Lewis, 2015).

3.9.1 Data analysis procedure

The collected data was analysed using both framework and thematic network analysis (see Chapter 4). Whereas the framework analysis provided the researcher with an opportunity to examine the findings of the research, the thematic analysis helped the researcher to explore the participants' perspectives through data coding, which allowed for new impressions and the interpretation of data in different ways (Barnes, 2018; Creswell & Creswell, 2017; Lewis, 2015).

3.10 SUMMARY

Chapter 3 described the methodology used in the research and reported on the data collection procedures. It highlighted the main research question and sub-questions, which gave the study its focus. The research paradigm and its relationship to the research were discussed. The background of the research type—participatory action research—was explained, and the method used for analysing the collected data was given. The analysis of the data were reported in detail in the next chapter, Chapter 4.

CHAPTER FOUR: DATA PRESENTATION AND DATA ANALYSIS
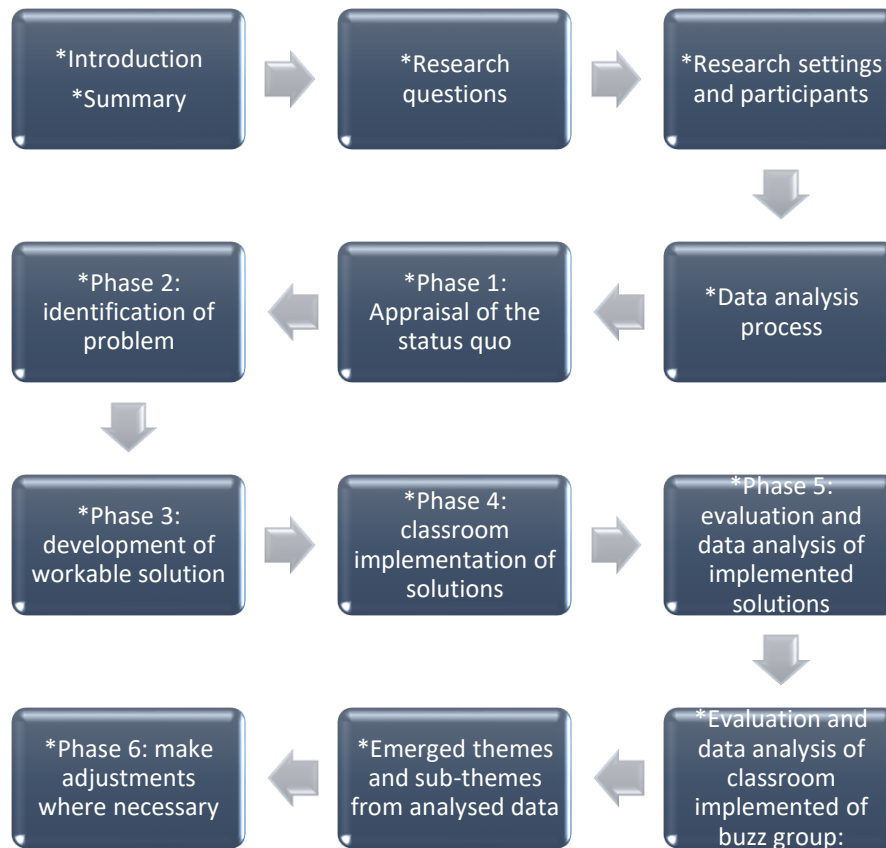
Figure 4.1: Outline of Chapter 4

4.1 INTRODUCTION

In Chapter 3, the researcher discussed the research design and methodology used to collect data for the current study. In Chapter 4, the researcher examine the data collected from the participants regarding the use of group work play-based pedagogy to enhance core skills in young learners. As indicated in Chapter 3, the researcher employed a qualitative data analysis in this study because it helped me to blend a large amount of information generated during the data collection process (Barnes, 2018; Creswell, 2014; Creswell & Creswell, 2017; Lewis, 2015). The researcher collected data for this study through semi-structured interviews, a professional development programme and a classroom observation schedule of nine teachers of young learners aged five to eight years.

The teachers responded to the semi-structured interview by writing down their responses. The researcher transcribed the responses of teachers and after that gave the transcribed responses to participants for member- checking. This process of member checking validated the data for accuracy and transparency and enriched the trustworthiness of the study. During the data analysis process, the researcher found parallels and commonalities between the analysed data and the verification of literature with my findings on which the researcher reported in Chapter 5.

The researcher restates the main research and research sub-questions in this chapter because it served as a guide to direct my discussion of the data collection, data presentation and data analysis. The first research sub-question guided me to collect the data through the semi-structured interviews. The second research sub-question dealt with the strategies that can enhance the teachers' knowledge and skills in the classroom implementation of group work play-based pedagogy while the last research sub-question was a guide for the professional development programme of the teachers.

4.2 MAIN RESEARCH QUESTION

How can teacher capacity be strengthened to use group work play-based pedagogy to enhance the core skills of young learners?

4.2.1 Research sub-questions

1. What previous knowledge, skills and practice do teachers have and demonstrate in implementing group work play-based pedagogy?

2. What strategies can enhance the teachers' knowledge and skills to implement group work play-based pedagogy in their lessons?

3. How would a professional development programme assist teachers to implement group work play-based pedagogy to enhance core skills in young learners?

In this chapter, the researcher described the research setting, tabulated and discussed the participants' profile and assigned codes to schools and teacher participants. The researcher documented the data collection process and also analysed data that emanated from the semi-structured questions and reflections of teachers on the professional development programme. Furthermore, the researcher discusses the

themes and sub-themes that emerged from the data analysis as findings of this research. Lastly, the researcher briefly summarises the discussions on the data analysed and made conclusions of the chapter.

4.3 ANALYSIS OF RESEARCH SETTINGS, PARTICIPANTS AND DATA COLLECTION PROCESS

The settings were clearly indicated in Chapter 3, Section 3.5. The selected schools in the current study are located in the Owerri educational zone of Imo State Nigeria, West Africa. The three selected schools, whose young learners come from different ethnic and cultural backgrounds, use English as their medium of instruction. Furthermore, the schools were selected because they are government public schools, which serve learners in the communities in which they are located. This variable of settings was necessary to have a reasonable sample from the demographics of Nigeria for data collection and understanding of the phenomenon under investigation.

Nine participants were selected from the three schools. Three teachers were selected from each school. One from pre-primary and one each from Primary 1 and Primary 2. The teachers selected were made up of one pre-primary (Teacher 1), one Primary 1 (Teacher 2) and one Primary 2 (Teacher 3), a total of 3 teacher participants for each of the selected schools; teaching in these classes (see table 4.1 for teacher profiling and coding of schools). The principals of the selected schools gave permission for their teachers to attend the interview session and the capacity building workshops during teaching time. School A which was chosen for the workshop venue was central to school B and C. This is because, it will take participants from school B and C 30minutes to walk down to the school A and 5minutes to drive to the school A. The school principals granted teachers this permission because the teachers live further away from their schools, they travel long distances and therefore they could not stay after school due to transport and security challenges. Before leaving their classes, all teachers participating in the interview and capacity building programme ensured that work was set for the learners. Their daily lesson planning was done in detail for the assistant teacher. During their absence from class, the teacher assistants managed their classes, gave the learners the worksheets

and activities. The learners were provided quality teaching and learning during their absence. In no way were the learners neglected during the teachers' absence.

It was noted that one teacher who had a Grade 11 certificate upgraded to a bachelor's degree, making the teachers with bachelor's degrees six in number. Two teachers had the Nigerian certificate in education (NCE) while one teacher had a post-graduate diploma in education. The teachers had a varying number of years of teaching experience. The teacher from school B with 30 years of experience informed me that she was ready to retire at the end of the year. Table 4.1 contains a tabular presentation of teacher participants' profiles, gender, work profile and coding for schools and teachers teaching experiences. The details on the table gave a clear understanding of the teachers' representation from different schools, their gender, qualification and work profile.

4.3.1 Profile of participants

Table 4.1 below presents the profile and codes of the participants as part of my data collection process. All the participants were females with at least a minimum of five years' working experience. A view of the teacher participants' work profile indicates that three teachers combine their teaching task with their administrative post (Sectional heads). An Assistant Headmistress was also among the participants. The names of participants were coded to ensure compliance with ethical practice while conducting the research.

Table 4.1: Profiling of teacher participants' gender, code, work profile, schools and teaching experience

Gender	Code	Qualification	Work profile	Years of teaching experience
			School A	
Female	T1	*National Diploma *Higher National Diploma *Postgraduate diploma in education	*Teaching Pre-Primary 3 since 2014	5
Female	T2	*Nigerian Certificate in Education *Bachelor of Education (Hons)	*Started teaching in 2009 *Taught in private schools *Teaches Primary 2 Sectional head junior primary	10
Female	T3	*Nigerian Certificate in Education (NCE)	Started teaching 2012 Teaches Primary 3	7
			School B	
Female	T4	*Nigerian Certificate in Education (NCE) *Bachelor of Education (Hons)	Teaches pre-primary 3 since 2013 6 years teaching experience	6
Female	T5	*Nigeria Certificate in Education (NCE)	Taught 5 years in private schools Taught 7 years in public school Sectional head junior primary Currently teaching Primary 1	12
Female	T6	Teachers Grade 11 Certificate Nigerian Certificate in Education (NCE) Bachelor of Education (Hons)	Assist. Headmistress Taught in the private sector 7 years Taught in different public schools for 23 years Currently teaching the pre-primary 3 learners	30
			School C	
Female	T7	Nigerian Certificate in Education (NCE) Bachelor of Education (Hons)	Sectional head junior primary Primary 2 teacher	9
Female	T8	Bachelor of Education (Hons)	Pre-primary 3 class teacher	7
Female	T9	Bachelor of Education (Hons)	Teaches Primary 2	6

Teacher 1 (T1)

Participant one is a female teacher who is 36 years old and has taught the Pre-Primary 3 learners for five years. Her original qualification was not in education; hence she came into teaching after she did a postgraduate course in education. Currently, she is pursuing her master's degree in education management after she concluded her postgraduate diploma in education. She indicated to me "*I am passionate about young learners, and I want to open my own pre-school. From a very young age, I always loved working with little children. It is such a pleasure to see them smile at you each day.*" Her love for young learners made the headmistress place her in the pre-primary class.

Teacher 2 (T2)

Teacher 2 (T2) is an enthusiastic female teacher whose sense of ingenuity and creativity is impressive. She is in her late 30s, trained as a biology teacher in the Nigerian Certificate of Education (NCE) and Bachelor of Education/Honours (B.Ed. Hons.). She is very passionate about her work and learners. Though biology teachers normally teach in secondary schools, she found satisfaction in teaching young learners. This she has done for ten years. She teaches learners in Primary 2 (7-year-old). During the period of this research, she became very sick and was asked to take leave to enable her to take her medication, but she refused saying "*I derive [more] joy coming to school to be with my learners than being in the hospital taking medication*". This indicates her passion.

Teacher 3 (T3)

Participant 3 was a woman in her mid-40s. She has taught in the primary classes for five years before being posted to teach the pre-primary class. Sometimes she faced the challenge of using suitable teaching strategy for learners aged five. She is an NCE holder and eager to learn new teaching strategies. This teacher at the time of the research lost both her parents and this affected her psychologically hence her participation was breached as mentioned Section 5.7.1 of Chapter 5.

Teacher 4 (T4)

Participant 4 is a trained NCE graduate primary education teacher. In her first degree (B.Ed.), she took some course (module) in child psychology. She is 40 years old and

currently teach Pre-Primary 3. She is experienced in using different instructional procedures in teaching young learners. She said, *"I enjoy teaching these children, but government should step up incentive to encourage them as they are not treated like their counterparts in the primary section"*. She is a passionate teacher of young learners for six year.

Teacher 5 (T5)

Participant 5 is a woman who has been teaching Primary 1 for seven years. Before teaching in public school, she has taught in the private sector for five years. She holds the Nigerian Certificate in Education. She mentioned that *"there is a huge difference between private sector and public sector".* She further noted:

> *"The public sector has more qualified teachers than those of the private sector, but the private sector performs better than the public sector because the proprietors of the private sector makes necessary provisions available for learners to improve whereas in the public sector, such resources towards the young learners are scarce."* (T5)

She noted with thanks that she is happy attending the workshop and learning new ways of teaching young learners through group work play-based pedagogy. She did not reveal her age.

Teacher 6 (T6)

Participant 6 is a 60-year-old female teacher who has been teaching young learners for 30 years both in the private and public sector. She is well experienced and exposed to teaching. She holds a Certificate in Education and a degree in elementary education. She is a committed teacher who goes the extra mile. This she does by spending her personal money to ensure her learner are taught with instructional materials. She has taught in different public primary schools. Currently, she serves as Assistant Headmistress and a classroom teacher for Pre-Primary 3.

Teacher 7 (T7)

Participant 7 is a Primary 2 teacher and the sectional head of the junior primary. She is in her mid-40s and holds an NCE in social studies and primary education while her first

degree/honours is in guidance and counselling. She has nine years teaching experience. She appreciated the professional development programme on the use of group work play-based pedagogy in facilitating learning. She, however, stressed the need for government to assist in up skilling in-service teachers through workshops because according to her, *"this is the first workshop I am attending since I joined the teaching sector of the Universal Basic Education (UBE)".* Furthermore, she noted that *"with the free education policy for learners in pre-primaries and primary, there has been an upsurge in school enrolment and that this development entails the need for teachers to be more equipped in discharging their duties"*.

Teacher 8 (T8)

Participant 8 is a Pre-Primary 3 teacher who is in her late-30s. She has taught for seven years and holds a bachelor's degree in economics. She is a pragmatic teacher who shows dexterity in doing her job. When asked why she opted to teach in the primary school while her degree in economics qualifies her to teach in the secondary school (high school), she noted that she is more fulfilled working with young learners than the young adults. That in her University education while studying economics, she took some courses (modules) in pre-primary and primary education and that those courses have enriched her passion for teaching among young learners greatly. She seized the opportunity to appeal to the government to support and sustain her passion by providing a conducive learning environment that is both inviting for the learners and teachers.

Teacher 9 (T9)

Participant 9 is a woman in her mid-30s. She was the teacher of Primary 2. She has taught the Primary 2 class in a period of six years. She is a graduate of political science and social studies. She also took some modules in primary education during her days in the university. She combines teaching with trading, and this sometimes makes her tired during lessons. When asked why she combines both vocations, she said, '"*I am the first child of the family, my parents are late, and I have to work hard to get extra money and help train my younger ones in school"*. She was willing to participate in the research but had the challenge of coping through the period of the research, getting her response at

some point was a challenge. She appreciated the new knowledge gained in the research and was apologetic about the areas she could not cover.

4.4 DATA ANALYSIS PROCESS AND PARTICIPATORY ACTION RESEARCH (PAR)

The researcher used the semi-structured questions for the data collection process, which enabled me to accumulate in-depth understanding of each teacher's previous knowledge, skills and practice they demonstrate in implementing group work play-based pedagogy. Among the open semi-structured questions that examined teachers' previous knowledge, skills, and their practice in the classroom were; their previous knowledge about play-based pedagogy, core skills, policy and curriculum knowledge, and workshops attended in the past. Strategies that can enhance teachers' knowledge and skills to implement group work play-based pedagogy in their lessons were adopted from existing literature. It was important to understand the teacher's previous knowledge because it provided a reflective background that necessitated the need for a professional development program. Subsequently, a professional development programme was organised to enable teachers to respond to questions aimed at evaluating the success of the Participatory Action Research (PAR) implementation of the teaching strategies used. Teachers' field notes were also used to assess the achievement of group work play-based pedagogy with regards to enhancement of core skills in young learners. Three different group work play-based strategies assisted in the data analysis; these pedagogical strategies were think-pair-share, jigsaw and buzz group.

A verbatim transcription of the semi-structured interview which addressed research sub-question 1, emanated from the response notes of the participants. The transcription process took place immediately after the interview, to ensure that data collected and captured were as accurate as possible. Thereafter, the researcher filtered through each interview to create a holistic picture of the teachers' previous experiences. The outcome of the interview which shows teachers inadequate knowledge play-based pedagogy (see section 4.10.1) led to the professional development programme for teachers that was aimed at enhancing core skills in young learners using group work play-based pedagogy.

Figure 4.2 represents the Participatory Action Research used in the study.
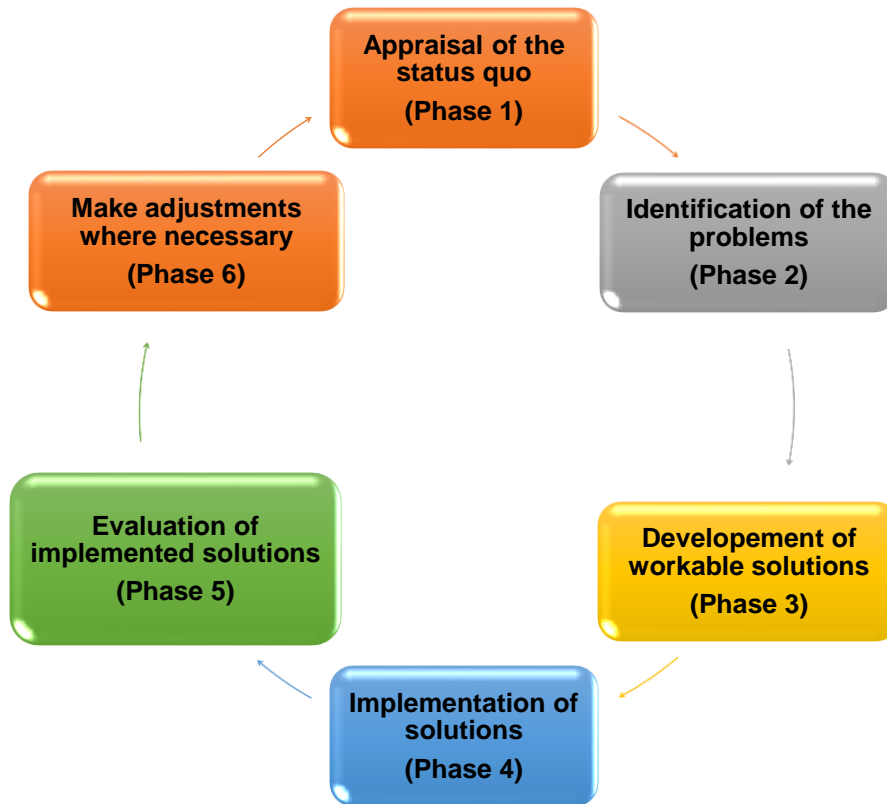
Figure 4.2: The Participatory Action Research (PAR) cycle

The PAR process allowed me to organise the data for analysis. The PAR process consisted of six phases, as presented in the PAR cycle. The teachers and the researcher implemented three professional programmes at three different workshops while using the PAR cycle. Below are the details of how the researcher applied each phases of PAR in the study. From the analysed results of each workshop and its classroom implementation emerged the themes and sub-themes of the study. This was used to present a discussion on the findings of the study.

4.5   PHASE 1: APPRAISAL OF THE STATUS QUO

The researcher met with all the participants in Phase 1 at the first workshop venue to introduce the research project as well as appraise the teaching pedagogy used in the area. In doing this, the researcher reiterated that they are at liberty to continue to participate in the study. They were also informed that they could withdraw from the study

at any point without providing reasons. Furthermore, the researcher assured them that their personal identity would be kept confidential to ensure that ethical considerations were upheld throughout the study. The researcher also informed them that during the reporting phase pseudonyms would be used to prevent identification of the participant or the school.

A semi-structured interview was conducted with each teacher participant that elucidated teachers' previous knowledge on the research focus. While responding, teachers unanimously agreed that they are used to the chalk and talk method of teaching. In their view, this method allows them to cover their curriculum faster as they are totally in charge of the teaching and learning process. In Phase 1, the following steps guided the researcher in conducting the semi-structured interview, which served as a baseline assessment tool for teachers' previous knowledge.

Introductory meeting with teachers

Obtaining teachers consent

Introduction of the research

Completion of interview questions

Appraisal of teachers' responses from interview questions
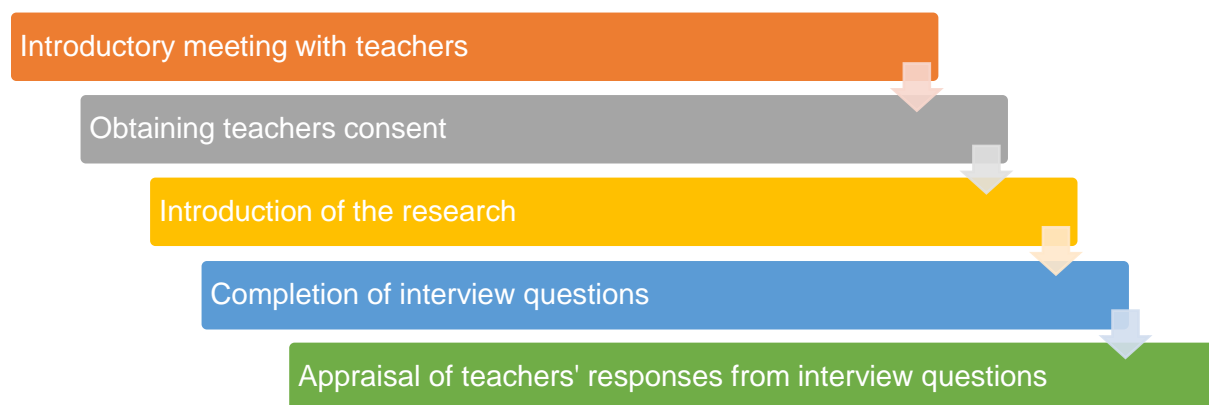
Figure 4.3: Steps for implementation of the semi-structured interview

4.5.1 Introductory meeting with the teachers

The researcher met with the teachers at the agreed workshop location as arranged by their headmistress. The meeting allowed the teachers and the researcher the opportunity for self-introduction. Thereafter, the researcher requested the teachers to grant me permission to involve them in the research.

4.5.2 Obtaining teachers' permission

The researcher referred to the teacher participants as T*, hence, the researcher referred to the teachers as T1, T2, T3, T4, T5, T5, T7, T8 and T9. The researcher used the pseudonym; T and school A, B, C, to protect the real names of participants as well as their schools. The participants gave me their informed consent voluntarily as they signed the consent forms without duress or intimidation. This, therefore, set the stage for me to introduce the research to the participants.

4.5.3 Introduction to the research

The researcher introduced the research to the teachers after they had finished responding to the semi-structured interviews. The teachers unanimously agreed that the use of a teacher-centred method was prevalent in all classrooms of young learners (see Figure 4.3). The teachers' responses formed the background on which the researcher explained the focus of the research. The baseline assessment of teachers' prior knowledge about group work play-based pedagogy and enhancement of core skills in young learners validated the need for the research.

4.5.4 Completion of interview questions

The teachers responded to 12 semi structured interview questions (see Appendix F). From these questions, the researcher was able to elicit responses from teachers concerning their previous understanding of group work play-based pedagogy and the enhancement of core skills. Some of the keywords used in structuring the interview questions included core skills, play-based pedagogy, Nigerian policy on education, curriculum document and teachers' previous experiences.

Before the interview with the teachers began, the researcher made sure that all ethical criteria were fulfilled, especially anonymity and confidentiality. The researcher informed all the participants of the interview process again. The researcher enquired from the participants if they would be comfortable to be photographed using the researcher's smartphone, and they agreed. The researcher informed the participants that data generated from their responses would be used for academic purposes only, for example

a thesis and articles. They consented to their photographs being used in academic reports, but with their faces blurred.

The semi-structured interview revealed the inadequate depth of knowledge and experience the participants had about the research focus (see CD Appendix G-response to semi-structured interview). The teachers had enough time to respond to the interview in detail. The interview aimed at evaluating their knowledge about the research focus. At first, teachers were reluctant in responding to the interview questions; however, later they saw it as an opportunity to learn and braced up to the task. The interview was stimulating as well as revealing. The teachers could do a self-assessment of their teaching practice over the years. It was obvious that the teachers had challenges understanding what core skills were and how to enhance them (see section 4.10.1). The interview questions also helped to show that most teachers did not understand how curriculum and education policy impacted the use of group work play-based pedagogy (see section 4.10.1).

The common desire the researcher observed from the participants was the quest to understand how group work play-based pedagogy would be effectively used in the classroom. Another observation was that they found it difficult to grapple with the concept of core skills. Nonetheless at the end of the three-workshop sessions and their classroom implementations, they were grateful for being chosen to participate in the research, as T2 said: *"since we started teaching, some of us have not had opportunity to attend workshop where our knowledge was put to test as if we were in the University again".* T3, as part of her appreciation for the stimulating interview said, "*I really would love to attend all the sessions of workshops but for the death of my both parents*".

4.5.5 Appraisal of teachers' responses from interview questions

The appraisal of teachers' responses validated the premise that teachers kept using the teacher-centred method of teaching and learning. The teachers unanimously agreed that: "*We are used to the teacher-centred method, it makes teaching much easier and saves time since we are expected to cover our scheme of work, but when we involve learners, they will waste our time and we will not cover our scheme" (Teachers, anonymous).* This position, as noted by the teachers, confirmed the teacher-centred classroom sitting arrangements of learners as seen in the photographs of (Figure 4.4). This position further

confirms the need for social interaction of learners within the Zone of Proximal Development (ZPD) as maintained by McLeod (2014); Joubert (2016) and Vygotsky (1978).

Furthermore, the teachers' response to the semi-structured interview indicated that their knowledge about the use of group-work to enhance core skills in young learners was very inadequate. The inadequacy in the knowledge of group work play-based pedagogy reflected in the thematic analysis done in Phase 5. Therefore, the problem of the study became glaringly obvious to the teachers after the appraisal of their responses to the semi-structured interview.

The researcher transcribed the interview directly from the notes made by the teachers. The transcription process was immediate, to ensure that all data collected and captured were as correct and accurate as possible. After that, the participants reread the data to authenticate that their thoughts were not tempered or misrepresented. At this point, the teachers have seen their inadequacies in facilitating group work play-based pedagogy to enhance core skills. They became curious to know how best to enhance core skills through group work play-based pedagogy. Since they had no idea of the different 21st century strategies used in facilitating group work, the need for Phase 2 became compelling.

Figure 4.4: Teacher centred classroom as observed before the start of the research

4.6 PHASE 2: IDENTIFICATION OF PROBLEM

In Phase 1, semi-structured interview questions were used as a baseline assessment tool, to enable teachers to reflect on their education practice. From their reflections, teachers were able to identify their chalk and talk method of teaching as a problem that inhibits the enhancement of core skills in young learners. The teachers' response to the semi-structured interview enabled them to understand and appreciate the need for a paradigm shift from teacher-centred learning to learner-centred. They realised the shortcomings of their knowledge on how to use group work play-based pedagogy to enhance core skills in young learners. Furthermore, the use of a semi-structured interview was a useful tool that allowed me to collect relevant data from participants. After the appraisal and analysis of data collected in Phase 1, the problem of the study was clearly identified hence the need for Phase 3 was apparent.

4.7 PHASE 3: DEVELOPMENT OF A WORKABLE SOLUTION

To develop a workable solution for the identified problem, teacher participants and the researcher adopted the group work play-based strategies from literatures and organised

three professional workshops within the span of four months. The workshops capacitated the teachers on the use of *think-pair-share*, *jigsaw* and *buzz group* play-based pedagogies. Thereafter, the teachers went to their various schools and classes to implement the teaching strategies. The workshops, which spanned a period of four months, enabled me to collect data that was useful in answering my research sub-questions 2 and 3. Four months was a full academic term according to the academic calendar of the selected schools. The training on the following professional workshops are depicted in Figure 4.5 below:
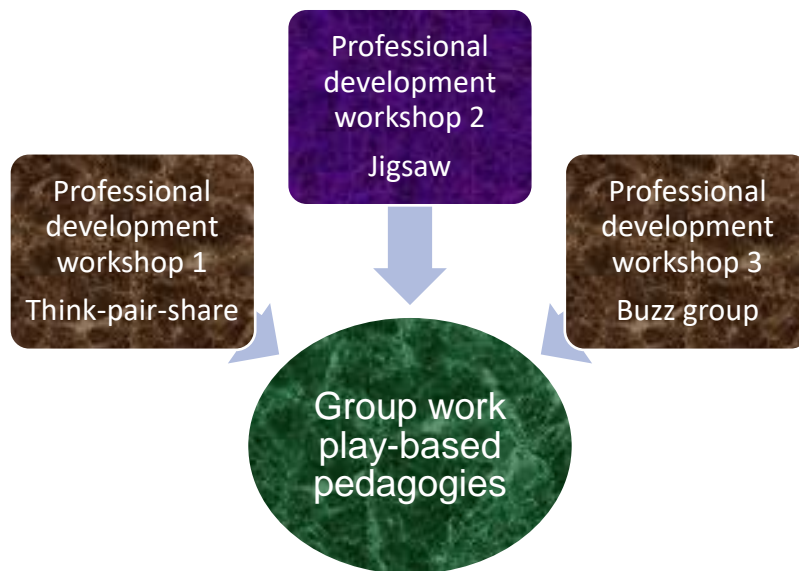
Figure 4.5: Professional development workshops group work pedagogies

4.7.1 Professional development workshop 1 (think-pair-share)

In the professional development workshops, teachers were exposed to experience how learning is facilitated using group work. Capacity building for teachers to use t*hink-pair-share* in facilitating learning, practically engaged teachers in the workshop to think, pair with other participants to check their answers and after that share the ideas they got from each other. The teachers had a 25minutes to critically think about a given task and 45minutes to discuss answers within pairs and share with the general class. The selected task that was used in facilitating thin-pair-share were drawn from English language and mathematics. Unfortunately, they ran out of time for the entire task given to them without

reaching the correct answer. This was because the exercise was brainstorming and was engaging and challenging as attested to by the teachers. Examples of the tasks given to teachers are set out below.

Task 1

Instruction: Identify one word that correctly fits all the blank spaces, it is a seven-letter word.

Question:

A rich man needs _____. A poor man has _____. If you eat _____, you will die and when you die, you can take _____ with you.

Answer: ***Nothing***

Task 2

Instruction: How many squares are there in the diagram below? Answer: 40 squares.

Adapted from https://www.simplemost.com

Figure 4.6: The mathematical square diagram 1

The teachers considered this task easy, surprisingly, of the nine teachers, only one teacher got the answer correctly.

Task 3

Instruction: Calculate the objects in the diagram and supply the missing answer.
<u>Answer:</u> 15

Adapted from https://www.republicworld.com
Figure 4.7: The mathematical square diagram 2
Solution to Task 3

3 pairs of shoes=30 meaning that a pair of shoes =10

2boys and a pair of shoes = 10, therefore 2boys will be 20-10=10 plus 1boy=5

If one boy is=5, then 13-5=8 so 2 pairs of spoons=8 this means a pair of spoons=4

Therefore, 1shoe =5, 1boy =5, 1spoon = 2

$5+5\times2=5+(5\times2)$

$= 5+10$

$= 15$

The above exercises are samples of how teachers can facilitate think-pair-share among young learners to enhance their core skills. Below are photographs showing the activity of workshop 1.

Figure 4.8: Teachers critically thinking and collaborating on a given task

The professional development programme wherein teachers were capacitated in using think-pair-share to facilitate learning was both interesting and challenging for teachers. It served as a pilot to how communication, collaboration, critical thinking and creativity skills can be enhanced among teachers who have experienced the use of group work play-based pedagogy during the professional development workshop and after that applied the same process to learners. The teachers worked together to achieve a common goal; some groups of teachers were not able to arrive at the answers correctly while others did. The group that was unable to get the correct answers was challenged to work harder in the subsequent task, and the outcome was positive.

4.7.2 Professional development workshop 2 (jigsaw)

Teachers organised themselves into groups of three. The grouping was called "homegroup". After that, they regrouped into another group called the "expert group" (see Chapter three, section 3.8.5.1). In the expert group, teachers became visual learners; hence they studied, discussed and noted their observations on the learning materials containing means of transportation and sources of water. When the allocated time was over, they went back to their home groups. At their home groups, each representative

from the expert group discussed what she learnt from the expert group with her home group members. This strategy enhanced communication, collaboration, critical thinking and creativity as could be seen during the time group members gave their reports.

Figure 4.9: Teaching materials on sources of water supply and means of transportation

The facilitation of the jigsaw pedagogical strategy with teachers was fascinating. Teachers were able to learn how to utilise time in achieving much learning content in a given learning period. It was observed that shuffling group members was a beneficial way of getting every learner involved in the learning task. The teachers were all involved and made useful contributions to their groups with regards to the learning content. It was

noted, however, that due to the nature of the learning strategy, more open space was needed to facilitate learning using the jigsaw, hence the idea of extending the learning environment to outside the classrooms. The teachers enjoyed this play-based learning strategy.

4.7.3 Professional development workshop 3 (buzz group)

Buzz group was the last workshop training organised for teachers because they were approaching the examination period. The teachers, however, attended the workshop and implemented the possible solution gained from the workshop. Unlike the "jigsaw" where groups move from one corner of the class to another, the organisation of the "buzz group" was much easier and less stressful as noted by teachers.

Figure 4.10: Teachers at workshop 3

Facilitating learning through "buzz group" was fun for the two groups of teachers. Teachers were grouped into two's and tasked to work on Task 1 and 2 within 30minutes time. The short time allocation for the task in the buzz group was a propellant factor to see how fast each group will accurately come up with an answer. The facilitation of buzz group definitely generated noise. This noise, however, was a healthy noise because it

showed that communication, collaboration, critical thinking and creativity was going on among group members.

Task 1

Teachers had the task to sort and identify the number of faces hidden in the drawing of a tree containing hidden human faces. This task facilitated number sense because accurate identification and sorting of hidden faces characterised the task.

Instruction: Accurately identify the number of faces hidden in the tree.

Answer: Nine faces
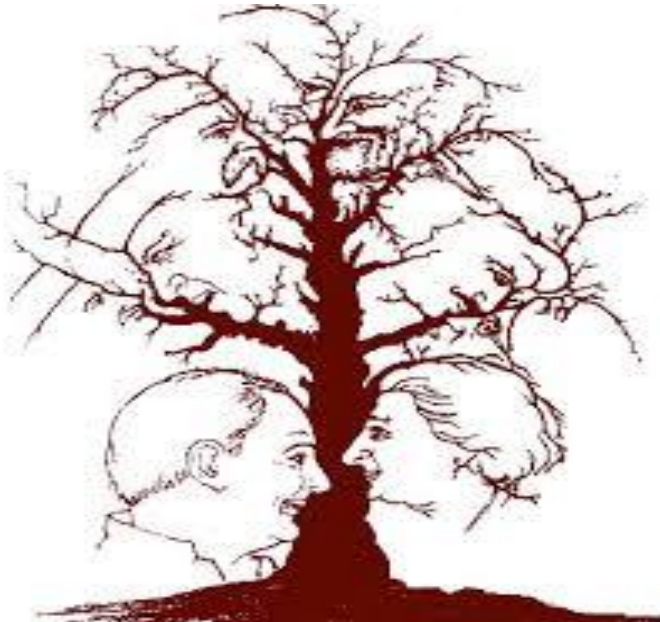
Adapted from https://www.bhavinionline.com

Figure 4.11: Identification of hidden faces

Task 2.

Instruction: There are two gateways in the maze puzzle, choose any entrance and trace your way out.
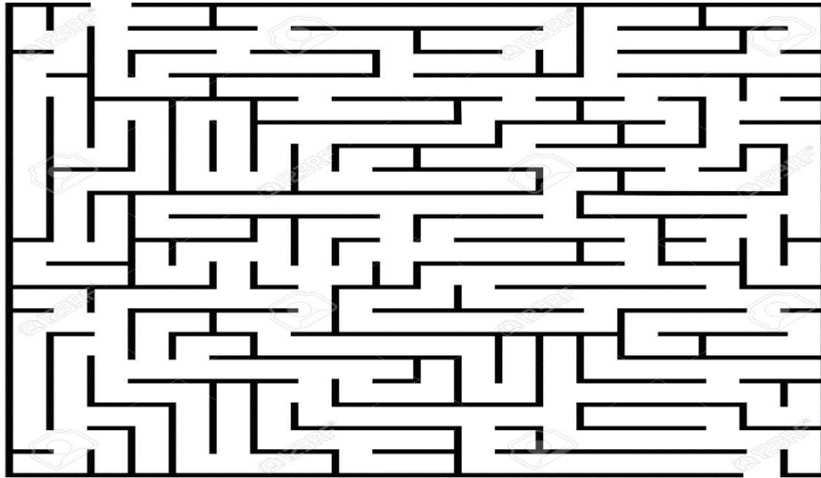
Adapted from https://www.alamy.com

Figure 4.12: The maze gateways puzzle

These tasks may be considered easy, but they were mentally challenging for teachers. As the teachers worked in 15minutes time allocated for the task, there was a lot of brainstorming to work out the answers. After the capacity building of teachers on the use of buzz group in the facilitation of group work play-based pedagogy to enhance core skills, they went to their classrooms for implementation.

4.8   PHASE 4: CLASSROOM IMPLEMENTATION OF SOLUTIONS

Whereas Phase 3 empowered teachers on how to use the group work play-based pedagogies as mentioned above, Phase 4 allowed teachers to implement what they had learnt from the workshops in their classes. Learning became fun as learners became active in the learning process.

4.8.1   Classroom implementation of think-pair-share by teachers

Preceding the capacitation of teachers in workshop 1 using think-pair-share, they went to their various classes to implement it. As the researcher visited the three schools to observe the implementation of think-pair-share by teachers, the researcher observed that teachers were able to use this strategy in teaching different subject content effectively. It was amazing to see how young learners who were passive in the past were now engaged in the learning process. After that, all the teachers convened to evaluate classroom

implementation. Below are the photographs showing learners' involvement during group work play-based pedagogy:

Figure 4.13: Learners engaged in group work play-based pedagogy

This is one of the simplest forms of group work play-based strategy. The teachers ask a question that triggers individual learners into critical thinking, thereafter, learners' pair themselves to examine if their answers are correct, after which they share their agreed answers with the whole group or class. In cross-checking their answers, learners shuffled themselves in pairs until everyone was satisfied with the results or answers of his peers. This method enhanced critical thinking, collaboration, communication and creativity.

4.8.2 Classroom implementation of jigsaw by teachers

After workshop 2, teachers went back to their various schools and classrooms for the implementation of jigsaw. In the first instance, teachers of young learners aged five to six years were apprehensive whether the jigsaw would work in their classes. Their fears fizzled out when they saw that these young learners adapted to the method very easily. From my observations, teachers used a variety of subject contents to facilitate learning. The variety of contents teachers used during their classroom implementation is appended

in (see CD Appendix H, I & J). The evaluation of the implementation of jigsaw is contained in Phase 5. The photographs below show young learners' participation in jigsaw.

Figure 4.14: Learners participating in jigsaw group work play-based pedagogy

A sequel to the classroom implementation of jigsaw was the evaluation of the implemented solution. Teachers' response on the use of jigsaw is presented in the observation schedule that states the evaluation and data analysis of implemented solution in Phase 5.

4.8.3 Classroom implementation of buzz group by teachers

The implementation of buzz group was effective in all classrooms. Teachers adapted this strategy for revision and preparation for the examination of young learners. Recall that the buzz group workshop was the last teachers' capacity workshop before the end of term examination. Learners sat in groups of 2 to 3 while facing each other and working on the task given to them. The strategy was effective in facilitating different learning contents such as English, number work, mathematics, civic education among others. Young learners' activeness in the learning process cannot be over-emphasised.

Figure 4.15: Learners paired for buzz group learning

The evaluation of buzz group by teachers shows a remarkable success. Out of nine teachers, six teachers responded to the evaluation of the implementation of a solution. In Phase 5, teachers rated the implementation of buzz group in their classes. From the rating done by teachers, the use of buzz group enhanced the facilitation of core skills in young learners.

4.9 PHASE 5: EVALUATION AND DATA ANALYSIS OF IMPLEMENTED SOLUTIONS

In Phase 5, the teachers and the researcher evaluated the classroom implementation of the programmes. Observation schedule was used to calculate the number of teachers' responses to a particular item under each of the core skills. Example, it shows the number of teachers who observed that item (i) communication was effective with peers, which the case of think pair share was six (6). The key to the rating scale implies that responses within "very poor and poor" are on the negative hence not accepted while responses

within "Ok, Good, very Good" implies positive hence accepted. Subsequently, the researcher analysed the data gathered from the classroom implementation.

4.9.1 Evaluation and data analysis of classroom implementation of the think-pair-share

The teachers reconvened to evaluate the classroom implementation of the think-pair-share exercise. During the implementation, the teachers had an observational assessment schedule which they used in assessing the progress of the implementation. Six out of nine teachers handed in their observation schedule during the appraisal workshop. From the observation schedule, the implementation of the think-pair-share exercise indicated a success as most of the responses indicated, "OK, good, very good". The think-pair-share was successfully implemented; hence there was no adjustment. The observation schedule for think-pair-share is depicted in Table 4.2.

Table 4.2: Observation schedule for think-pair-share

	Core skills observed using think-pair-share	Rating scale				
		Very poor	Poor	Ok	Good	Very good
1	**_Communication skills_** Young learners did the following in their groups:					
i.	Communicate effectively with peers.				3	3
ii.	Uses the names of peers during interactions.			1	3	2
iii.	Follow instructions given by the teacher.			1		4
iv.	Show good listening skills.				1	5
v.	Ask questions in relation with class work.		1	1	4	
vi.	Made use of non-verbal communication cues.		1	2	3	
vii.	Group work activity was noisy.				5	1
2	**_Collaboration skills_**					
i.	Integrated into the group successfully.			1	2	3
ii.	Enjoy interacting with group members.				1	5
iii.	Shared working materials appropriately.				4	2
iv.	Worked together in group as friends.				2	4
v.	Negotiated during group work			1	4	1
vi.	Group learnt from their mistakes				3	3
vii.	Group achieved common goal set out for them.				2	4
3	**_Critical thinking skills_**					
i.	Resolved problems such as puzzles.				2	4
ii.	Sort out complex mixed materials.				6	
iii.	Categorized objects into different classes.				2	4
iv.	Ability to re-tell stories.				3	3
v.	Answered questions accurately.				5	1
vi.	Ask the (WH) questions: what, why, who, where, how			2	2	1
vii.	Logical presentations of problems	1	1		2	2
4	**_Creative skills_**					
i.	Showed interest in painting.				6	
ii.	Showed interest in moulding objects.				1	4
iii.	Used scissors to cut out shapes.				3	3
iv.	Constructed objects with cardboards.				5	1
v.	Fixed puzzle games.				3	3
vi.	Enjoyed dancing during play.				6	
vii.	Created imaginative stories.		1	1	1	3

4.9.1.1   Data analysis of communication skills using think-pair-share

The think-pair-share activity presented to learners in the class yielded different results. When the activity was initially presented, learners were a bit reluctant to involve

themselves. Once the teacher explained what the activity involved and what the learners' roles were going to be, there was a fair amount of excitement amongst the learners. In her class, T6 indicated that her young learners were unable to "*ask questions in relation to the classwork*", and unable to *"make use of non-verbal communication cues."* One possible reason for this is that young learners have not yet developed adequate social skills that enable them to interact with their peers. According to Sadulloyevna (2018a & 2018b), most learners remain passive when they lack the social skills needed for active participation and interactions among peer.

In contrast, T1; T4; T5, T7 and T9 had a more positive experience with their learners regarding the think-pair-share activity. They indicated that the learners in their classes were able to *"communicated effectively with their peers", "use the names of their peers during interaction", "follow the instructions given by the teacher", "show good listening skills", "ask questions in relation with classwork", "make use of non-verbal communication cues"* and *"group work activity was noisy" (*T1; T4; T5, T7, T9)*.

This response from teachers shows that the use of the think-pair-share activity was effective among learners. The learners were able to enhance their social skills as they communicated and related to one another as they learned. The teachers' responses corroborate the idea that young learners develop their social lives and self-concept as they interact with their peers, facilitators, instructors and teachers (Sadulloyevna, 2018a & 2018b). Furthermore, the teachers' responses affirm the fact that the interactive dimension of Vygotsky's theory supports people in their appreciation and cultivation of quality effective communication, which profits them (McLeod 2014; Joubert 2016; Vygotsky, 1978).

4.9.1.2   Data analysis of collaboration skills using the think-pair-share

The use of the think-pair-share was favourable in the facilitation of collaboration as one of the core skills. Table 4.2 shows that T1 rated learners' collaboration enhancement as poor because the learners "could not *integrate into the group successfully"* and were "*unable to negotiate during group work".* Learners' inability to integrate into the group successfully and also negotiate during group work could be because they were not used to learning in groups. Lai (2011) asserts that in learning collaboratively, learners get to

learn classroom rules, which assist in the facilitation of learning and epitomise the behavioural prospects that support the fundamental ideas of trust, sharing, belongingness and respect.

In the affirmative, T4, T5, T6, T7, and T9 maintained that young learners in their classes *"integrated into the group successfully"*, *"enjoyed interacting with group members"*, *"shared working materials appropriately"*, *"worked together in the group as friends"*, *"negotiated during group work"*, *"learnt from their mistakes"* and *"achieved common goals set out for them".* The learning outcomes from these groups of learners indicated that they were receptive and open to adapt to a new learning pedagogy. They showed mutual support for one another as they collaborated. The position of T4, T5, T6, T7 and T9 affirm the views of Kropp et al. (2016) and Sawyer (2018) who posit that collaboration is the capability to work proficiently with others on combined responsibilities, support and uphold agreement and unite in win-win circumstances to accomplish a mutual goal.

4.9.1.3 Data analysis of critical thinking skills using think-pair-share

The use of think-pair-share in enhancing critical thinking was also positive, as indicated by teachers. In their responses, T1, T4, T5, T7, and T9 concurred that learners' critical thinking enhanced during the learning process because they were able to *"resolve problems such as puzzles"*, *"sort out complex mixed materials"*, *"categorise objects into different classes"*, *"re-tell stories"*, *"answer questions accurately"*, *"ask [the WH] questions what, why, who, where, how"* and show *"a logical presentations of problems".* Learners were able to achieve these activities because working in groups boosted their inquisitiveness to accomplish the group task. They were able to brainstorm and were positively motivated not to fail as a group. The teachers' responses corroborate Fawcett and Garton's (2005) research, which avows that learners who cooperated collectively attained a significantly higher number of correct sorts than learners who worked individually.

In her response, T6 opined that learners performed poorly in *"logical presentations of problems".* The researcher considered the response of T6 whose learners had difficulty in logical presentation of problems, as insignificant because, T6 agreed that her learners were able to *"resolved problems such as puzzles"*, *"sort out complex mixed materials"*,

"categorise objects into different classes", "re-tell stories", "answer questions accurately", "ask the [WH] questions what, why, who, where, how". Learners cannot complete all of these activities without the element of logical presentation. Kallet (2014) states that critical thinking is a logical and thoughtful way of dealing with things to arrive at the best possible resolution to difficult situations of which the learner is aware.

4.9.1.4 Data analysis of creative skills using the think-pair-share

The success of creative skills while using think-pair-share is evident in the response of teachers. In their responses; T1, T4, T5, T6, and T7 maintained that learners exhibited their creative skills as they showed interest "*in painting, moulding of objects", "used scissors to cut out shapes", "constructed objects with cardboards", "fixed puzzle games", "enjoyed dancing during play"* and "c*reated imaginative stories".* The ability of learners to fix puzzles and create imaginative stories underpinned the diverse ways in which they link stunning hidden patterns with reality. Creative skills are characterised by an aptitude to distinguish the world in diverse ways to link with stunning hidden patterns which are apparently unrelated but then lead to the generation of solutions (Goodliff et al., 2017; Sawyer, 2014).

In her response, T9 agreed with the rest of the participants that learners exhibited their creative skills as they showed interest in "*painting, moulding objects", "used scissors to cut out shapes", "constructed objects with cardboards", "fixed puzzle games"* and *"enjoyed dancing during play".* However, she differed when she noted that her learners could not *"c*reate imaginative stories". The possible reason for this could be that her learners needed a more creative and inviting environment that will make them creatively develop their imagination. In creating imaginative stories, Smith (2012) maintained that creativity is a facet in the learning process that reassures learners about their involvement in their environments which offers them with steady, dependable knowledge that may be used to design, construe, plan and explore in terms of hands-on learning.

4.9.2 Evaluation and data analysis of classroom implementation of jigsaw

Teachers' assessment of the classroom implementation of jigsaw indicated satisfaction. There was no adjustment because the objective of the programme was correctly implemented and attained. Seven teachers responded to the observation schedule, which

aimed at determining the level of progress attained in the implementation of jigsaw in the classrooms. The appraisal of the data informed its analysis, as shown in Table 4.3 below:

Table 4.3: Observation schedule for jigsaw

Core Skills Observed using Jigsaw		Rating scale				
1	***Communication skills*** Young learners did the following in their groups:	Very poor	Poor	Ok	Good	Very good
i.	Communicate effectively with peers.				4	3
ii.	Uses the names of peers during interactions.				3	4
iii.	Follow instructions given by the teacher.			1	5	1
iv.	Show good listening skills.				5	2
v.	Ask questions in relation with class work.		1	1	5	1
vi.	Made use of non-verbal communication cues.	1			3	1
vii.	Group work activity was noisy.				4	3
2	***Collaboration skills***					
i.	Integrated into the group successfully.			1	2	4
ii.	Enjoy interacting with group members.			1	2	4
iii.	Shared working materials appropriately.			2	4	1
iv.	Worked together in group as friends.				3	4
v.	Negotiated during group work		1	1	3	2
vi.	Group learnt from their mistakes			1	3	3
vii.	Group achieved common goal set out for them.			1	3	3
3	***Critical thinking skills***					
i.	Resolved problems such as puzzles.				4	3
ii.	Sort out complex mixed materials.			1	4	2
iii.	Categorized objects into different classes.				3	4
iv.	Ability to re-tell stories.				4	3
v.	Answered questions accurately.				5	2
vi.	Asked the (WH) questions: what, why, who, where, how		1	1	3	2
vii.	Logical presentations of problems	1	1		4	1
4	***Creative skills***					
i.	Showed interest in painting.				2	5
ii.	Showed interest in moulding objects.				3	4
iii.	Used scissors to cut out shapes.				6	1
iv.	Constructed objects with cardboards.			1	3	3
v.	Fixed puzzle games.			1	4	2
vi.	Enjoyed dancing during play.					7
vii.	Created imaginative stories.				5	2

4.9.2.1 Data analysis of communication skills using jigsaw

Responding to the question of whether using jigsaw enhanced communication skills, T1, T2, T4, T5, T7, and T9 agreed that young learners were able to **"***communicate effectively with peers", "use the names of peers during interactions", "follow instructions given by the teacher", "show good listening skills", "ask questions in relation with class work", "make use of non-verbal communication cues"* and that "*group work activity was noisy".* The teachers' response supports the assertion that group work play-based pedagogy fostered communication, collaboration, creativity and critical thinking among learners. Effective group work encourages communication, respect for one another, participation and assisting others in achieving their goal, constructive questions and answers, patiently managing difference and enthusiasm in keeping deadlines (Brooker et al., 2014; Lillard & Eisen, 2017; Montessori, 1959; 2018; Waterloo; 2018).

Teacher T6 disagreed, stating that in using jigsaw, young learners could not "a*sk questions in relation with classwork"* and were unable to "*make use of non-verbal communication cues".* The views of T6 may not be sustained because she agreed that her learners were able to **"***communicate effectively with peers", "follow instructions given by the teacher"* and*, "show good listening skills"* and that the group work activity in her class was noisy. Learners only need to ask questions when they do not understand the instruction given by the teacher. However, T6 noted that her learners followed the instruction she gave to them. According to Hong et al. (2017), Kuchel (2017) and Tan et al. (2017), effective communication entails vocal communication skills that may happen during face-to-face negotiations. In contrast, non-verbal communication skills represent the use of body language, gestures and dress.

4.9.2.2 Data analysis of collaboration skills using jigsaw

As can be seen in Table 4, T1, T4, T6, T7 and T9 maintained that young learners collaborated in their classes, as they: integrated into the group successfully, enjoyed interacting with group members, shared working materials appropriately, worked together in a group as friends, negotiated during group work, learnt from their mistakes' and they were able to 'achieve the common goal set out for them.

The use of jigsaw in the facilitation of collaboration as one of the core skills indicated a favourable response from teachers. The teachers' response shows that learners worked as a team as they collaborated in achieving a common task. Collaboration is an inkling that engages learners to work collectively for their common benefit to achieve a shared goal. Moreover, it is the teamwork that exists amongst two or more learners in the process of working together (Ogunyemi & Ragpot, 2015).

Teacher T2, in her response, considered her learners' collaboration to be poor because they were unable to *"integrate into the group successfully"* and*, "achieve a common goal set out for them".* Similarly*,* T5 differed because her learners, while collaborating, performed poorly in *"negotiation during group work"* and *"learning from their mistakes'.* The position of T2 and T5 was insignificant because the opinion of T1, T4, T6, T7, and T9 holds more sway than that of T2 and T5. Besides, T2 and T5 concurred with the rest of the teachers that their learners *"enjoyed interacting with group members", "shared working materials appropriately",* and *"worked together in a group as friends*". This, therefore, sustains the fact that collaborative skills are attitudes, which assist people in working and functioning appropriately in a team; uphold group ethics, permit team members to engage, sustain pressure and manage disputes (Afurobi et al., 2015).

4.9.2.3   Data analysis of critical thinking skills using jigsaw

There were positive responses in the use of jigsaw in enhancing critical thinking for young learners by teachers. T2, T4, T5, T6, T7, and T9 agreed that the enhancement of critical thinking in young learners was significant. In their response they upheld that young learners were able to *"resolve problems such as puzzles", "sort out complex mixed materials", "categorize objects into different classes", "re-tell stories", "answer questions accurately", "ask the (WH) questions what, why, who, where, how"* and *"logically present problems".* Learners' critical thinking skills were enhanced after they were exposed to learning using jigsaw. Scheffer and Rubenfeld (2001) consider critical thinking skills as analysing and unscrambling a complete part to realise its nature, function and relationships. It is also the application of standards while deciding according to an established criterion.

However, T1 noted that her learners performed poorly as a result of not being able to *"ask the (WH) questions: what, why, who, where, how"* and to *"logically present problems"*. The response of T1 was not significant when compared to that of T2, T4, T5, T6, T7, and T9. It was possible the learners with higher capacity to work were not properly paired with those with lower capacity; hence, the teacher's response. The implication of proper pairing is that learners feel free to ask the WH questions among their peers. Fawcett and Garton (2005) highlight that learners with a lower sorting capacity who work together with their higher sorting ability peers showed a significant improvement in their sorting ability.

4.9.2.4   Data analysis of creative skills using jigsaw

Apparently, the response of teachers indicated success in the use of jigsaw in enhancing creative skills. All teachers—T1, T2, T4, T5, T6, T7 and T9—upheld that learners showed dexterity in their creative skills as they *"showed interest in painting"*, *"showed interest in moulding objects"*, *"used scissors to cut out shapes"*, *"constructed objects with cardboards"*, *"fixed puzzle games"*, *"enjoyed dancing during play"* and also *"created imaginative stories"*. Young learners can be very creative when the right pedagogical approach and resources are employed in facilitating their learning. Creativity is well thought-out to be an act of spinning new and ingenious ideas into reality (Bloom & Dole, 2018; Goodliff et al., 2017). Montessori (2018) asserts that learners learn superlatively through hands-on, real-life practices, which are grounded in a social context. All the teachers confirmed that the use of jigsaw play-based pedagogy in facilitating learning for young learners was a huge success; this sustained the position of Smith (2012) and Montessori (2018).

4.9.3 Evaluation and data analysis of classroom implementation of buzz group:

From the appraisal done by six teachers and me, the implementation of buzz group in young learners' classes was accurate. For this reason, there was no need for programme adjustment. Table 4.4 reflects the data analysis for the buzz group strategy.

Table 4.4: Observation schedule for buzz group

	Core Skills Observed using buzz group	Very poor	Poor	Ok	Good	Very good
1	***Communication skills*** Young learners did the following in their groups:					
i.	Communicate effectively with peers.				2	4
ii.	Uses the names of peers during interactions.				4	2
iii.	Follow instructions given by the teacher.				4	1
iv.	Show good listening skills.				6	
v.	Ask questions in relation with class work.			2	4	
vi.	Made use of non-verbal communication cues.	1			3	2
vii.	Group work activity was noisy.			1	1	4
2	***Collaboration skills***					
i.	Integrated into the group successfully.				2	4
ii.	Enjoy interacting with group members.				2	4
iii.	Shared working materials appropriately.			2	3	1
iv.	Worked together in group as friends.				4	2
v.	Negotiated during group work			1	3	2
vi.	Group learnt from their mistakes		1	2	1	2
vii.	Group achieved common goal set out for them.		1		3	2
3	***Critical thinking skills***					
i.	Resolved problems such as puzzles.				4	2
ii.	Sort out complex mixed materials.				2	4
iii.	Categorized objects into different classes.				4	2
iv.	Ability to re-tell stories.			1	3	2
v.	Answered questions accurately.				6	
vi.	Asked the (WH) questions: what, why, who, where, how				1	5
vii.	Logical presentations of problems			2	2	2
4	***Creative skills***					
i.	Showed interest in painting.			1	2	3
ii.	Showed interest in moulding objects.			2	2	2
iii.	Used scissors to cut out shapes.			1	1	4
iv.	Constructed objects with cardboards.				2	4
v.	Fixed puzzle games.				2	4
vi.	Enjoyed dancing during play.				4	2
vii.	Created imaginative stories.			1	2	3

4.9.3.1 Data analysis of communication skills using the buzz group

According to T2, T3, T4, T5, T7, and T8, the use of the buzz group enhanced the communication skills of young learners. The indication from teachers' responses showed that learners "*communicated effectively with peers*", "*used the names of peers during interactions*", "*followed instructions given by the teacher*", "*showed good listening skills*", "*asked questions in relation with classwork*", "*made use of non-verbal communication cues*" and that "*group work activity was noisy*".

Communication skills were enhanced as can be seen from teachers' responses. The view of T2, T3, T4, T5, T7, and T8 supports the statement that effective communication entails vocal communication skills that may happen during face-to-face negotiations whereas non-verbal communication skills represent the use of body language, gestures and dress (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017).

In her response, T8 agreed with the rest of the teachers but objected that the buzz group did not encourage young learners in her class to "*make use of non-verbal communication cues*". The position of T8 on learners not making use of non-verbal communication skills during the implementation of the buzz group was not significant because T2, T3, T4, T5, and T7 upheld that learners made use of non-verbal communication cues during programme implementation. Moreover, from my observation, learners were active in the learning process; hence there was bodily movement, and no learners came to class without proper dressing. Hong et al. (2017), Kuchel (2017) and Tan et al., (2017), affirm that non-verbal communication skills characterise the use of body language, gestures and dress.

4.9.3.2 Data analysis of collaboration skills using the buzz group

The teachers noted during the appraisal that the buzz group enhanced collaboration as one of the core skills as showed by its analysis. All teachers (T2, T3, T5, T7 and T8) with the exception of T4, agreed that young learners collaborated as they "*integrated into the group successfully*", "*enjoyed interacting with group members*", "*shared working materials appropriately*", "*worked together in a group as friends*", "*negotiated during group work*", "*learnt from their mistakes*" and "*achieved a common goal set out for them*". It is therefore notable to say that the buzz group enhanced the collaboration skills of young learners.

Collaboration supports the advancement of core skills that are essential for learners' imminent life activities. The response of T2, T3, T4, T5, T7, and T8 substantiates the statement made by Curtis and Carter (2017), indicating that young learners can advance several indispensable skills by engaging in group work and other forms of collaboration (Curtis & Carter 2017).

Teacher T4 agreed with other teachers on the above but differed by noting that learners' collaboration was poor in that group learners in her class did not *"learn from their mistakes"* and that they were unable to *"achieve [a] common goal set out for them"*. However, the standpoint of T4 became insignificant because learners in other classes and schools did learn from their mistakes and did achieve the common goal set for them. Furthermore, the researcher considered the implementation of the buzz group a success in the class of T4 because her learners, among other things, could be *"integrated into the group successfully"*, *"enjoyed interacting with group members"*, *"shared working materials appropriately"*, *"worked together in [a] group as friends"*, *"negotiated during group work"* and *"learnt from their mistakes"*. Kropp et al. (2016) and Sawyer (2018) justify this standpoint when they postulate that collaboration is the ability to work skilfully with others on collective tasks; support and uphold agreement, and unite in win-win circumstances.

4.9.3.3 Data analysis of critical thinking skills using the buzz group

The use of the buzz group in enhancing critical thinking for young learners by teachers showed positive response. In their response, T2, T3, T4, T5, T7 and T8 all agreed that young learners' critical thinking was enhanced, as they were able to *"resolve problems such as puzzles"*, *"sort out complex mixed materials"*, *"categorize objects into different classes"*, *"re-tell stories"*, *"answer questions accurately"*, *"ask the (WH) questions: what, why, who, where, how"* and were able to *"logically present problems"*. The researcher agrees with these teachers that young learners' critical thinking was enhanced. This is because all the learners were able to perform the stated criteria used in checking attainment of critical skills using the buzz group.

Agboze et al. (2013) affirmed that critical thinking skills connote the capacity of learners to analyse, examine and challenge assumptions, information and contrasting points of view. Critical thinking learners are offered a variety of chances to enable them to resolve

difficult problems and explore and gain their independence in everyday living (Clarence, 2018; Robson & Hargreaves, 2005). These assertions corroborate the feedback of T2, T3, T4, T5, T7, and T8 on the use of the buzz group to enhance critical thinking skills in young learners. Furthermore, teachers' response to the implementation of critical thinking skills supports the claim of Hove (2011), who maintained that in developing critical thinking skills, critical thinking strategies need to be explored.

4.9.3.4 Data analysis of creative skills buzz group

Ostensibly, the response of teachers indicates that the use of the buzz group to enhance creative skills was effective. T2, T3, T4, T5, T7 and T8 maintained that young learners exhibited handiness in their creative skills as they *"showed interest in painting"*, *"showed interest in moulding objects"*, *"used scissors to cut out shapes"*, *"constructed objects with cardboards"*, *"fixed puzzle games"*, *"enjoyed dancing during play",* and *"created imaginative stories".* Learners' creative skills were successfully enhanced, possibly because of their passion and commitment to produce novel and useful ideas. The procedure of conveying something new into existence involves passion and obligation to produce cognisance of what was beforehand unfamiliar and points to new life (Naiman, 2014). Mumford, Giorgini, Gibson and Mecca (2013) agree that creativity comprises the creation of a novel, useful product. Kaufman and Sternberg (2010) maintain that creativity is the creation of something innovative and valuable.

In slight contrast, T3 noted that her learners' performance in *"creating imaginative stories"* was not encouraging. This could be because creativity is a progression that involves the conveying of ideas. The learners need more time to process ideas progressively before conveying it. Naiman (2014), Mumford, Giorgini, Gibson and Mecca (2013), Kaufman and Sternberg (2010) and Mansy (2015) consider creativity as the progression of conveying an imaginative idea to life that is advantageous to persons in the social order and gratifies creative minds.

4.10 EMERGED THEMES AND SUB-THEMES FROM ANALYSED DATA

As the data analysis process progressed, five main themes emerged, each with several sub-themes. These themes and sub-themes also captured the data responses arising from the research question and research sub-questions. Each theme was organised to

have sub-themes, and these sub-themes were used to build data and conduct a "thematic analysis" (Creswell et al., 2010). Figure 4.16 provides an overview of the themes and sub-themes. The next section captures a discussion of the themes and sub-themes of this study.

The researcher thoroughly read the data he collected from participants several times, thereafter, he filtered the responses to notice what generic considerations came up as unique contributions from participants. The researcher considered a holistic matrix of issues and factors that were significant for strengthening group work play-based pedagogy. Correspondingly, the researcher used responses and issues emerging from the participants' responses to establish themes and sub-themes. Figure 4.16 depicts the themes and sub-themes of the study.

THEME 1:

TEACHERS' INADEQUATE KNOWLEDGE OF PLAY-BASED PEDAGOGY

- •1.1. Teachers' understanding and perception of play-based pedagogy
- •1.2. Teachers' inadequate use of play-base pedagogy
- •1.3. Teachers' inadequate knowledge of types of play-based pedagogy

THEME 2:

LACK OF KNOWLEDGE OF POLICY AND CURRICULUM DOCUMENT ON PLAY-BASED PEDAGOGY

- •2.1. Lack of knowledge and understanding of policy environment for play-based pedagogy
- •2.2. Lack of influence on the implementation of policy/curriculum on play-based pedagogy

THEME 3:

TEACHERS' LACK OF KNOWLEDGE AND UNDERSTANDING OF CORE SKILLS

- •3.1. Lack of understanding of what core skills are
- •3.2. Lack of planning for the development of core skills
- •3.3. Lack of understanding the effects of play-based pedagogy on the enhancement of core skills

THEME 4:

CHALLENGES EXPERIENCED BY TEACHERS

- •4.1. Challenge regarding none professional development programme
- •4.2. Inadequate knowledge and understanding of play-based pedagogy and core skills
- •4.3. Inadequate management support and learning resources
- •4.4. Poor understanding and implementation of policies that influence play-based pedagogy

THEME 5:

STRATEGIES FOR THE ENHANCEMENT OF CORE SKILLS THROUGH PLAY-BASED PEDAGOGIES

- •5.1. Think-pair-share
- •5.2. Jigsaw
- •5.3. Buzz group

Figure 4.16: Themes and sub-themes that emerged from the current study

4.10.1 Theme 1: Teachers' inadequate knowledge of play-based pedagogy

The semi-structured interviews clarified the assumption of what knowledge, skills and practice teachers have and demonstrate in implementing group work play-based pedagogy. In response to this, the teachers gave different meaning and understanding of play-based pedagogy. They indicated how they use play-based pedagogy, the kinds of play-based pedagogy and the challenges they encounter while teaching using play-based pedagogy.

4.10.1.1 Sub-theme 1.1: Teachers' understanding and perception of play-based pedagogy

In response to what participants understood play-based pedagogy to mean, T1 noted that *"play-based pedagogy is the means or act of using play method in the act of teaching and learning",* transcribed as [the means or act of using play method in the act of teaching and learning]. T2 avowed play-based pedagogy to mean *"play-based pedagogy means the teaching method a teacher uses to teach the pupils learning",* transcribed as [teaching method a teacher uses in teaching learners]. T3 indicated, "*in my own understanding, play-based pedagogy means: the activities of education or the strategies of Instruction",* transcribed as [the activities of education or strategies of instruction]. T4 considered play-based pedagogy to mean *"the activities or ability of teaching, educating or instructing",* transcribed as [activities or ability of teaching, educating or instructing]. T5 said: *"play-based pedagogy is a method of using songs, to dramatize what the teacher is educating to the pupils, taking the pupils along as the lesson is going on",* transcribed as [methods of using songs to dramatize what the teacher is educating the learners].

Similarly, T6 asserted that:

> Play-based pedagogy mean the method of teaching in school; this method helps the learners to understand what the teacher is talking all don't a topic it makes the learner to learn fast because learners can learn fast while using play-based pedagogy. (T6)

This was transcribed as [method of teaching].

T7 noted that "*play-based pedagogy means a method of teach with play*", transcribed as [method of teaching]. T8 mentioned that in her view:

> What we mean by play-based pedagogy is a way or a technique used in teaching to understand [or] to make lesson easier or [an] intertwine of quickly to understand example. If you are teaching counting we can use singing method to teach it e.g. one – otu, two –abuo, three-ato. *(T8)*

This was transcribed as [technique used in teaching]. The example she gave is a mathematical song in English and vernacular. T9 said *"play-based pedagogy means using play-play and still teaching the children"*, transcribed as [using play while teaching the learners].

From the response of the participants and the literature reviewed, there is a strong indication that all participants understand what play-based pedagogy means. An example of this, a common code for their responses is that play-based-pedagogy is a teaching method for young learners.

According to Aldhafeeri et al. (2016) and Chien, (2017), play-based pedagogy is a teaching technique used by teachers of early years learners in facilitating learning. Furthermore, they asserted that play-based learning refers to the learning or the activities that a learner is experiencing in a play-based environment. This agrees with the views of Chen and Fleer (2013, 2016) that play is a vehicle through which learning occurs. Similarly, Marginson and Dang (2017) and Topçiu and Myftiu (2015) maintained that play-based pedagogy is an intrinsically motivated, voluntary activity that allows the child the opportunity to construct their own knowledge. In affirmation, Fleer (2017) and Montessori (2013) uphold that when a teacher adopts an approach that acknowledges the use of active, hands-on and play in a learning environment, this is considered as play-based pedagogy. Wood (2004) considered play pedagogy-based pedagogy to mean those provisions marked out for play and playful approaches by early childhood professionals, which helps to facilitate learning.

4.10.1.2   Sub-theme 1.2: Teacher's inadequate use of play-based pedagogy

Considering participants to have a fair knowledge of what play-based pedagogy means, the researcher proceeded to find out how these teachers use group work play-based pedagogy in teaching. Their responses are reflected below.

T1 mentioned "I used this method mostly when I was in junior primary", transcribed as [junior primary means learners from ages 6-8]. T2 noted "story-telling/role play". T3 avowed "by interacting with them whenever am in class". T4 asserted that she "used play-based pedagogy to teach by using objects or figures that have similar examples to educate and draw the interest of the pupil". This was transcribed as [use of hands materials to teach learners]. T5 opined "I have used it to teach parts of the body". T6 said "while teaching using play-based pedagogy, I make sure I divide the learners into groups to achieve what I want and also I make sure I make use of learning materials to enable them to understand what I want them to understand to know". This was transcribed as [learning in groups with materials]. T7 argued "we have been using play-based method sometimes in the classroom for while teaching children mostly the pre-primary class children". T8 maintained "I use play- based pedagogy to teach counting in mathematics e.g. One- otu, two – abuo". Transcribed as [singing and dramatization]. T9 asserted "to ask the learner who is the tallest should come out and who is the shortest should come out and stand out and also ask who is talker, to come out, stand".

The indication of teachers' responses to the sub-theme 2 is that teachers mostly use storytelling, discussion and singing as a play-based pedagogy strategy in teaching. T6 was the only teacher who noted the use of group learning. This implies that most teachers do not have sufficient understanding of how to use group work play-based pedagogy to facilitate learning.

In the literature, Engelen, Wyver, Perry, Bundy, Chan, Ragen, and Naughton (2018) maintained that group work as a pedagogy must involve learners to work in collaboration on fixed tasks, in or outside the classroom. This was supported by Killen (2007) that, when two or three learners work towards the achievement of a common goal in a given task through a play medium, group work ensues.

Furthermore, the literature reviewed indicates that the application of a playful attribute during the facilitation of learning to achieve curriculum outcomes, yet without being formal, is considered to be play-based, as described by Brooker et al. (2014) and Moyles (2014). Wood (2004) maintained the use of play-based pedagogy amounts to pedagogical decisions, strategies, materials and techniques that aid in the facilitation of learning through play.

4.10.2 Sub-theme 1.3: Teachers' inadequate knowledge of types of play-based pedagogy

Whereas the researcher would not want to assume that the response of teachers to sub-theme 1.2 was due to insufficient understanding on how to use group work play-based pedagogy, a step further into the interview was to find out the types of group work play-based pedagogy these teachers do use. The responses are reflected below.

T1 said "the method I used based mostly on the topic I want to teach. That means that the play method must relative closely to the topic I was teaching or handling". This was transcribed as [the teaching method she uses depends on the topic she wants to teach]. T2 mentioned that "sometimes, the pupils feel shy to participate in the role-play method even in storytelling method". This was transcribed as [play role and storytelling method]. T3 noted by saying "you find out the weak ones that finds it difficult to pick up with others". T4 avows "teaching with some stones, cracking jokes to draw their interests". T5 indicated "songs and dramatization' as a pedagogy. T6 maintained "I normally use demonstration method". T7 did not differ much as she noted that "the kinds of play-based pedagogy we use (i) Singing (ii) dramatizing etc". T8 said "use singing method", whereas T9 noted she uses "play-based method".

The response from teachers on the kind of group work play-based pedagogy they use shows that these teachers are not abreast with the 21st century teaching strategy. This, therefore, agrees with Ogunyemi and Ragpot (2015), who affirm that most Nigerian teachers have a narrow understanding of the use of play and its integration into teaching and learning. This explains their consistent choice of teacher-centred learning. It also confirmed my observation, as stated in the rationale of the study, that pre-primary and

primary education teachers do not use group work play-based pedagogy when teaching young learners.

Furthermore, according to Edwards and Cutter-Mackenzie (2011), Hedges and Cooper (2018), and Walsh, McGuinness, Sproule and Trew (2010) , there are different kinds of group work play-based pedagogy available for teachers' use in the 21st century. These include think-pair-share, circle of voices, rotating trios, snowball groups, jigsaw, fishbowl, learning teams, and others. The teachers, therefore, were unable to mention some these 21st century play-based pedagogies hence, T2, T6 and T7 noted the use of songs, singing, storytelling, role-playing and dramatization, while T4 indicated she uses stones and the cracking of jokes. The teachers' responses confirm the claim that though there are literature in the form of policies and other research on the use of play-based pedagogy, some teachers are yet to find their feet in implementing them adequately (Federal Government of Nigeria, 2013; Fleer, 2013; 2017).

4.10.3 Theme 2: Lack of knowledge of policy and curriculum document on play-based pedagogy

Theme 2 aimed to examine teachers' knowledge of the NPE and curriculum document. Furthermore, it sought to find out how the curriculum for young learners' impact on the use of group work play-based pedagogy. The theme is made of two sub-themes as presented below:

4.10.3.1 Sub-theme 2.1: Lack of knowledge and understanding of policy environment for play-based pedagogy

When asked how the Nigeria National Policy on Education advocate the use of play-based pedagogy for young learners, T1, T4, T5, T6, T7, and T9 had no response. However, T2, in her understanding, noted that: "*it helps the pupils to learn fast when they work in [a] group because children learn fast from their fellow children". T3 said "when the pupils are shared in groups, they tend to do the work faster and perfectly well because each and every one of them will have their own ideas shared among themselves. Some children see it as an opportunity to have the boldness to speak in public".* T8 mentioned *"Nigeria policy on education document impact on the use of group work play-based*

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pedagogy in that it helps to carry along all the learners both the weaker ones and the fast ones".

There is a strong indication that most teachers of young learners are not knowledgeable about the position of the NPE concerning the use of group work play-based pedagogy. This assertion confirms the responses of T1, T3, T4, T5, T6, T7 and T9. This also confirms a unanimous response from the participants who said they do not have a copy of NPE.

Meanwhile, T2 responded by saying learners learn fast when they are a group while T8 said the policy recommends that all learners should be carried along. Evidence in literature showed that the Nigerian NPE strongly advocated the use of play in facilitating learning for young learners (Federal Government of Nigeria, 2013). Furthermore, Federal Government of Nigeria (2013) noted that it is the responsibility of the government to promote and train teachers of young learners to enable them to contribute to the development of a sustainable curriculum.

4.10.3.2 Sub-theme 2.2: Lack of influence on the implementation of policy or curriculum on play-based pedagogy

In response to how curriculum document impacts on the use of group work play-based pedagogy, the teachers' responses showed that T1, T3, T5 and T6 were unable to respond to how the curriculum document impacts on the use of group play-based pedagogy. On the other hand, T2 in her response said that *"core skills are various skills used in teaching the learners both in the school, at home, etc. (i.e. it is a skill that comprises many things that a learner will learn and get broad and verse knowledge. Such as education, domestic work, hand work".* T4 noted *"it really impacts in the life of the children because they will all learn from each other to enhance their knowledge".*

T7 mentioned that in her view: "*The curriculum for this emphasized much on this play-based pedagogy that children may understand more as something they observe bad, it is very impressing children understands more on the things like drawer".*

On the other hand, T8 asserts that "*Nigeria policy on education document advocate for group work play-based pedagogy in early childhood it helps to fast learning*".

T9 maintained that *"the early childhood curriculum documents the impact on the use of group work play. One can only get their attention mainly through playing while communicating with them".*

In the curriculum document, Federal Government of Nigeria (2018) maintained that teachers should use learning strategies such as play, group work, discussion, singing and dancing, among others, in facilitating learning for young learners. This, however, does not specifically point to the twenty-first century play-based pedagogies as noted by Edwards and Cutter-Mackenzie (2011), Hedges and Cooper (2018) and Walsh, McGuinness, Sproule and Trew (2010). According to Federal Government of Nigeria (2018), facilitation of learning must revolve around the development of social and financial literacy, cognitive and creativity skills, emotional and physical skills. To achieve this, learning pedagogies have to agree with the current pedagogical practice.

Most teachers do not understand how policy or the curriculum impacts on group work play-based pedagogy in the 21st century. This is most probably that teachers do not have a copy of the policy or curriculum document in the nursery classes. Furthermore, teachers do not understand how the curriculum impacts group work because despite the curriculum having been published first in 2016 and reprinted in 2018 (see appendix K), to date not much emphasis has centred on the 21st century group work play-based pedagogies. Nevertheless, a few teachers showed that the curriculum advocated the use of play-based learning as a learning strategy. This, therefore, agrees with Federal Government of Nigeria (2018), which maintained that the facilitation of learning for young learners should be done through play and group work, among others.

4.10.4 Theme 3: Teachers' lack of knowledge and understanding of core skills

Theme 3 sought to find out teachers' knowledge and understanding about core skills. It further sought to discover the challenges they encounter while enhancing core skills and how play-based pedagogy enhances core skills in young learners. From theme 3, the researcher was able to draw out four sub-themes. Through their responses, it became evident that they needed a professional development programme to educate and equip them on how to use group work play-based pedagogy in the enhancement of the 21st century skills (core skills).

4.10.4.1 Sub-theme 3.1: Lack of understanding of what core skills are

To elicit a response from teachers on their understanding of core skills, I asked the question "What are core skills?". In their response, T1 said "core skill enhancement are those methodologies or those skills a teacher introduces in his/her teaching during teaching/learning" [Core skills are major skills exhibited by a learner during learning]. T2 noted, "so that the child will have little knowledge of something". T3 and T4 were unable to respond, possibly because they did not know what it meant. T5 maintained that "it can help the pupils to do more on their own mostly practicalizing what they are doing". [skills that a learner can implement using his/her thinking or initiative]. T6 in her response mentioned "my understanding in core skills enhancement in early childhood education is that they are the skills to understand to topic fast, they are also the skills in teaching" [important skills used in teaching]. T7 avowed that "core skills are teaching methods and instructional materials". T8 noted that "core skills help to fast track learning" [methods or skills used in making teaching fast]. T9 indicated that "core skill enhancement in early childhood education means those things they see and play with remain in their memories till they grow up" [core skills means play materials].

Viewed from the lens of teacher's responses, teachers do not have a rich understanding about the enhancement of core skills in young learners. This is because most of the teachers interviewed see the enhancement of core skills in young learners as a teaching method. The common understanding of core skills as identified in their responses, was that it is a teaching method. The understanding of the teachers that core skills are teaching methods connote that they lack knowledge about the meaning of core skills.

By contrast, the indication from the literature shows that core skills are communication, collaboration, critical thinking and creativity skills. Core skills enhancement in young learners has to do with the development of interpersonal skills, recognition and value of other people's roles, development of love for humanity, critical thinking skills, creative skills and communication skills development (Aronson & Patnoe, 2011; Clarence, 2018; Deming, 2017). Furthermore, Webster-Stratton and Reid (2004) maintained that learners' core skills are developed when their abilities to manage their lives, make friends and adapt to their environment have been enhanced.

Universally, scholars designate core skills to mean 21st century skills, employability skills, functional skills, transferability skills, essential skills, soft skills, life skills and key skills (Allen & Williams, 2012; Ansari & Gershoff, 2015; Saxena, 2014; Siraj, 2017). They are skills that assist individuals to decide how best to relate, share, collaborate, manipulate, create, observe, criticise, analyse, synthesis and handle things efficiently (Fischer & Zigmond, 2001; Kemp & Carter, 2000; Nel, 2014; Siraj, 2017).

4.10.4.2   Sub-theme 3.2: Lack of planning for the development of core skills

This sub-theme sought to examine why teachers think planning for the development of core skills is necessary for the learner. In their response, T1 avowed *"it will help to retain the knowledge of the learners"* helps learners to retain knowledge]. T2 said *"in terms of storytelling I engaged the pupils to tell their own story about the subject matter of the day"*, t [learners tell their own stories]. T3 did not respond to the question. T4 maintained that "e*nhancement of core skills in children is necessary because it helps in the improvements of the children on their knowledge and understanding"* [helps improve learners' knowledge and understanding]. T5 indicated that *"it will help the child to be focused and be confident in whatever he/she is doing"* [Helps the learner to be focused and be confident].

Furthermore, T6 said *"why I think enhancement of core skill is necessary for the child is as follows: (a) It will enable the child to learn fast (b) it will enable the child to understand what the teacher is talking about"* [it will enable the learner to learn fast, enables the learner understand the teacher]. T7 opined *"the core skill-enhancing the following on children to develop the ideas of socialization future"* [core skill helps learners to socialise in future]. T8 mentioned *"the enhancement of core skill is necessary for the child, it will help to promote education",* [helps promote education]. T9 noted *"the enhancement of core skill is necessary for the child in the sense that the more things they see on every subject the more they get use to those things"* [The more learners see objects in every subject, the more they get used to those things].

Some teachers had a fair knowledge about the need for core skills development as seen in the response of T2, T3, T4, T7 and T8. However, their scope of understanding of the

need for planning for the development of core skills needs broadening as learners are prepared for the 21ˢᵗ century, which is characterised by the fourth industrial revolution.

The importance attached to the development of communication, collaboration, critical thinking and creativity skills cannot be over-emphasised. However, the emergence of the digital revolution and its chain effect on industrialisation is of paramount importance for the enhancement of core skills (Bloem et al., 2014; Colombo et al., 2017; World Economic Forum, 2016; Li et al., 2017). Therefore, it is a prerequisite for teachers to enhance core skills of young learners, so they can properly integrate into the emerging fourth industrialisation (Bloem et al., 2014; Colombo et al., 2017; World Economic Forum, 2016; Li et al., 2017).

4.10.4.3 Sub-theme 3.3: Lack of understanding the effects of play-based pedagogy on the enhancement of core skills

In response to how play-based pedagogy has enhanced the core skills of young learners, the teachers commented as set out below.

T1 said that *"play-based Pedagogy helps to retain core skills in young children. It can retain the knowledge in children for a very long time"* [helps young learners retain core skills]. T2 and T3 had no response to the question. T4 indicated that *"play-based pedagogy enhance core skills in young children because each and every one of them will like to share their own experience, thereby improving them on their knowledge and understanding"* [Share their own experiences]. T5 mentioned that "*it will make learning and teaching easy, it allows the teaching to be child-centred"* [it makes learning and teaching easy, it allows the teaching to be learner-centred]. T6 maintained that *"how play-based pedagogy enhances core skill in young children are as follows: (a) by using them while teaching is the core skill".* T7 noted that *"play-based enhance core skill on children by putting what they saw in practice after watching what a particular company of person did they now come back to perform theirs"* [Making young learners to practice what they have seen]. T8 in her response said *"play-based pedagogy enhance skills in young children, it help them to learn faster"* [helps them to learn fast]. T9 indicated that *"play-based pedagogy enhance core skills in young children by once they have seen and do that by themselves it will be part of them"* [by seeing and doing it themselves].

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The responses from most teachers show that they have a fair understanding on the effects of play-based pedagogy but lack an understanding of its linkage with core skills in young learners. The invalid response from teachers and lack of a response is a perceived indicator that teachers do not have adequate knowledge about the enhancement of core skills through group work. However, a teacher noted that play-based pedagogy enables learners to share their experiences. This confirms Sadulloyevna's (2018a & 2018b) view that interaction among peers and teachers develop socio-emotional skills.

The effects of play-based pedagogy on core skills are obvious. This is because the demand for effective communication goes beyond oratory abilities but also involves body language, gestures and dressing (Hong et al., 2017; Kuchel, 2017; Tan et al., 2017). The interaction among peers and teachers enhances learners socio-emotional development (Sadulloyevna, 2018a and 2018b). When learners team up to solve a common problem in coordinated synchronous activity, it results in a rich development of inter-personal skills (Terrazas-Arellanes, Strycker, Walden & Gallard, 2017). Lamb, Annetta, Firestone and Etopio (2018) maintain that people function properly as they engage in collaboration skills. Ogunyemi and Ragpot (2015) assert that working together in a group avails the members of the opportunity to achieve a common goal through mutual benefits and learners perspective develops as they critically and creatively think or perceive the world around them (Goodliff et al., 2017; Sawyer, 2014). Halpern (2014) considers critical thinking to be a catalyst for the logical connection between ideas and the ability to rationalise.

4.10.5 Theme 4: Challenges experienced by teachers

Prior to this research, the implementation of group work play-based pedagogy to enhance core skills in young learners posed some challenges as noted by teachers and the observations made by me. The following sub-themes captured some of the challenges faced by teachers and learners.

4.10.5.1 Sub-theme 4.1: Challenge regarding none professional development programme

Teacher's response about their previous experience on capacity building for play-based pedagogy was not encouraging, as shown in the response of T1, T2, T3, T4, T5 and T8 who were unable to respond to the question. T6 in her response said that "*the experiences encountered while attending early childhood education workshop are: (a) Sharing of ideas (b) it makes you to know what you did not know (c) it helps me to know move on early childhood education (d) it helps on how to manage the children etc.",* [it helped me to know more about early childhood education]. T7 mentioned that "*the previous experiences I have attending early childhood education were as follows (a) I can now handle little children on matter the age without problem (b) I am now used to their methods (c) I can endear whatever they do to me (d) The children make me feel happy all the time I see them,* [I can handle young learners, no matter their age, without any problem]. T9 in her response indicated "*no workshop yet".*

Professional development programmes integrate the knowledge that education and training are the essential evolving important teacher competences for efficiency in school (Stosich, 2016; Thoonen et al., 2012; Yashkina et al., 2017). It emphasises activities that assist teachers in advancing and increasing their knowledge, attitudes, aptitude and understanding to enable them to bring about the desired change. The development of teachers' capacity can be seen as upgrading of skills, knowledge, attitudes in individuals and groups of teachers for whom the training is intended for (Stosich, 2016; Thoonen et al., 2012; Yashkina et al., 2017).

It was obvious that the professional development T6 and T7 experienced was not in the area of using group work play-based pedagogy to enhance core skills in young learners. Consolidating teachers' capacity supports them to develop more effective and creative ways of discharging their responsibilities. When the value of knowledge and skills of the teacher is rated high, the expected learning outcome becomes of high quality.

4.10.5.2   Sub-theme 4.2: Inadequate knowledge and understanding of play-based pedagogy and core skills

Teachers noted some challenges associated with the use of play-based pedagogy to enhance core skills. Among their responses T1 reasoned that *"because of individual differences, most of the children may not make absolute use of the skill being introduced by the teacher"*. T2, T3 and T5 did not respond to the question if there were any challenges they could associate with the use of play-based pedagogy. T4 indicated *"shyness, stammering"* as challenges she encountered. T6 noted that *"the challenges I encounter while enhancing core skills in young children are as follows (a) Too much of talking while directing them (b) noise making (c) funds/capital for the learning materials"*. T7 affirmed that *"the challenges we encounter during core skill are as follows (a) money (b) transportation (bus) (c) bad roads (d) attitudes of teachers and too much time for teaching it"*. T8 avowed that *"the challenges in core skill in young children are some learners have late development, and they find it difficult to learn quickly"*. T9 stated that *"the challenges one encounter while enhancing for core skills in young children are sometimes the children take everything for play (a) at times those materials will not be available due to [the] cost of it"*.

These statements of the teachers show that the facilitation of group work play-based pedagogy does pose a challenge to some teachers because some school curricula are arranged inflexibly, and teachers are expected to implement the rigid plan. The time demands of the implementation of group work play-based is perceived as too excessive (Abrami et al., 2004; Koutselini 2009). The teachers report that group work play-based pedagogy is excessively time-consuming and they complain of difficulties in managing time effectively (Gillies & Boyle 2010).

Buchs et al. (2017) stated that all group work play-based pedagogy is governed by rules, ideologies and techniques of implementation. They further assert that some facilitators of learning are not acquainted with these techniques whereas other teachers consider it problematic to follow the technical procedures connected with the application of each group work play-based pedagogy (Koutselini, 2009; Sharan, 2010). The old-fashioned teacher needs to change her old method of teaching and take up the role of a facilitator

when facilitating group work play-based pedagogy (Johnson et al., 2008; Sharan 2010; Brody, 2018).

4.10.5.3 Sub-theme 4.3: Inadequate management support and learning resources

The teachers unanimously expressed concern of inadequate support from the school board management and the government. Among the issues highlighted was poor remuneration of teachers and inadequate funding of the early childhood education section. They further expressed dissatisfaction on the lack of a school meal provision from the government for the 3-5-year-old learners; whereas these young learners need the meal more than their senior counterparts do. Among other challenges was the non-provision of age-appropriate furniture, school bags and other accessories for young learners aged 3-5 that the government gives for free to learners aged 6-11.

Inadequate or lack of classroom space for group work activities was another source of challenge for both teachers and learners. Most of the teachers had no idea of how to utilise the internet to produce and provide learning materials. Some teachers tend to rely on the government to supply it, and this hardly ever comes. When taught how to produce some of the learning materials used during the workshop, they complained of a lack of funding to subscribe to the internet for the production of learning materials. Part of the challenges noted from teachers was the challenge of time allocation for each subject. They complained that group work activities consume a lot of time; hence they must cover their academic workload before the end of the term.

4.10.5.4 Sub-theme 4.5: Poor understanding and implementation of policies that influence play-based pedagogy

As can be seen in sub-theme 2.1, teachers are not knowledgeable about the National Policy on Education. In addition, teachers of young learners aged five years old do not have access to the curriculum for learners of that age. This is a big challenge for teachers. Some teachers with the curriculum policies for young learners aged six to seven years had difficulties understanding the impact of policies on play-based pedagogy.

According to Gillies and Boyle (2010), difficulties in managing time appropriately, low motivation and inflexibility in the use of teaching strategies to facilitate group work play-based pedagogy are among the challenges teachers face. Johnson et al. (2008) and Sharan (2010) supported this assertion as they maintained that teachers must relinquish their traditional roles as teachers and become facilitators. Buchs et al., (2017) argue that inability of teachers to keep to the guidelines, values and practices of implementing group work play-based pedagogy, will be a challenge for teachers when implementing any group work play-based learning strategy. On this note, Koutselini (2009) and Sharan (2010) corroborate that some difficulty associated with the implementation of group work play-based pedagogy centres on the fact that some teachers are not knowledgeable about the values of its implementation. The anxiety about disciplinary problems in groups, as teachers do not consider themselves fully in-charge of each group, is another challenge using group work play-based pedagogy (Johnson et al., 2008; Sharan 2010; Brody, 2018).

Noise, distraction, time management, shyness and inadequate instructional materials are among the noted challenges participants pointed out while responding to theme 4. From the literature reviewed, it was obvious that teachers handled these challenges if they adhered to the rules and procedures of implementing group work play-based pedagogy. Some of these challenges, such as noise while facilitating learning in this context, are strengths because it enhances core skills among learners.

4.10.6 Theme 5: Strategies for the enhancement of core skills through play-based pedagogies

Theme 5 tried to answer the question; what strategies may be implemented to enhance teacher's knowledge, skills and practice to implement group work play-based pedagogy in their lessons? The researcher sourced these strategies from available literature as was used in the professional development programme. The strategies include think-pair-share, jigsaw and buzz group. Details on how these strategies were implemented is shown in Phase 3 and 4.

4.11 PHASE 6: MAKE ADJUSTMENTS WHERE NECESSARY

There should have been an adjustment and repetition of the three-implemented professional development programme where necessary, after reflections and evaluations of the implemented programmes. However, the implementation of the programmes were very successful; hence, there was no need for adjustments.

4.12 SUMMARY

In Chapter 4, the researcher presented the results of strengthening group work play-based pedagogy as it emerged from themes and sub-themes. Teachers went through the transcripts (member checking) of their responses to validate their response. The semi-structured interview served as an appraisal or baseline assessment tool for teachers to understand the need for the professional development programme. The appraisal revealed the paucity of teachers' knowledge in using group work play-based pedagogy to enhance core skills in young learners. A professional development programme was, therefore, launched with the teachers to capacitate their skills in facilitating learning using various group work play-based strategies.

The facilitation of group work play-based pedagogy to enhance core skills proved effective, engaging and a positive challenge to teachers and young learners. The involvement of young learners in their learning corroborated Vygotsky's Zone of Proximal Development. Learners were able to construct their own learning with little guidance from their teachers. The researcher explained in detail the activities that constituted the professional development programme. It began by explaining how the semi-structured interview was administered. After that, the researcher discussed the different strategies that remained during the PAR cycle.

In the next chapter, Chapter 5, the researcher discussed the findings, conclusion and recommendations of this study.

CHAPTER 5: INTERPRETATION OF RESEARCH FINDINGS, CONCLUSIONS AND RECOMMENDATIONS
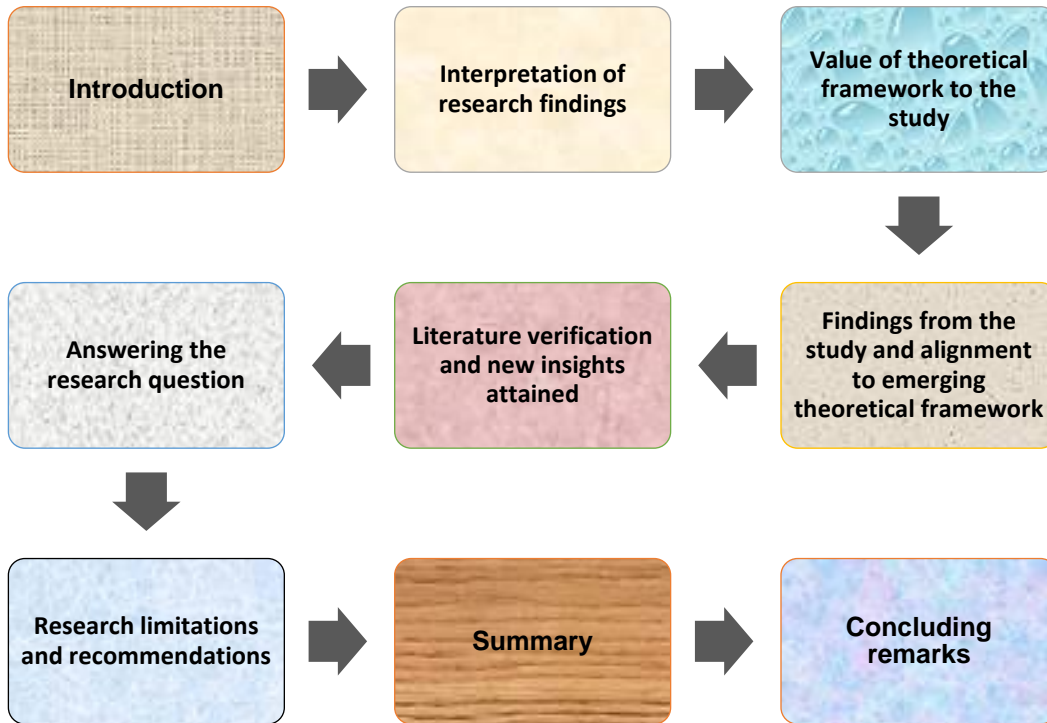
Figure 5.1: Outline of Chapter 5

5.1 INTRODUCTION

In Chapter 4, the researcher presented data analysis strategies and the findings of the current study as they appeared from themes and sub-themes. With the use of pseudonyms, participants' views and responses were protected. The existing literature was used to support the findings that emerged from data analysis. This study focused on strengthening group work play-based pedagogy to enhance the core skills in young learners. Teacher's background knowledge about the research focus was examined through a semi-structured interview, strategies for group work play-based pedagogy were implemented through professional development of the teachers.

Analysis of data is the final phase of data collection wherein the interpretation and meaning of data emerge. This phase is important as it gives an analytic understanding of

the phenomenon under investigation (Creswell, 2014). In Chapter 5, the researcher presents the interpretation of the research findings in relation to the research focus (see Chapter 1, Section 1.4) the research questions, the relevant literature on group work play-based pedagogies, core skills in young learners (see Chapter 2, Section 2.3), and theoretical framework (see Chapter 2, Section 2.2).

5.2   INTERPRETATION OF RESEARCH FINDINGS

The interpretation of findings of this study, was presented to reflect links between the findings and the themes and sub-themes that were used for data analysis. The value of the theoretical framework and its alignment was linked to the research findings. Verification of the existing literature while comparing it with the new insight to the study, was another discussion aimed at interpreting the findings of the research.

The interpretation of the research findings necessitated a reference to the themes and sub-themes that emerged in Chapter 4. These themes and sub-themes as the emerged findings enabled an organisation thereof and subsequently, the recommendations of this study. Table 5.1 presents the interpretation of findings based on themes, sub-themes and their relevance to the research sub-questions.

Table 5.1: Interpretation of findings based on themes, sub-themes and relevance to research sub-questions

Themes	Sub-themes	Relevance to research sub-questions
1. Teachers' inadequate knowledge of play-based pedagogy	Teachers' understanding and perception of play-based pedagogy Teachers' inadequate use of play-based pedagogy Teachers' inadequate knowledge of types of play-based pedagogy	Research sub-question 1
2. Lack of knowledge of policy and curriculum document on play-based pedagogy	Lack of knowledge and understanding of policy environment for play-based pedagogy Lack of influence on the implementation of policy /curriculum on play-based pedagogy	Research sub-question 1
3. Teachers' lack of knowledge and understanding of core skills	Lack of understanding of what core skills are Lack of planning for the development of core skills Lack of understanding the effects of play-based pedagogy on the enhancement of core skills	Research sub-question 1
4. Challenges experienced by teachers	Challenge regarding none professional development programme Inadequate knowledge and understanding of play-based pedagogy and core skills Inadequate management support and learning resources Poor understanding and implementation of policies that influence play-based pedagogy	Research sub-question 1
5. Strategies for the enhancement of core skills through play-based pedagogies	Think-pair-share Jigsaw Buzz group	Research sub-question 2 Research sub-question 3

Table 5.1 enabled an organised interpretation of findings based on themes and sub-themes that were identified in Chapter 4. An additional column of the table shows a connection between the themes, sub-themes and the research sub-questions from where

they emerged. This, therefore, implies that the interpretation of the findings as discussed using the themes and sub-themes in connection with the research sub-questions provided credibility when answering the Research Question. However, a section is provided below for responding to the research question and research sub-questions.

5.2.1 Teachers' inadequate knowledge of play-based pedagogy

During the baseline assessment of teachers' knowledge of play-based pedagogy, it was discovered that teachers of young learners understood play-based pedagogy to mean a teaching method used in facilitating learning for young learners. It was also found that whereas teachers understood what play-based pedagogy was, they seldom used it in facilitating learning for young learners. This was because teachers were not abreast of diverse play-based pedagogy used in facilitating learning. This entails that learning will not be maximised for young learners as their core skills will be inhibited hence impacting negatively in their education.

5.2.1.1 Teachers' understanding and perception of play-based pedagogy

From the data analysed in Chapter 4, theme 1 sub-theme 1.1, it was evident that teachers understood play-based pedagogy. A recurring response, which was common to all teachers as they responded to what they understood play-based pedagogy to mean, was that it was the use of play as a teaching method for learners. Teachers' understanding of play-based pedagogy, gave credence to the claims of Aldhafeeri et al. (2016) and Chien (2017), who noted that play-based pedagogy was a teaching method used by teachers in advancing learning (see Chapter 4, Section 4.10.1.1).

5.2.1.2 Teachers' inadequate use of play-based pedagogy

It was evident that teachers do not make effective use of play-based pedagogy while facilitating learning for young learners, (see Chapter 4, theme 1, sub-theme 1.2). This statement hinges on the responses of most teachers who noted that the play-based pedagogy they normally use is storytelling, role-playing and interaction with learners. The response of other teachers showed and confirmed that the play-based pedagogy, which they are used to, was still within the traditional method of teaching. The use of traditional teaching approach (TLA) means that teachers predominantly use direct teaching,

otherwise known as the chalk and talk method. Only one teacher mentioned that she divides learners into groups, she was not specific about what kind of group work that was (see Chapter 4, Section 4.10.1.2).

5.2.1.3 Teachers' inadequate knowledge of types of play-based pedagogies

The teachers were given a task to identify the kind of group work play-based pedagogy they use in facilitating learning. This task confirmed that teachers were used to the traditional method of teaching, as it came to light in Chapter 4 (see Chapter 4, Section 4.10.1.3). Their response showed that they were not familiar with any 21st century kind of group work play-based pedagogy. Edwards and Cutter-Mackenzie (2011), Hedges and Cooper (2018), Walsh, McGuinness, Sproule and Trew (2010) and Waterloo (2018), as discussed in Chapter 4, Section 4.10.1.3 outlined various group work play-based pedagogy to include jigsaw, buzz group and think-pair-share, among many others. However, teachers are only familiar with the singing method, dramatising, demonstration and cracking jokes, as mentioned in sub-theme 1.3 of Chapter 4 (See Chapter 4, Section 4.10.1.3).

5.2.2 Lack of knowledge of policy and curriculum document on play-based pedagogy

In the current study, the researcher examined teachers' knowledge of policy and curriculum document. To my dismay, teachers were not abreast with the content of the Nigeria National Policy on Education and curriculum document on play-based pedagogy for young learners. Teachers also mention that the curriculum document for nursery three classes was not available for them to use.

5.2.2.1 Lack of knowledge and understanding of policy environment on play-based pedagogy

The National Policy on Education (NPE) Federal Government of Nigeria (2004) is a document wherein policies about every educational level in Nigeria is stated (see appendix L). The policy document made provision for the use of play in facilitating learning for young learners. However, the policy was not specific about what kind of play pedagogy to be used. Hence, teachers of young learners from participating schools did not have

knowledge and understanding about the position of the policy on the play-based pedagogy. This is because, none of their responses indicated that the policy advocated for the use of play pedagogy (see Theme 2, sub-theme 2.1 of Chapter 4).

5.2.2.2 Lack of influence on the implementation of policy/curriculum on play-based pedagogy

Besides the NPE, the curriculum for young learners is another document propagating play based-pedagogy (PBP) (see Appendix K). Whereas the NPE just indicated that learning should be facilitated through play for young learners, the curriculum expounded on it by giving elaborate teaching strategies teachers should adopt while facilitating learning through PBP for young learners. Among the teaching strategies outlined are group work and play. Teachers, however, do not understand the impact of the curriculum document on the use of group work play-based pedagogy in the 21st century classrooms. The impact should be reflected in the enhancement of core skills in young learners. This, however, is not visible because the curriculum content in use did not specifically synchronize with the 21st century group work play-based pedagogies in it. However, the provision of group work and play in the curriculum that was meant to achieve the enhancement of core skills was underutilised because of teachers' inadequate understanding of the curriculum. This inadequacy in teachers' understanding of the impact of the curriculum document resulted to a 'No Responses' and 'Invalid Responses' by most of the teachers on the question of how curriculum impacted on play-based pedagogy (see Chapter 4, Section 4.10.2.2).

5.2.3 Teachers' lack of knowledge and understanding of core skills

It was essential to the study, to examine teachers' knowledge and understanding of the core skills of young learners. It was, however, discovered that teachers lacked the knowledge and understanding of what the core skills were.

5.2.3.1 Lack of understanding of what core skills are

It was revealing that teachers did not understand what core skills were (see Chapter 4, Section 4.10.3.1). Chapter 4, Section 4.10.3.1, showed that there was no single explanation that described core skills for teachers. However, some teachers did not respond to the question that should have elicited their explanation on core skills (which

implied that they did not know what core skills were). Other teachers considered it as a teaching methodology or instructional materials. Nevertheless, core skills are also considered to be soft skills, 21st century skills, life skills, employability, essential skills, functional skills, key skills and transferability skills (see Chapter 4, Section 4.10.3.1). These skills include communication skills, collaboration skills, critical thinking skills and creative skills (see Chapter 4, Section 4.10.3.1) as promoted by Allen and Williams (2012), Fischer and Zigmond (2001), Goodspeed (2016) and Siraj (2017).

5.2.3.2 Lack of planning for the development of core skills

A further probe that confirms that teachers do not understand what core skills are was the question: "*Why would teachers plan for the development of core skills?*" Responding to this question, some teachers said. "*it would help learners to retain knowledge, learn fast, develop confidence in themselves and acquire skills for future socialization*" among others. Teachers' ideas on the development of core skills indicate that teachers have a faint understanding of why core skills should be developed. The main reason why core skills should be developed in young learners is to equip them with the essential life skills that will assist them to fit and function properly in the 21st century society (see Chapter 4, Section 4.10.3.2) (Bloem et al., 2014; Colombo et al., 2017; World Economic Forum, 2016; Li et al., 2017).

5.2.3.3 Lack of understanding the effects of play-based pedagogy on the enhancement of core skills

The teachers commented on the effects of play-based pedagogy on the enhancement of core skills. They indicated that it "*helps learners to learn fast", "retain core skills", ":share their own experiences", "allows for learner centeredness*" and *"makes learning easy"*, among others. The effect of play-based pedagogy on core skills entails that either communication, collaboration, critical thinking and creative skills are enhanced or reduced (see Chapter 4, Section 4.10.3.3). The teachers' responses showed a fair understanding of the effect of play-based pedagogy but could not correlate it with core skills (see Chapter 4, Section 4.10.3.3).

5.2.4 Challenges experienced by teachers

Teachers noted several challenges that they experienced while facilitating learning. The following are their responses.

5.2.4.1 Challenges regarding no professional development programme

In Chapter 4, Section 4. 10.4.1, a "No response" and "No workshop yet" was among the challenges noted by seven teachers on their experiences on capacity building for play-based pedagogy. Two teachers who noted that they had attended a workshop, indicated that it was to help them know more about early childhood and learn how to handle young learners, no matter their age. Teachers' responses in Chapter 4, Section 4. 10.4.1, shows that teachers lack the capacity building for play-based pedagogy and in extension, its enhancement on core skills (see Chapter 4, Section 4. 10.4.1).

5.2.4.2 Inadequate knowledge and understanding of play-based pedagogy and core skills

Responding to challenges associated with knowledge and understanding of play-based pedagogy and core skills; the teachers noted that time-consuming activities, individual differences, shyness, stammering, noisy learners, and the inability of learners to differentiate play and learning, posed a challenge to play-based pedagogy and core skills. Teachers need a better understanding of principles governing the implementation of play-based pedagogy and core skills to enable them to deal with some of these challenges (see Chapter 2, Section 2.3.7). Furthermore, some other challenges such as lack of funding for learning materials, bad roads which hinder access to schools and learning in groups, among others, are notable challenges that should be addressed to assist young learners to enhance core skills (see Chapter 4, Section 4.10.4.2).

5.2.4.3 Inadequate management support and learning resources

The teachers explained anonymously that inadequate support from the school management board and the government was a huge challenge for the implementation of play-based pedagogy to enhance core skills in learners. They noted that some of their classrooms were furnished with age-inappropriate furniture, suffered from water leakage, had no electricity supply, had no fence or security and did not have gadgets such as

computers or internet for research, hence there also were no updates on new teaching methods. Tactical exclusion of learners between three and five years of age from statutory benefits such as school meals and distribution of school bags were part of the noted challenges (see Chapter 4, Section 4.10.4.3). The teachers also frowned upon inadequate classroom spaces for group work play-based pedagogy (see Chapter 4, Section 4.10.4.3).

5.2.4.4 Poor understanding and implementation of policies that influence play-based pedagogy

Chapter 4, Section 4.10.4.4, clearly shows that teachers' understanding, implementation and interpretation of policies and the impact they have on play-based pedagogy is very poor. None of the teachers had a copy of the national policy on education; some teachers did not have a copy of the curriculum document. Those who had a copy of one of the documents did not have a holistic grasp of how the document had to be implemented appropriately. On this note, Koutselini (2009) and Sharan (2010) corroborated that some challenges associated with the implementation of group work play-based pedagogy centres were based on the fact that some teachers were not knowledgeable about the philosophies of its implementation.

5.2.5 Strategies for the enhancement of core skills through play-based pedagogies

In this study, the enhancement of core skills in young learners using group work play-based pedagogy was facilitated by teachers. These teachers were capacitated in the use of group work play-based pedagogies through three different professional development workshops. The findings from their classroom implementation of group work play-based pedagogies are discussed in Phase 1, 2 and 3 as shown below.

5.2.5.1 Phase 1 professional development workshop one (think-pair-share) and data analysis

A professional development workshop on the use of think-pair-share as a teaching strategy was organised to see if learners' core skills would be enhanced (see Chapter 4, Section 4.7.1). The outcome of the implementation of the learning strategy was that core

skills—communication, collaboration, critical thinking and creative skills, were enhanced (see Chapter 4, Section 4.9.1). The teachers agreed that this teaching and learning strategy is a veritable tool for the enhancement of core skills in young learners. They also noted a significant shift from a teacher-centred to a learner-centred approach, greatly improving learner participation (see Chapter 4, Section 4.9.1).

5.2.5.2 Phase 2; professional development workshop two (jigsaw) and data analysis

Similarly, a workshop on professional development on "jigsaw" was organised and it yielded a positive outcome as learners' core skills were enhanced (see Chapter 4, Section 4.7.2). The core skills were enhanced in young learners, as more multifaceted topics were simplified into learnable components. The teachers noted that this teaching and learning strategy requires sufficient learning spaces. They solicited flexible and easily moveable seats for young learners besides allowing for the provision of adequate instructional materials (see Chapter 4, Section 4.10.4.3).

5.2.5.3 Phase 3; professional development workshop three (buzz group) and data analysis

In Chapter 4, Section 4.8.3 and Section 4.9.3, the enhancement of communication, collaboration, critical thinking and creative skills using "buzz group" was very impressive. This is because all the teachers who responded indicated that the use of a *buzz group* was impactful in the enhancement of core skills. Two teachers, however, noted that a buzz group did not allow the learners to make use of non-verbal communication cues, create imaginative stories and learn from their mistakes. Apart from these few negative notes, four other teachers agreed that the use of a buzz group to enhance core skills was very significant (see Chapter 4, Section 4.9.3).

5.3 VALUE OF THEORETICAL FRAMEWORK FOR THE STUDY

The effectiveness of the theoretical framework on which the research hinges, cannot be over emphasised, because it gave the study a structure and shape. Vygotsky's theory of social interaction was the theory adapted for the study. The researcher considered the More Knowledgeable Other (MKO), the Zone of Proximal Development (ZPD), authentic

activities and social learning more appropriate for this study. The researcher discussed the value of the theoretical framework under the sub-headings as set out below.

5.3.1 Value of More Knowledgeable Other (MKO) to the study

An MKO is referred to as an individual with a better understanding of a subject matter (see Chapter 2, Section 2.2.2). Such an individual is noticeably advanced in their level of aptitude about a specific theme, than the individual who is struggling to learn such a theme (McLeod 2014; Joubert 2016; Vygotsky, 1978). The MKO often comes in the person of a teacher or a peer with more experience. There are cases when it may perhaps e somebody younger who has cultivated some knowledge and skills. Vygotsky's ideas of MKO demonstrates how learners can acquire and enhance their ideas, values, strategies and speech patterns in a learning process (McLeod, 2014; Joubert, 2016; Vygotsky, 1978).

In the current study, teachers and some more capable learners were considered More Knowledgeable Others (MKOs). This is because they assisted other learners with low learning ability to understand the taught concepts better. The concept of MKO works together with Vygotsky's ZPD model.

5.3.2 Value of Zone of Proximal Development (ZPD) to the study

One of the fundamentals of Vygotsky's theory is encapsulated in the theoretical construct of the ZPD. Vygotsky argued that the ZPD is where the child is given the most complex instruction or guidance, spiced with a lot of encouragement, by the MKO. The MKO will offer just the precise expanse of guidance, and then permit the learners to learn and advance his skills. The MKO will help the child develop their higher mental functions faster, thereby speeding up cognition. Vygotsky maintained that a child has boundaries to what the child can learn alone; however, these boundaries are extended under the guidance and support of an MKO.

The ZPD epitomizes the possible capacity of a child when given guidance and help from others. For learning to ensue, the learner has to start work with a challenge, which is within his ability and then progress to a more complex task with the assistance of MKO (McLeod 2014; Joubert 2016; Vygotsky, 1978). As the learner progresses, the assistance

is gradually being reduced while learning and cognitive development occur. In this study, learners were therefore given tasks that were within their developmental level, and their learning capacity was enhanced as they related with their peers in the ZPD (see Chapter 4, Section 4.9, Section 4.10 and Section 4.11). Learners progressed from the known to unknown during learning. Learners and teachers who operated as the MKO assisted other learners to grasp the learning content; to this end, learners worked both collaboratively and independently.

5.3.3 Value of Vygotsky social learning to the study

A thought-provoking component of Vygotsky's construct of the ZPD is the provison that requires learning and teaching to materialize in "whole" or "authentic' activities that mimic real life. In this study, learning was facilitated with vivid materials that extrapolated a real-life situation such as sources of water supply or means of transportation among many others. Vygotsky (1978) asserts that a child will be unable to develop until they experience social learning first. He acknowledged two levels wherein the child's social interaction functions are activated; these include the social level, or inter-psychological (McLeod 2014; Joubert 2016; Vygotsky, 1978). This level of social development first appears between individuals. At this level, the individual interacts and connects with other people. Social learning takes place at this level. At the individual or intra-psychological level, the interaction with people which is acquired during social learning facilitates the intra-psychological level of the learner. At the individual level, the learner's cognitive development is stimulated by his exposure to the social level (Chaiklin, 2003; Mardani, 2020; Vygotsky, 1978).

In this study, the learners were placed in groups of three and four at other times as determined by their class population (inter-psychological level), which enabled a conducive environment for the enhancement of core skills. Learning activities in groups created the needed social level where learners connected and interacted with each other through the learning content presented. Thereafter, they were allowed to have an individual reflection of the group learning to which they were exposed. The individual reflection of the group work gave learners the opportunity to develop their cognitive abilities (intra-psychological level). The integration of inter-psychological and intra-

psychological perspectives granted learners the opportunities to enhance their core skills; thus, achieving the goal the research set out to achieve.

5.4 FINDINGS FROM THE STUDY AND ALIGNMENT TO EMERGING THEORETICAL FRAMEWORK

In Table 5.2, the researcher discussed the findings of the study while aligning them with the emerging theoretical framework which the researcher used for the study. Vygotsky's sociocultural theory was used as the theoretical framework in Table 5.2.

Table 5.2: Sociocultural theory and findings from the study

Sociocultural theory	Description	Finding
Social environment and cognition	This element of the theory maintains that learners adopt ways of thinking and behaving as they interact with more knowledgeable persons. Such interactions culminate in the child's thought patterns and behaviours.	As learners interacted among themselves, some knowledgeable learners led their groups into critical thinking about the learning concept. The outcome was the attainment of a behavioural objective set out for the lesson.
Social influences on cognitive developments	Children, being inquisitive, are always actively involved in their own learning; hence they are discovering things for themselves as they develop new understanding through interactions.	Learners were actively involved in their own learning. They constructed their own learning as they were able to sort out differences, classify objects and achieved results for their group task.
More knowledgeable other (MKO)	Relates to persons with a better understanding about a task, process, concept or phenomenon than the learner. The MKO stands in the gap to mediate learning with others who are not adequately knowledgeable about the learning content.	Teachers and some learners were seen to be MKOs in this study. They had a better understating of the task and thus assisted learners who are not very knowledgeable. This resulted in learners achieving a group task set for them.
Zone of Proximal Development (ZPD)	Deals with the differences that exist in what the child can achieve independently and what he can achieve with guidance and encouragement from an MKO.	It was discovered that learners could not achieve much without learning materials. Teachers, therefore, made provisions for learning materials that appealed to learners' senses and learning became attainable.
Vygotsky and language development	Advocates that language is the greatest tool for community engagements in the outside world; hence, children develop language through social interactions.	The communication skills among learners were greatly improved as learners discussed among themselves while working in groups.

The theory the researcher used for the study is Vygotsky's sociocultural theory. This theory informed the theoretical framework adopted for the study. Five aspects of the theory gave a firm support to the study, namely social environment and cognition, social influence and cognition, MKO, ZPD and language development. In Table 5.2, an alignment of the findings justified by the theoretical framework was used. The findings upheld that the social environment enhanced learners' cognition as the learners were seen active in their learning, hence, improving their communication, collaboration, creative and critical thinking skills. Teachers and some knowledgeable learners served as MKOs while the gap in knowledge in the ZPD was filled by persons acting as MKOs.

5.5 LITERATURE VERIFICATION AND NEW INSIGHTS ATTAINED

This section covers literature verification and the insights attained in the study. In doing so, a comparison of the emerged themes, authors of existing literature, description of the existing body of literature and interpretive discussions which confirmed or contradicted findings and the insights from findings were used for literature verification. In confirmation, a checkmark ($\checkmark$) was used to confirm existing literature while an "$\times$" was used to indicate a contradiction with existing literature (see Table 5.3).

Table 5.3: Comparing themes, author(s), existing knowledge, interpretive discussion with insights attained

(Confirmation √ or contradiction ×)

Themes	Author(s)	Existing knowledge	Interpretive discussion	Insights attained
Teachers' inadequate knowledge of play-based pedagogy	Chen and Fleer (2016)	Play-based pedagogy is a fun-filled interactive approach young learners use while exploring the social world around them.	Responding to this section, teachers confirmed the existing literature on what play-based pedagogy is hence there was no contradiction of the existing literature. √ Teachers agree that play-based pedagogy is a teaching method that employs the use of songs, drama, and story (fun) while teaching (see Chapter 4, section 4.10.1.1) Teachers seem to have a reasonable knowledge of what play-based pedagogy is about.	Teachers understood that play-based pedagogy is a method used in facilitating learning for young learners. Teachers do not use group work play-based pedagogy in facilitating learning for young learners because they do not have the skills on how to facilitate group work play-based learning. Furthermore, they consider play-based learning to be time-consuming. Teachers do not have knowledge about different types of group work play-based pedagogy; hence their reason for constant use of the traditional "chalk and Talk" method of teaching.

Lack of knowledge of policy and curriculum document on play-based pedagogy	UNICEF (2012)	Through play, young learners interact with people, objects and acquire essential skills, which they live with throughout their lifetime.		
	Giardiello (2014) Lillard and Eisen (2017) Montessori (1959; 2018)	Play is a pleasurable activity for adults, however, for young learners' play it is work.		
	Federal Government of Nigeria (2004) Federal Government of Nigeria (2018)	Teachers of early childhood/pre-primary education should teach rudiments of numbers, letters, colours, shapes, forms through play.	✕ Teachers contradicted the existing literature because they lack knowledge of the policy and curriculum document on play-based pedagogy.	Teachers do not have knowledge about the policy and the curriculum document with regards to the use of play-based pedagogy. The schools used for the research do not have a copy of the policy and curriculum document.

| Teachers' lack of knowledge and understanding of core skills | Allen and Williams (2012) Fischer and Zigmond (2001) Goodspeed (2016) Siraj (2017). | Core skills are transferable skills, employability skills, 21st century skills which include; communication listening, collaborating, negotiating, creativity and thinking skills. | Teachers' knowledge of core skills and the enhancement of core skills was inadequate.

Teachers considered core skills to mean:

✕ Teaching methods and instructional materials used in facilitating learning (T7; see Chapter 4, section 4.10.3.1).

✕ Things that young learners see and play with which clings to their memory lifelong (T9; see Chapter 4, section 4.10.3.1).

✕ Critical skills used for teaching and learning (T6; see Chapter 4, section 4.10.3.1) | Teachers do not understand what core skills are and why it is critically needed in the 21st century; hence planning for its enhancement in young learners was not intentional.

Teachers were not well informed about the difference between core skills and learning pedagogies. |

Challenges experienced by teachers	Martlew, Stephen, and Ellis (2011) and Pyle and Danniels (2017)	The facilitation of group work can be exasperating and time consuming for learners and facilitators.	√ In the affirmative, teachers concurred that group work play-based pedagogy is time-consuming and overwhelming as they may not cover their curriculum for the term if they stick to it (see Chapter 4, section 4.10.4.2)	Teachers are expected to cover their curriculum by the end of the term. For this reason, they consider group work play-based pedagogy to be time wasting.

Teachers scarcely have opportunities for professional development programme on group work play-based pedagogies.

Teachers are poorly motivated as salaries are not duly paid. They see to the production of most of their learning and teaching materials. |
| | Abrami, Poulsen and Chambers (2004) Koutselini (2009) | Time meant for the application of group work play-based is perceived as excessive. | Teachers were concerned that group work play-based pedagogy is time demanding and that it impacts on the coverage of their daily routine when compared to the teachers centred teaching strategy. | |
| | Gillies and Boyle (2010) | A low motivated and inflexible teacher who is used to teacher-directed learning finds it challenging to explore interactive teaching and learning methods. | √ In the agreement to literature, teachers confirmed that they are not adequately motivated, and this affect teaching and learning style in the classroom (see Chapter 4, section 4.10.4.3). | |

	Stosich (2016) Thoonen et al. (2012) Yashkina et al. (2017)	Development of teachers' capacity means training for the upgrading of skills, knowledge, attitudes in targeted individuals and groups of teachers.	√ T6 avows that professional development (development of capacity) helps teachers to advance knowledge about early childhood and skills on how to manage children. Similarly, T7 affirmed that capacity development assists the teachers to handle learners of any age group without constrains (see Chapter 4, section 4.10.4.1).	
Strategies for the enhancement of core skills through play-based pedagogies	Engelen, Wyver, Perry, Bundy, Chan, Ragen, and Naughton (2018) Balslev et al. (2015) Boudreau (2008) Clarence (2018)	Engelen, Wyver, Perry, Bundy, Chan, Ragen, and Naughton maintained that group work is associated with learners working collaboratively on fixed tasks, in or outside the classroom.	√. T6 reported that she employs group work while teaching, and she does this by dividing learners into small groups. Moreover, she ensures each small group has access to learning materials (see Chapter 4, Section 4.10.1.2) √ Teachers reiterated that group work assists in	Group work play-based pedagogy was a useful strategy that engaged learners to enhance their core skills. Learners were active in their own learning, as they made discoveries in their learning, their critical thinking skills were sharpened. They collaborated effectively with their peers. This shows ability to work as a team in a group. Learners' communication skills were greatly improved. Some learners who are shy, timid and withdrawn in class became lively as they interacted with their peers whilst learning.

	Aronson and Patnoe (2011); Drouet, Saugy, Millet and Lentillon (2018); O'Leary, Barber and Keane (2018)	The concept of think-pair-share requires learners to think, write down, thereafter share their thoughts. The Jigsaw technique is designed to neutralise inter-group tension and promote self-esteem among learners.	resolving problems such as puzzles, sorting out complex mixed materials, categorizing objects into different classes, re-tell stories, answer questions accurately, ask the (WH) questions: what, why, who, where, how and were able to logically present problems (T2, T3, T4, T5, T7 & T8; see Chapter 4, section 4.10.1.3)	Learners became creative in their learning, teachers who now became facilitators were surprised to see learners create different strategies in handling tasks given to them. Teachers discovered that learning content that take most of their time while teaching became simplified when facilitated through group work play-based pedagogy. The teacher became a facilitator rather than the "chalk and talk" teacher. The workload for the teacher was reduced because there were more MKO's in the class than just the teacher.
	Buchs, Filippou, Pulfrey and Volpe (2017)	Group work play-based pedagogy suggests that the teacher designates responsibility to learners and delegates leadership to leaners in the creation of a learner-centred environment	$\sqrt{}$ learners communicated effectively with peers, used the names of peers during interactions, followed instructions given by the teacher, showed good listening skills, asked questions in relation to classwork, made use of non-verbal communication (T2, T3, T4, T5, T7 & T8; see Chapter 4, Section 4.9.3.4).	Learning became more interesting and inviting as learners were more motivated in the learning process.

Martlew, Stephen and Ellis (2011); Pyle and Danniels (2017)	When group members work as a team, they are more productive than individuals	$\sqrt{}$ T2, T3, T5, T7, and T8, agreed that young learners collaborated and integrated into the group successfully, enjoyed interacting with group members, shared working materials appropriately, worked together in a group as friends, negotiated during group work, learnt from their mistakes and achieved a common goal set out for them (see Chapter 4, Section 4.9.3.4)	
Killen (2007)

Caruso and Wooley (2008) | Group work ensures learners work together as a team to achieve the goal of a given task. Learners are encouraged to improve in their areas of weaknesses as they admire and emulate their peers when completing a task | | |

	Gajdamaschko, (2015) Marginson and Dang, (2017) Vygotsky (1978) McLeod (2014) Joubert (2016)	Intra-psychological development stimulates reflective/critical thinking as it leads to problem-solving. Inter-psychological relationship generates an enabling atmosphere for intra-psychological development.	√ Teachers commented that while using different group work play-based pedagogies, learners learn through brainstorming (inter-psychological) and after that shared their experiences with their peers leading to (intra-psychological) developments (see Chapter 4, Section 4.9).	

In Table 5.3, the researcher compared the themes, authors of existing literature and their studies and interpretive discussions with the insights that emerged from the findings of my results. Whereas some findings confirmed some existing literature, others contradicted existing studies. In confirmation of the existing literature, it was discovered that play-based pedagogy is a teaching method for young learners. However, play-based pedagogy is time-consuming, hence teachers' preference for the teachers' centred approach. Furthermore, it was confirmed that teachers of young learners were not adequately motivated to stimulate their need for professional development programmes at regular intervals to up skill their knowledge and performance.

Similarly, the findings of the study confirmed that group work play-based pedagogy is a child or learner-centred approach that makes learners actively involved in their learning. In contradiction to the existing literature, core skills were discovered to mean teaching methods and learning materials. However, the researcher does agree with the existing works of literature that core skills are transferable skills, life skills, and soft skills such as communication, collaboration, critical thinking and creative skills that allow individuals to fit properly into any given society.

The insights the researcher garnered from the study revealed the situation the researcher met, before the teachers were lunched into the professional development programme as well as the outcome of the programme. From the insight column, the teachers' disposition about using group work play-based pedagogy read negative before the professional development programme, but after they were capacitated to use group work play-based pedagogies, the outcome showed positive.

5.6   ANSWERING THE RESEARCH QUESTION

In answering the primary research question, consideration is given first to answering the sub-research questions.

5.6.1   Research sub-question 1

What previous knowledge, skills and practice do teachers have and demonstrate in implementing group work play-based pedagogy?

Research sub-question 1 was aimed at evaluating the previous knowledge, skills and practice teachers demonstrate while using group work play-based pedagogy in their classrooms. It, therefore, served as the baseline assessment tool to harness teacher's prior knowledge with regards to the research focus. A semi-structured interview consisting of open-ended questions was generated from research sub-question 1 to allow for teachers to adequately respond to the baseline assessment (see appendix F). The question was however responded to by all teacher participants in an interview session that was organised in a centralised venue.

At the end of the interview by teachers, the researcher collected the data as responded to by teachers and analysed it. After that, the researcher gave it back to the teachers for member checking. The teachers agreed with me that the analysed data reflected the thoughts they responded to during the baseline assessment. This assessment, however, revealed the lack of teachers' knowledge, skills and practice which they demonstrated in implementing group work play-based pedagogy.

The semi-structured interview assessed teachers' previous knowledge of play-based pedagogy, policy and curriculum documents on play-based pedagogy, understanding of core skills and challenges they experience as they implement group work play-based pedagogy. Responding to the interview, the researcher discovered that though teachers know that play-based pedagogy is a teaching method, they do not have adequate knowledge of the types of play-based pedagogy and thus do not use it to facilitate learning (see Sections 4.10.1.1; 4.10.1.2; 4.10.1.3). Findings reveal that teachers lack the understanding and knowledge of policy and curriculum documents on play-based pedagogy (see Sections 4.10.2; 4.10.2.1; 4.10.2.2). This was responsible for the lack of influence on the implementation of the policy or the curriculum on play-based pedagogy (see sections 4.10.2; 4.10.2.1; 4.10.2.2). Similarly, teachers lacked the knowledge and understanding of what core skills are, hence they were unable to plan for the development of core skills (see Sections 4.10.3; 4.10.3.1; 4.10.3.2; 4.10.3.3). The challenges experienced by teachers was lack of professional development for the use of group work play-based pedagogies, inadequate management support and provision of learning resources and poor understanding of policy implementation among others (see Sections

4.10.4; 4.10.4.1; 4.10.4.2; 4.10.4.3; 4.10.4.4). These were the categories of questions that characterised the baseline assessment on which research Sub-question 1 focused.

To answer Research Sub-question 1 categorically, teachers lacked knowledge, skills and practice to demonstrate the implementation of group work play-based pedagogy (see Sections 4.10.1.1; 4.10.1.2; 4.10.1.3; 4.10.2; 4.10.2.1; 4.10.2.2; 4.10.3; 4.10.3.1; 4.10.3.2; 4.10.3.3; 4.10.4; 4.10.4.1; 4.10.4.2; 4.10.4.3; 4.10.4.4. Furthermore, also see Sub-sections 5.2.1.1; 5.2.1.2; 5.2.1.3; 5.2.2.1; 5.2.2.2; 5.2.3.1; 5.2.3.2; 5.2.3.3; 5.2.4.1; 5.2.4.2; 5.2.4.3; & 5.2.4.4). Following the answer to research sub-question 1, the following section answers research sub-question 2.

5.6.2 Research sub-question 2

What strategies can enhance teachers' knowledge and skills to implement group work play-based pedagogy in their lessons?

The lack of knowledge, skills and practice of teachers found in response to research sub-question 1 led to the question of research sub-question 2. Available literature studies on knowledge, skills and practice of the implementation of group work play-based pedagogies assisted me with the strategies to enhance teachers' knowledge and skills to implement group work play-based pedagogy in their lessons. These strategies with regard to the research sub-question 2 are therefore discussed below.

According to Martlew, Stephen and Ellis, (2011) and Pyle and Danniels (2017), the implementation of group work play-based pedagogy, needs careful planning. Consideration must be given to who, what, when, why and how learning content is to be facilitated. Preparation of the learning environment is one of the key factors to consider as well when planning for group work learning activities. This entails that the choice of a classroom or outdoor learning space must be prepared to fit the learner and learning purpose at the time (Hedges & Cooper, 2018; Martlew, Stephen & Ellis, 2011; Pyle & Danniels, 2017).

Other factors to consider when implementing group work play-based pedagogy include giving the learners a clear instruction of the expected learning outcome, the time allocation within which a given task must be completed and allowing for groups to choose their members. If there are any learners without a group, then the facilitator will allocate

such a learner into a group. The roles of each group member is to be well defined. The teacher ceases from being a traditional "chalk and talk" teacher and assumes the role of a facilitator or moderator (Hedges & Cooper, 2018; Martlew, Stephen & Ellis, 2011; Pyle & Danniels, 2017).

Facilitators' roles while effecting the implementation of play-based pedagogy include supervision and motivation of learners to ensure they are involved in the learning process, helping young learner in collating and summarising the ideas they generate from their groups and discouraging extroverted group members from dominating the group. The teachers must assist each group in maintaining focus on the learning content as well as clarifying any confusion associated with any learning activity. Facilitators also watch out for conflicts among learners and help to resolve them (Hedges & Cooper, 2018; Martlew, Stephen & Ellis, 2011; Pyle & Danniels, 2017).

Among the strategies that enhance teachers' knowledge, skills and practice of implementation of group work play-based pedagogy are "jigsaw", "buzz group", "hot potatoes", "think-pair-share" and "circle of voices" among others (Aronson & Patnoe, 2011; Drouet et al., 2018; O'Leary et al., 2018; Waterloo, 2018).

5.6.3 Research sub-question 3

How would a professional development programme assist teachers implement group work play-based pedagogy to enhance core skills in young learners?

The identification of strategies that enhance teacher's knowledge, skills and practice in the implementation of group work play-based pedagogy led to the organising of professional development programmes to help teachers implement group work play-based pedagogy. The implementation, therefore, facilitated the enhancement of core skills in young learners. Recall that core skills are those soft skills that enable young learners to fit properly into any spheres of life; they include collaboration, communication, critical thinking and creative skills.

In this study, professional development programmes helped teachers to implement group work play-based pedagogy and subsequently, the enhancement of core skills through the workshops wherein teachers were capacitated to use group work play-based pedagogy to facilitate learning (see Sections 4.7.1; 4.7.2; 4.7.3; 4.8.1; 4.8.2; 4.8.3). During the

professional development programme, three different workshops were organised to capacitate teachers. Each of these workshops adopted the participatory action research cycle (see Figure 4.2; Sections 4.5; 4.6; 4.7; 4.8; 4.9). In this study, the steps of the research cycle were considered as Phases. At each phase of the cycle, teachers were trained on the expected outcome of that phase. Although all phases were important to this study, the classroom implementation phase, Phase 4, and the evaluation phase, Phase 5, were the two phases that directly showed how professional development programmes helped teachers to implement group work play-based pedagogy to enhance core skills in young learners.

In answering the research sub-question 3, teachers were exposed to group work play-based pedagogies. They were taught how to facilitate learning using the "jigsaw", "think-pair-share" and "buzz group" learning strategies (see Sections 4.7.1; 4.7.2; 4.7.3; 4.8.1; 4.8.2; 4.8.3). These teaching and learning pedagogies brought a paradigm shift from their teacher-centred orientation method of teaching to a learner-centred way of facilitating learning.

5.6.4 Primary research question

How can teacher capacity be strengthened to use group work play-based pedagogy to enhance the core skills of young learners?

The discussion below shows the approach the researcher adopted for how teacher capacity can be strengthened to use group work play-based pedagogy to enhance the core skills of young learners.

I conducted a baseline assessment of teachers' previous knowledge, skills, and practice of the use of group work play-based pedagogy to ascertain what capacity they already have and what needs to be strengthened (see Section 5.6.1). The outcome of the baseline assessment prompted the need to source what strategies can enhance teachers' knowledge and skills to implement group work play-based pedagogy in their lessons (see Section 5.6.2). An understanding of the strategies that could be used to upskill teachers in the implementation of group work play-based pedagogy led to the third dimension, which was organising a professional development programme for teachers (see Section 5.6.3).

In answering the primary research question of this study, the teachers' capacity was strengthened to use group work play-based pedagogy to enhance core skills in young learners after a baseline assessment was conducted. After the baseline assessment, the researcher identified strategies from the literature to enhance teacher's knowledge, skills and practice and this led to a positive outcome in the teachers' professional development programme.

5.7 RESEARCH LIMITATIONS AND RECOMMENDATIONS

In this study, the researcher discussed some limitations to the study and proffered some recommendations as deduced from the findings of the study. These were discussed in Sections 5.8.1 and 5.8.2 below.

5.7.1 Limitations of the study

The current research answered the research questions that were established in Chapter 1, Section 1.4.2. The research, which was conducted in the Owerri educational zone of Imo State in Nigeria, had its challenges hence its limitations. The challenges, however, are not out of place because qualitative research has its strengths and weaknesses, as noted by Creswell (2010). Okeke and Van Wyk (2016) support the views of Creswell by noting that the findings of qualitative research cannot be extended to a wide-ranging population because of the small sample size normally selected. This alone is a limitation generally associated with qualitative research. There are a few limitations associated with this study.

Firstly, out of 1,275 primary schools in Owerri Education zone of Imo state, 2,780 teachers of Early Childhood Care Development Education (ECCDE) and primary teachers as cited by the Universal Basic Education key statistics of 2014, only three schools, and nine teachers were selected for this study. In consideration of the ethics requirement of participation by choice, three teachers, at some point, could not continue because of their engagement in their schools during the inter-house sports. The implications may be a missed opportunity to acquire the skill that the research imparted to the rest of the teachers.

Secondly, the roads leading to one of the locations of the sampled schools were terribly bad and water-logged because it was the rainy season. This was a challenge because

the transport fare to the schools in that area was inflated due to bad roads; it affected my visiting the schools every day for classroom observation.

Thirdly, at the time of the research, the researcher intended to capacitate teachers on five group work play-based pedagogy strategies but could only capacitate teachers on three, because the learners started their end term examination in preparation of the Easter break. However, the data generated from teacher participants were adequate to proceed with the analyses thereof and obtain the research findings.

Fourthly, one of my participants lost her parents during the time of this research and this affected the rich data that would have been collected from her. This is because she took leave to conduct her parents' funerals. In another development, a teacher in one of the schools used was involved in preparing their learners for inter-house sports and this also affected her participation in the research. These situations were among the limitations encountered during the research.

Lastly, with regard to transferability, the study yielded positive outcomes that can only be transferable to schools in similar contexts or challenges, although teachers in most Nigerian schools struggle with the same issues regarding group work play-based pedagogy. The generalisation of the recommendations from the findings may not be advisable since the study was carried out in a specific geographical context. However, for generalisation, further research is advised in other contexts to give the study a wider horizon necessary for generalisation. However, the findings of this research are not transferrable except in the case of a similar context while generalisation was not the aim of the study (Finfgeld-Connett, 2010; Joram, Gabriele & Walton, 2020). Further studies can be conducted to examine:

- Environmentalising group work play-based pedagogy and enhancement of core skills in rural schools;
- Curriculum development of group work play-based pedagogies in rural schools;
- A scoping review of group work play-based pedagogies and the improvement of core skills in schools;
- Teachers dispositions towards the use of group work play-based pedagogies for the enhancement of core skills in young learners; and

+ Assessments of the group work play-based pedagogy curriculum for quality programme implementation.

5.7.2 Recommendations of the study

Based on the findings of the current research, recommendations can be made on strengthening group work play-based pedagogy for teachers to enhance core skills in young learners.

5.7.2.1 Recommendation for teachers to use play-based pedagogy

The findings of the current study show that teachers do not make use of play-based pedagogy in practice. This is because they are not familiar with the 21st century play-based pedagogies. It is therefore recommended that the government should re-train or reskill teachers of young learners on how to use play-based pedagogy for the benefit of young learners in schools. Doing this may expound their understanding of the provision of play as a medium of instruction for young learners as indicated in the national policy on education and the curriculum for young learners as well.

5.7.2.2 Recommendation for teachers to update their knowledge of policy and curriculum document on play-based pedagogy

The findings of the current study reveal that some teachers do have a copy of the NPE while most teachers of young learners aged five do not have the early childhood curriculum for Nursery 3. The unavailability of the NPE and curriculum documents in pre-schools impact negatively on the facilitation of learning. I, therefore, recommend that teachers should get a personal copy of the NPE, study it and implement the provisions stated in the policy.

The policy document itself contains relevant policies that aid play-based pedagogy. The State Universal Basic Education Board (SUBEB) should in its capacity make provision for the national policy on education for all schools and especially make provision for the current curriculum for teachers of early childhood education. The implications of teachers and schools not having the current curriculum of early childhood were revealed in this study (see Chapter 4, Section 4.12.2.2).

5.7.2.3 Recommendation for capacity building for teachers to upgrade their knowledge and understanding of core skills

It was surprising to note that none of the teachers who participated in the semi-structured interviews knew what core skills were. The core skills as noted earlier are life skills that every learner needs to acquire and enhance if such a learner must integrate properly in the 21st century (see Chapter 2, Section 2.4; Chapter 4, Section 4.13.1). One of the characteristics of the 21st century is the advent of the fourth industrial revolution. Young learners must be exposed to problem-solving skills using play-based pedagogy and enhance their skills. If the teachers who are to assist in enhancing these core skills do not understand what core skills are, then the learners may become misfits in society in a few years. Therefore, the researcher recommends that the government should organise capacity building for teachers, especially in-service teachers, to upgrade their knowledge and understanding of core skills.

5.7.2.4 Recommendation for a professional development programme for teachers to learn strategies for the enhancement of core skills

Knowledge is not static but rather dynamic. It was observed that most teachers do not understand the different strategies employed to enhance the core skills of young learners. Teachers used the traditional method of chalk and talk teaching strategy. The dynamics of today's teaching strategies which are learner-centred have overtaken the teacher-centred teaching method. Evidence abounds of learner-centred learning as could be seen in the Vygotsky theoretical framework for the study and studies of other scholars such as Maria Montessori and Marilyn Fleer, among many others (Fleer, 2009, 2013; Montessori, 2018). As a result of this, the researcher recommends that the government should arrange professional development programmes for teachers of young learners to be trained in different learner centred strategies for the enhancement of core skills.

5.7.2.5 Recommendation for the provision of continuous professional development programme for teachers of young learners

As the researcher has recommended explicitly that professional development programs should be organised for teachers to learn strategies for the enhancement of core skills, a recommendation is hereby made for the government to make provision for continuous

professional development. This recommendation is based on the findings that teachers highlighted that one of the challenges they face is a lack of workshops for them to update their knowledge. Some of these teachers graduated more than twenty years ago. Continuous professional development programmes may assist in upskilling and updating teachers' knowledge, based on research and evidence-based strategies that facilitate learning.

5.7.2.6 Recommendation for the provision of a school-based education resource centre

Among the challenges experienced by teachers was a lack of or inadequate resource materials for learning. Teachers' object to the fact that it is expensive for them to keep producing learning materials for each topic out of their meagre salaries. They indicated that improvisation and locally made learning materials are not sufficient in the 21st century classroom. The teachers reiterated how impossible it is for learners from the researched context to compete with peers taught using computers when there is no electricity in their classrooms. Most learning materials that may engage and enhance the core skills of young learners need electricity, computers, printers and the internet. Consequently, the researcher recommends that the government make a provision of school-based education resource centres. The centre will enable teachers to prepare and produce learning materials as such, helping them to save the cost of producing learning materials by themselves.

5.7.2.7 Recommendation for the provision of adequate learning infrastructure

I recommend that the government improve the infrastructures in schools. This is because the findings indicated that there were leakages of water in the classrooms of young learners when it rains besides inadequate seats for young learners. Roads leading to schools are bad; hence, it discourages young learners from attending schools when it rains. The implication of learners not attending school when it rains due to adverse road infrastructure is that the enhancement of core skills to such learners will be inhibited.

5.7.2.8 Recommendation for a community of practice for teachers

Teachers need to be assertive and organise a community of practice to share best practices or outsource support from the government through available structures. The

researcher, therefore, recommends that trained teachers should be used as the school-based support structure to transfer the group work play-based pedagogy skills to other teachers at other schools in a similar context where such educational problems also exist.

5.8   SUMMARY

In this chapter, the presentation of interpretation of findings was organised using themes and sub-themes that emerged from Chapter 4. The value of Vygotsky's theory to this study was discussed. An interpretation of key findings in relation to Vygotsky's theory of social interaction was presented in this chapter. The comparison of existing literature, themes of the study, interpretive discussion and insight from the study were addressed. In this chapter, the researcher answered the research question and research sub-questions that were set out in Chapter 1 of this study. The limitations of this study were outlined as recommendations for strengthening group work play-based pedagogy to enhance core skills in young learners as they emerged from the interpretation of findings.

5.9   CONCLUDING REMARKS

Strengthening group work play-based pedagogy to enhance core skills in young learners was a plausible tool in enhancing communication, collaboration, creative and critical thinking skills of young learners. This pedagogical approach was learner-friendly, learning inviting and sustained learners' attention span. The researcher is optimistic that when educational stakeholders apply the recommendations made in this study, our educational sector will experience the most rewarding quality education for young learners.

On a concluding note, the researcher would like to note that this study was both challenging and interesting. This was because the researcher spent lots of hours reading, writing, and researching on the phenomenon of group work play-based pedagogy and how it could be used to enhance core skills in young learners. The outcome of the study gave me the most satisfying joy because the study was relevant to classroom teachers who experienced a paradigm shift from the teacher-centred teaching practice to learner-centred teaching practice. This research exposed me to a new perspective on conducting research. The researcher was used to the quantitative research approach until he began this study. The use of participatory action with teachers in this research was a novel way

of involving teachers in a community of practice that aims at solving common classroom practice problems.

Hopefully, the researcher is certain that beyond making this work accessible to the reading public, the teachers used in this study have automatically become resourceful persons to their colleagues who are caught up in the traditional way of teaching.

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LIST OF APPENDIXES

Appendix A: Letter of Consent; Pre-primary and primary school educators (primary participants)

Appendix B: Letter of consent; Head teachers (principals)

Appendix C: Letter of consent; parents of pre-primary school learners

Appendix D: Letter of assent; pre-primary and primary school learners

Appendix E: Observation schedule

Appendix F: Semi-structured interview

Appendix G: Response to semi-structured interview

Appendix H: Response to think-pair-share

Appendix I: Response to Jigsaw

Appendix J: Response to Buzz group

Appendix K: Nigeria Early Childhood Curriculum

Appendix L: Nigeria National Policy on Education

7.1.1 Appendix A: Educator Letter of Consent

2019/02/05

Dear Educator

Request for you to participate in a Research Project

My name is Martin Chukwudi Ekeh and I am a PhD student at the University of Pretoria, South Africa. The research I wish to conduct for my PhD thesis is entitled: Strengthening group work play-based pedagogy to enhance core skills in young learners. It will involve investigating the effectiveness of group work in enhancing core skills, such as communication, collaboration, critical thinking and creativity, in pre-primary children.

This project will be conducted under the supervision of Dr Roy Venketsamy and Dr Susan Thuketana in the Department of Early Childhood Education at the University of Pretoria.

You are kindly invited to participate in the data collection phase of the study in terms of the following:

Semi structured interview to determine your needs and your understanding of group work play-based pedagogy.	90 mins.
Workshop on capacity building.	90 mins.
Implement group work play-based activities in your classroom while the researcher observes your lesson presentation.	60 mins.
Reflection session to reflect on the lesson implementation.	90 mins.

The interview, workshop and reflection sessions will be scheduled according to your availability and will take place at a venue convenient to you. Your participation in this

study is completely voluntary and all discussion in the group will be kept confidential. Furthermore, it is your right to withdraw your participation at any point during the research study without consequences or explanation. You may be assured that your decision will be respected. Confidentiality and anonymity will be guaranteed by assigning numbers to participants during the transcription phase. No participant names or personal information will be revealed in the findings or in the final report.

If you are willing to participate in this research the researcher will ask for your consent to audio-record the interview, workshop and reflection sessions to facilitate the transcription of data in terms of ease and accuracy. Recordings will be securely stored at the University of Pretoria and only my supervisors and I will have access to them. All data will be used for academic purposes only.

You may ask questions at any time before and during your participation in the research process. If you have any concerns regarding the data collection procedures, please inform me or my supervisors. As a participant you will be given an opportunity to verify the views expressed and the transcriptions of interviews.

Please sign the attached permission form to indicate that you fully comprehend the nature and purpose of the research as well as the procedures to be used and that you consent to participate in the project.

Kind regards

_____

Martin Chukwudi Ekeh
E-mail address: martinchuks80@gmail.com
Contact number: 08020323643

Supervisor: Dr. R. Venketsamy
E-mail address: roy.venketsamy@up.ac.za
Co-supervisor: Dr. NS Thuketana
E-mail address: susan.thuketana@up.ac.za

Faculty of Education
Fakulteit Opvoedkunde
Lefapha la Thuto

2019/02/05

PERMISSION FOR EDUCATORS TO PARTICIPATE IN RESEARCH

I, _____, hereby give permission to Martin Chukwudi Ekeh to include me as a participant in his research project entitled: Strengthening group work play-based pedagogy to enhance core skills in young learners.

Signature: _____

Date: _____

7.2 Appendix B: Principal's Letter of Consent

2019/02/05

Dear Principal

Request for you to participate in a Research Project

My name is Martin Chukwudi Ekeh and I am a PhD student at the University of Pretoria, South Africa. The research I wish to conduct for my PhD thesis is entitled: Strengthening group work play-based pedagogy to enhance core skills in young learners. It will involve investigating the effectiveness of group work in enhancing core skills, such as communication, collaboration, critical thinking and creativity, in pre-primary children.

The project will be conducted under the supervision of Dr Roy Venketsamy and Dr Susan Thuketana in the Department of Early Childhood Education at the University of Pretoria.

You are kindly requested to permit two of your pre-school educators to participate in the data collection phase of this study by taking part in the following:

Semi structured interview to determine their needs and understanding of group work play-based pedagogy.	90 mins
Workshop on capacity building.	90 mins.
Implement group work play-based activities in their classrooms while the researcher observes their lesson presentation.	60 mins.
Reflection session to reflect on the lesson implementation.	90 mins.

The interview, workshop and reflection sessions will be scheduled according to their availability and will take place at a venue convenient to them.

Pre-primary school educators' participation in this study is completely voluntary. All discussion in the group will be kept confidential. Furthermore, it is their right to withdraw at any time during the research study without consequences or explanation. You may be assured that their decision will be respected and confidentiality and anonymity will always be guaranteed by assigning numbers to participants during the transcription phase. No participant names or personal information will be reported in the findings.

If you are willing to permit the pre-primary school educators to participate in this research study, the researcher will ask the participants for their consent to audio-record the interview, workshop and reflection sessions to facilitate the transcription of data in terms of ease and accuracy. Recordings will be securely stored at the University of Pretoria and only my supervisors and I will have access to them. All data will be used for academic purposes only.

You and your participant educators may ask questions at any time before or during participation and if you have any concerns regarding the data collection procedures, please inform me or my supervisors. Your educators will be given an opportunity to verify their expressed views and the transcriptions of interviews.

Please sign the attached permission form to indicate that you fully comprehend the nature and purpose of the research as well as the procedures to be used and that you give your consent for your educators to participate in the project.

Kind regards

_____

Martin Chukwudi Ekeh
E-mail address: martinchuks80@gmail.com
Contact number: 08020323643

Supervisor: Dr R Venketsamy
E-mail address: roy.venketsamy@up.ac.za
Co-supervisor: Dr NS Thuketana
E-mail address: susan.thuketana@up.ac.za

2019/02/05

PRINCIPAL'S PERMISSION FOR EDUCATORS TO PARTICIPATE IN RESEARCH

I,

_____,

hereby give permission to Martin Chukwudi Ekeh to include pre-primary and primary educators of my school as participants in his research entitled: Strengthening group work play-based pedagogy to enhance core skills in young learners

Signature: _____

Date: _____

7.3   Appendix C: Parents' Letter of Consent

2019/02/05

Dear Parent

Request for your child(ren) to participate in a Research Project

My name is Martin Chukwudi Ekeh and I am a PhD student at the University of Pretoria, South Africa. The research I wish to conduct for my PhD thesis is entitled: Strengthening group work play-based pedagogy to enhance core skills in young learners. It will involve investigating the effectiveness of group work in enhancing core skills, such as communication, collaboration, critical thinking and creativity, in pre-primary children.

This project will be conducted under the supervision of Dr Roy Venketsamy and Dr Susan Thuketana in the Department of Early Childhood Education at the University of Pretoria.

As part of my research, I am expected to observe teachers using group work play-based activities in their teaching to enhance the core skills of young learners. Your child(ren) will be part of a group in the class while the teacher is teaching. As the researcher, I will be observing the teacher and how the learners are responding to teaching and learning in the classroom.

Your child(ren)'s participation in this study is completely voluntary and all discussion in the group will be kept confidential. Furthermore, it is your right to withdraw your child(ren) from being involved in the group work activity at any time. Should you withdraw your child(ren) from the group work activity, the teacher will ensure that your child(ren) is given his/her normal task to work on in class. Your child(ren) will not be disadvantaged in any way. You can be assured that your decision will be respected. Confidentiality and anonymity will always be guaranteed by assigning numbers to the learners during the

transcription phase. No learner names or personal information will be reported in the findings and in the final report.

If you are willing to allow your child(ren) to participate in this research study, the researcher will ask you for your consent to take photographs of group work activities. All the children's faces will be blocked out during the reporting phase of the study. The information collected will be securely stored at the University of Pretoria and only my supervisors and I will have access to the information. All data will be used for academic purposes only.

You may ask questions at any time before or during participation. If you have any concerns regarding the data collection procedures, please inform me or my supervisors. As a parent of a participant you will have the opportunity to verify the views expressed and the transcriptions of interviews made.

Please sign the attached permission form to indicate that you fully comprehend the nature and purpose of the research as well as the procedures to be used and that you give consent for your child(ren) to participate in the project.

Kind regards

_____

Martin Chukwudi Ekeh
E-mail address: martinchuks80@gmail.com
Contact number: 08020323643

Supervisor: Dr R Venketsamy
E-mail address: roy.venketsamy@up.ac.za
Co-supervisor: Dr NS Thuketana
E-mail address: susan.thuketana@up.ac.za

PARENT'S PERMISSION FOR LEARNER(S) TO PARTICIPATE IN RESEARCH
I, _____, hereby give permission to Martin Chukwudi Ekeh to include my child(ren) as a participant(s) in his research project entitled: Strengthening group work play-based pedagogy to enhance core skills in young learners Signature: _____ Date: _____

7.4   Appendix D: Learners Letter of Assent

2019/02/05

Dear Master/Miss _____

Request for you to participate in a Research Project

I am Martin Chukwudi Ekeh and I am a PhD student of the University of Pretoria, South Africa. I, hereby, seek your permission to involve you in my research project entitled: Strengthening group work play-based pedagogy to enhance core skills in young learners. If you would like to participate in this research, kindly tick happy face (V) in Box A to show your voluntary acceptance to participate in the research.

If you would not like to participate in this research, please tick angry face (V) in Box B to show that you do not want to participate in the research.

Kind regards

_____
Martin Chukwudi Ekeh
E-mail address: martinchuks80@gmail.com
Contact number: 08020323643

Supervisor: Dr. R. Venketsamy
E-mail address: roy.venketsamy@up.ac.za
Co-supervisor: Dr. NS Thuketana
E-mail address: susan.thuketana@up.ac.za

S/N	Core Skills Observed using buzz group	Rating scale				
		Very poor	Poor	Ok	Good	Very good
1	*Communication skills* Young learners did the following in their groups:					
i.	Communicate effectively with peers.					
ii.	Uses the names of peers during interactions.					
iii.	Follow instructions given by the teacher.					
iv.	Show good listening skills.					
v.	Ask questions in relation with class work.					
vi.	Made use of non-verbal communication cues.					
vii.	Group work activity was noisy.					
2	*Collaboration skills*					
i.	Integrated into the group successfully.					
ii.	Enjoy interacting with group members.					
iii.	Shared working materials appropriately.					
iv.	Worked together in group as friends.					
v.	Negotiated during group work					
vi.	Group learnt from their mistakes					
vii.	Group achieved common goal set out for them.					
3	*Critical thinking skills*					
i.	Resolved problems such as puzzles.					
ii.	Sort out complex mixed materials.					
iii.	Categorized objects into different classes.					
iv.	Ability to re-tell stories.					
v.	Answered questions accurately.					
vi.	Asked the (WH) questions: what, why, who, where, how					
vii.	Logical presentations of problems					
4	*Creative skills*					
i.	Showed interest in painting.					
ii.	Showed interest in moulding objects.					
iii.	Used scissors to cut out shapes.					
iv.	Constructed objects with cardboards.					
v.	Fixed puzzle games.					
vi.	Enjoyed dancing during play.					
vii.	Created imaginative stories.					

7.5   Appendix F: Semi-structured interview

- ❖ What do you understand play-based pedagogy to mean?
- ❖ How have you been using play-based pedagogy to teach?
- ❖ What kinds of play-based pedagogy do you use?
- ❖ What challenges do you encounter while using play-based pedagogy?
- ❖ How does the Nigeria policy on education document advocate for group work pay-based pedagogy in early childhood?
- ❖ How does the early childhood curriculum document impact on the use of group work play-based pedagogy?
- ❖ What are core skills?
- ❖ What is your understanding of core skills enhancement in young learners?
- ❖ Why do you think enhancement of core skills is necessary for the learner?
- ❖ What challenges do you encounter while enhancing core skills in young learner?
- ❖ How can play-based pedagogy enhance core skills in young learners?
- ❖ What previous experiences do you have attending early childhood education?