



Teacher collaboration to enhance play-based learning for the holistic development of young children

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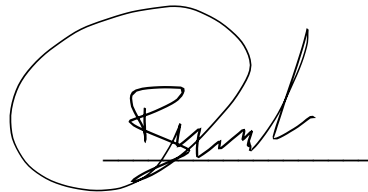
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Declaration of authenticity

DECLARATION

I the undersigned, hereby declare that the work contained in this dissertation / thesis is my own original work and that I have not previously in its entirety or in part submitted it at any university for a degree.

A handwritten signature in black ink, consisting of a large, stylized initial 'P' followed by a cursive name, written over a horizontal line.

Signature

3 November 2022

Date

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Preface and acknowledgements

I would like, first and foremost, to thank my heavenly Father who granted me the courage, vision, and strength to do this study.

My husband has been my pillar of strength, my support structure, and my motivator in trying times.

My children have supported me and understood when their mommy worked long hours, day and night.

Thank you to the best supervisors one could ask for, for always responding, day or night, even on weekends. They were always available to support, correct, and motivate me throughout this journey.

My mother always offered a helping hand, an ear to listen, and family support to grant me the opportunity to get this study done.

I am forever grateful to everyone who has made an impact on my study.

Abstract

The purpose of this study was to explore the enhancement of play-based learning for the holistic development of young children through teacher collaboration. When referring to education in the early years of a child's life, the *National Integrated Early Childhood Development Policy* of 2015 suggests that opportunities should be granted to engage in play-based activities, rather than formal, taught activities. The literature clearly shows the importance of play-based learning. According to the *National Curriculum Framework* of 2015, play-rich environments are important for the holistic development of children. The *National Integrated Early Childhood Development Policy* of 2015 also expresses the importance of holistic development in children in the areas of health, nutrition, and psychosocial and educational development. Two theories, Bronfenbrenner's (1979) ecological theory and Vygotsky's (1978) sociocultural theory were combined to underpin the study. This framework displays that holistic childhood development is affected by both cultural and social influences. The qualitative approach was selected for this study owing to the fact that a qualitative research methodology offers a deep understanding of an individual's perception. In this action research study, I employed the participatory action learning and action research design which enabled me to obtain a better understanding from the participant's point of view. I recruited participants for the study by means of purposive sampling because the participants were chosen with a specific purpose in mind. The data generation consisted of three cycles. The aim of Cycle 1 was to build relationships, implement ethical agreements, create a shared vision for this study, and negotiate the challenges teachers face while incorporating play-based learning in the early years. Cycle 2 was a reflection of Cycle 1 and confronted the idea of how collaborative learning could help teachers to improve the play-based learning guidelines used in the early years. Cycle 3 dealt with evaluating and clarifying the data gathered during Cycles 1 and 2 and determining guidelines that could be derived from the findings to enhance the holistic development of young children through play-based learning. The data analysis of this study was conducted according to steps proposed by Braun and Clarke (2021) to follow in the reflective thematic analysis of data. Furthermore, I applied Herr and Anderson's (2015) quality criteria because they were relevant to this study and served as quality assurance for the purpose of this study. I adhered to the ethical principles of respect, justice, and beneficence. In addition, the privacy and confidentiality of the research participants were respected and preserved throughout the study. The study brought about a better understanding of play-based learning in the holistic development of children, the challenges teachers face during the implementation of play-based learning, and guidelines

that can be implemented to support teacher collaboration for the enhancement of play-based learning in the holistic development of children.

Keywords: collaboration, holistic development, participatory action learning and action research, play-based learning, young children

Opsomming

Die doel van hierdie studie was om die verbetering van spel-gebaseerde leer te verken vir die holistiese ontwikkeling van jong kinders deur onderwyser-samewerking. Wanneer verwys word na opvoeding in die vroeë jare van 'n kind se lewe, beveel die *Nasionale Geïntegreerde Vroeë Kinderontwikkelingsbeleid* van 2015 aan dat geleentheid gegee moet word vir deelname aan spel-gebaseerde aktiwiteite, eerder as formele, onderrig aktiwiteite. Die literatuur toon duidelik die belang van spel-gebaseerde leer. Volgens die Nasionale Kurrikulumraamwerk van 2015 is spelryke omgewings belangrik vir die holistiese ontwikkeling van kinders. Die Nasionale Geïntegreerde Vroeë Kinderontwikkelingsbeleid van 2015 druk ook die belang van holistiese ontwikkeling van kinders op die gebiede van gesondheid, voeding, psigo-sosiale en opvoedkundige ontwikkeling uit. Twee teorieë, Bronfenbrenner (1979) se ekologiese teorie en Vygotsky (1978) se sosiokulturele teorie is gekombineer om die studie te rig. Hierdie raamwerk toon dat holistiese kinderontwikkeling geaffekteer word deur sowel kulturele as sosiale invloede.

Die kwalitatiewe benadering is vir hierdie studie gekies omdat 'n kwalitatiewe navorsingsmetodologie 'n diep begrip bied van 'n individu se persepsie. In hierdie aksie-navorsingstudie het ek 'n deelnemende aksie-leer en aksie-navorsingontwerp gebruik, wat my in staat gestel het om 'n beter begrip te verkry van die deelnemers se oogpunt. Ek het deelnemers vir die studie gewerf deur middel van doelgerigte steekproefneming. Die rede om doelgerigte steekproefneming toe te pas was dat die deelnemers gekies is met 'n spesifieke doelwit in gedagte. Die data-generasie het bestaan uit drie siklusse. Die doelwit van Siklus 1 was om verhoudings te bou, etiese ooreenkomste te implementeer, 'n gedeelde visie vir die studie te skep, en die uitdagings van onderwysers in ag te neem terwyl spel-gebaseerde leer in die vroeë jare toegepas word.

Siklus 2 was 'n weerspieëling van Siklus 1 en spreek die idee aan van hoe samewerkende leer onderwysers kan help om die spel-gebaseerde riglyne wat in die vroeë jare gebruik word, te verbeter. Siklus 3 handel oor die evaluering en verheldering van die data wat tydens Siklusse 1 en 2 versamel is en riglyne te bepaal wat uit die bevindings ontgin kan word om die holistiese ontwikkeling van jong kinders deur spel-gebaseerde leer te bevorder. Die data-analise van die studie is uitgevoer volgens die stappe voorgestel deur Braun en Clarke (2021) om te volg op die reflektiewe tematiese analise van data.

Verder het ek Herr en Anderson (2015) se kwaliteit-kriteria toegepas want hulle was relevant tot hierdie studie en het gedien as kwaliteitversekering vir die doel van hierdie studie. Ek het die etiese beginsels van respek, regverdigheid en heilsaamheid nagekom. Daarby is die privaatheid en vertroulikheid van die navorsing-deelnemers gerespekteer en bewaar tydens die hele studie. Die studie het beter begrip bewerkstellig vir spel-gebaseerde leer in die holistiese ontwikkeling van kinders, die uitdagings wat onderwysers in die gesig staar tydens die implementering van spel-gebaseerde leer, en riglyne wat geïmplementeer kan word om leerkrag-samewerking te ondersteun ten bate van spel-gebaseerde leer in die holistiese ontwikkeling van kinders.

Sleutelwoorde: deelnemende aksie-leer en aksie-navorsing, holistiese ontwikkeling, samewerking, spel-gebaseerde leer, jong kinders, samewerking, holistiese ontwikkeling

Acronyms and abbreviations

ALS	Action Learning Set
DBE	Department of Basic Education
DSD	Department of Social Development
ECD	Early Childhood Development
ECCE	Early Childhood Care and Education
ELP	Early Learning Programme
NCF	National Curriculum Framework
NELDS	National Early Learning Development Standards
NIECD	National Integrated Early Childhood Development Policy
PALAR	Participatory Action Learning and Action Research
PBL	Play-Based Learning
ZPD	Zone of Proximal Development

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Chapter 1 Introduction and overview

1.1 Introduction and background

The play-based learning (PBL) approach is recommended in South Africa as a developmental practice that incorporates most elements necessary for child development (Department of Basic Education [DBE], 2022; Excell & Linington, 2020; Van Heerden, 2021; Veldsman, 2021). Unlike other learning approaches, such as direct instruction, PBL nurtures children to express and explore their learning environment, which encourages them to make their own decisions and develop holistically (Clark, 2020). According to the Department of Higher Education and Training (DHET, 2017), early childhood development (ECD) was introduced in South Africa in the 1990s to emphasise the importance of early childcare and education. The *Children's Act* 38 of 2005 defines early childhood education (ECD) as a process where children from birth to nine years of age develop mentally, morally, emotionally, spiritually, physically, and socially. Early Childhood Care and Education (ECCE) is explained by the DHET (2017, p. 6) as one component of ECD that relates to the provision of “education and stimulation of young children from birth until the year before they enter school”.

In the *Summary of Key Results* of the National ECD Census of 2021, the DBE (2022) differs from the above-mentioned age range and specifies that ECD is a comprehensive approach to programmes and policies for children from birth to seven years of age. According to Kotzé (in Parliamentary Monitoring Group, 2020), ECD can be grouped into three age groups, namely conception to age two years, age three to five years and Grade R. According to the DBE (2022), early learning programmes (ELP's) refer to preschools, creches, Educare Centres, day mothers, or playgroups, but not to Grade R. It can be seen that there are different interpretations for the components of ECD, and in order to secure consistency in this dissertation the terms “early years” and ELP's are used when referring to teaching, education and stimulation of the emotional, social, cognitive, spiritual development in classrooms of three- to four-year-olds in the ECD sector.

The roots of ECD are ingrained in the governing feature of the teaching pedagogy in the early years (Rogers, 2011). The method that offers the best results for educating children from birth to the age of four has become a matter of increasing concern (Ogunyemi & Ragpot, 2016). Garrett (2013) explains that it is possible to use play in a way that encompasses more than merely fun. This is because play includes a broad developmental spectrum of critical skills that are beneficial for children on a daily basis (Rogers, 2011). This idea is emphasised in the *Summary of Key Results* of the National ECD Census of 2021 (DBE, 2022), where Minister

Angie Motshekga highlights the importance of employing PBL in the early years. Excell and Linington (2020) state that it is of vital importance that the South African government adopts a strategy to support ELP's to eliminate challenges with regard to poverty, quality education, and health by implementing a structured policy. The *National Early Learning Development Standards* or NELDS (DBE, 2009) is a curriculum-related policy drive that essentially focuses on the needs of children from birth to four years (Ogunode, 2020).

The *National Integrated Early Childhood Development Policy* or NIECD (Department of Social Development [DSD], 2015) expresses the interconnectedness of multiple role players for children's diverse needs in the ECD phase (Dirks, 2021). These needs are affected by the many socioeconomic challenges that can affect the holistic development of children. Owing to the importance of this holistic development, optimal management must be implemented to ensure sustainable comprehensive development in the ECD sector (Excell & Linington, 2020). Lombard and Du Toit (2021) stipulate that the holistic development of a child in the ECD sector is influenced by play opportunities, as these initiate learning, which, in turn, generates wisdom and moulds a child's character. With regard to the holistic development in education in the early years of a child's life, it is suggested that the opportunity is granted to engage in play-based activities rather than formal, taught activities because of the impact that PBL has on holistic development (Brodie, 2018). Through simultaneous playful and quality experiences, a child develops holistically when both care and education are integrated (Lombard & Du Toit, 2021). Brodie (2018) further explains that children express their thoughts, skills, and personalities during play. Thus, play is a formative component of the holistic development of young children. When referring to the holistic development and wellbeing of children in early childhood an important consideration is offering sufficient services that support the health, nutrition, and psychosocial and educational requirements of the children (DSD, 2015).

In 2015, it was reported that over 65% of the seven million children from birth to four years of age in South Africa are living in poverty (DSD, 2015). These poverty conditions may include restricted health care, poor nutrition, a lack of quality education, and insufficient infrastructure (DSD, 2015). Dirks (2021) explains that young children whose lives are steeped in poverty are most likely vulnerable to toxic stressors that influence their health, nutrition, early learning, safety, and wellbeing. The foundation for lifelong learning is presented in the early learning and developmental years, and the fundamental importance of this early development signifies economic growth and educational sustainability (DSD, 2015). According to the latest ECD census, in the *Summary of Key Results* (DBE, 2022), 33% of ELP's are dependent on subsidies from the DSD that influence the sustainability of early childhood education and have a direct impact on the holistic development of children. Excell and Linington (2020) state that

the best investment a country can make is in quality education, where critical human development promotes peaceful societies and eliminates extreme poverty and inequality.

Adopting a PBL approach enables one to understand that play is a process and action, and not an end product (Lombard & Du Toit, 2021). PBL is classified as an intrinsically motivated procedure that supports outcomes and development (Broadhead et al., 2010). Furthermore, PBL focuses on an educational approach while promoting socio-emotional development, cognitive development, and academic achievement, in other words, the child in its whole capacity (Lombard & Du Toit, 2021). Consequently, PBL is focused on gaining support, as it places the child at the centre of the process of learning and teaching. According to Excell and Linington (2020), playfulness, resilience, and reciprocity are positive learning dispositions that are imperative for successful engagement to sustain lifelong learning and focus on the holistic development of the child. PBL is broadly known as the best approach to achieve quality outcomes for children as a whole, and it is vital to understand the importance of play to sustain holistic development (Hesterman, 2018). The *National Curriculum Framework (NCF)* (DBE, 2015) of South Africa guides teachers¹ on ways to create a play-rich environment in the early years.

Most teachers find it difficult to incorporate PBL and demonstrate the importance of play in the classroom (Walsh et al., 2017). As a result, it appears as if play is disappearing from early education classrooms and being pushed aside to make space for academic instruction, despite the fact that play is a primary turbine of personal growth (Dearybury & Jones, 2020; Ogunyemi & Ragpot, 2016). Since the 18th century, much emphasis has been put on play and it has been regarded as greatly important in the learning and development areas of children (Walsh et al., 2017). Play describes the behaviour, process, and approach to a task (Sheridan et al., 2010). With the broad description of play, it is possible to accept it as the process of eagerly engaging in a delightful mental or physical endeavour to obtain emotional gratification (Sheridan et al., 2010). Through play, children learn about the world around them and develop various skills. Play has various essential elements that contribute to development in preschool children, such as supporting children's expression of ideas and feelings, supporting effective academic learning, and testing children's world knowledge (Saracho, 2020). Optimal learning conditions are provided through PBL, while the focus on the environment and the approaches used is based on the child's interest (Saracho, 2020). When referring to education in the early years of a child's life, it is suggested that the opportunity is granted to engage in play-based

¹ In order to secure consistency in this dissertation, the term "teachers" and not "practitioners" will be used when referring to educators who guide young children in classrooms for three- to four-year-olds.

activities rather than formal, taught activities (DSD, 2015). Walsh et al. (2017) argue that play, in its highest form, can establish the holistic development of children. The concept of play has a fundamental effect on the development of children when the opportunity is granted for them to select their learning, especially when there is a goal they wish to achieve (Saracho, 2020). It can be argued that teachers working in the ECD sector should act as advocates for children's right to play.

The *Children's Act* 38 of 2005 acknowledges children's right to play and the requirement to engage in play for the development of children through acceptable activities. The regulations of the *Children's Act* 38 of 2005 also state that ELP's are obligated to promote children's rights and encourage play, rest, and recreation through a safe environment and equipped premises in promoting the best interest of the child. Both the *Constitution of the Republic of South Africa* (1996) and the *Local Governments Municipal Systems Act* 32 of 2000 play an integral role in sustaining the rights of children and developing and adopting policies that promote healthy and safe environments for children to play. The NCF (DBE, 2015) for children from birth to four targets a collaborative approach for stakeholders, including parents, teachers, curriculum developers, caregivers, and specialists, working together as a fundamental principle to ensure development through play opportunities as a learning tool in the growing stages of a child. In 2019, the South African president, Cyril Ramaphosa, made an announcement at the State of the Nation Address that this process would start when ECD centres migrated to the DBE. Angie Motshekga, minister of Basic Education, announced that ECD would migrate from the DSD to the DBE from 1 April 2022 (Seeletsa, 2022). She added that implementing this shift would create an opportunity to implement guidelines to support learning and strengthen the foundation of education (Seeletsa, 2022). Furthermore, the shift of ECD to DBE would expand the offering of education and the implementation of supporting programmes in PBL, Motshekga explained (Seeletsa, 2022). Table 1-1 below presents the strategic action plan for the migration of ELP's from the DSD to the DBE.

Table 1-1: Action plan for the function shift

Source: Dirks (2021)

Key reminders of what the migration is not	Ten strategic action points – Draft National Framework
<ol style="list-style-type: none"> 1. Not all zero- to five-year-olds will now go to schools – using a hybrid model means that children zero to three years old will continue in ECD centres. ECD centres that cater for four- to five-year-olds in a Grade RR class will need to be properly registered with the DBE 2. The DBE will not automatically employ all ECD practitioners. Practitioners in ECD centres will continue to be funded through the non-governmental and private sectors. 3. Funding for ECD programmes (birth to four years) will not increase overnight. Funding strategies and budgets will be reviewed, planned for, and initiated over time 4. ECD infrastructure will not change or be expanded immediately – this will be part of the long-term ECD strategic planning. 5. Current service provisioning (and applicable funding) will not stop abruptly. There needs to be minimum disruption in service delivery. 6. ECD practitioners will not automatically become professional educators. ECD practitioners need to meet the minimum professional and academic norms and standards. 	<ol style="list-style-type: none"> 1. A highly functional organisational structure for effective coordination between different government departments and stakeholders anchored in the DBE. 2. A national ECD media and advocacy campaign tied to a branded national programme. 3. A single streamlined system of registration for centres, programmes, and practitioners. 4. A model of funding for ECD centres, programmes, and practitioners that is aligned with DBE systems. 5. A new system of infrastructure support for ECD centres and schools providing Grades R and RR. 6. An education management information system for the ECD sector that is very powerful yet very simple to use. 7. A quality assurance system that allows for constant feedback, directed support, and the tracking of progress. 8. A rich and consolidated network of public-private partnerships that help drive access and quality. 9. A professionalised workforce of ECD practitioners and educators who are able to service the needs of the sector. 10. An early learning index that will enable the tracking of children’s progress, milestones, and outcomes at national and local levels.

The migration and action plan summarised above provides an opportunity to improve the quality of early childhood education systems to support children in South Africa better (Dirks, 2021).

Specific policy goals have been set in South Africa in the *National Plan of Action for Children in South Africa 2012-2017* (Department of Women, Children, and People with Disabilities, 2017) to promote development in the ECD sector. These goals include the goal for play to form part of the ECD programmes. The curricula offered at schools should ensure that play is introduced as a critical aspect of the lives of children and that resources are made available for promoting play. Furthermore, the NIECD (DSD, 2015) has set goals for a sustainable ECD sector. By 2024, the goal is to have created programmes where stakeholders can help with holistic development in early childhood through positive learning practices, which include play as learning instruction (DSD, 2015). Lastly, the NIECD (DSD, 2015) and the *National Plan of Action for Children in South Africa* (Department of Women, Children, and People with Disabilities, 2017) have set the goal that all children have access to recreation and play facilities as a right. It is the obligation of the DBE to develop curricula and implement training for teachers to ensure optimal development for children in their early learning stages through play. Teachers bear the responsibility of guaranteeing children the right to play; otherwise, they are denied the right to be children (Nicholson & Wesneski, 2019).

The Department of Sport and Recreation in South Africa adopted the *White Paper on Sports and Recreation* (2012) and the *National Sport and Recreation Plan* (2012). The topic of the white paper is “Getting the nation to play”, which suggests that its objective is to encourage participation in sport and leisure among the youth of South Africa. In the North-West Province, the recreational service programme – which is supported by the Department of Sport, Arts, and Culture – offers services where local recreational coordinators attend preschools and educate ECD teacher directives on play programmes and the integration of physical activities (Department of Women, Children, and People with Disabilities, 2017).

The above-mentioned policy documents emphasise that play and development are powerful mediums for education (Nicholson & Wisneski, 2019). Within the ECD sector, teachers have the platform to promote awareness of the importance of and the right to play (Nicholson & Wisneski, 2019). This platform should be sustainable, considering that the early childhood setting is inclusive and a balanced approach to play should be maintained. Play is seen as a fundamental part of life in the development of children (Clark, 2020). It can be universally accepted to describe early childhood by using children and play in one sentence where play is associated with holistic development.

The aim of this study is to work collaboratively with teachers to enhance PBL for the holistic development of young children.

1.2 Problem statement

The literature emphasises that play is crucial for child development (Excell & Linington, 2020; Nicholson & Wisneski, 2019; Stach & Veldsman, 2021). Dotson (2020) agrees by highlighting that children in the 21st century spend far too little time in free play. Play is greatly disadvantaged in the early years by exposing children to technology, information overload, and scholastic pressure (Lombard & Du Toit, 2021). Saracho (2020) explains that children today are spending too much time being instructed and tested in academic areas than learning through exploration, play, and using their imagination.

When children under the age of six years are exposed to technology, they may spend 1,58 hours per day on screen time, while they only play for an average of two hours per day (Mustafaoğlu et al., 2018). It seems that children have inappropriate habits of using technology and spend too much time on technology, which create developmental problems and pose a health risk to children (Mustafaoğlu et al., 2018). A study in the United States of America, based on technology use among children, found that 36% of children worldwide lived in homes where the television was switched on most of the time and 45% of parents used the television as a tool to occupy their children (Mustafaoğlu et al., 2018). Research in South Africa has found similar tendencies and shows that South Africa is one of the countries with the highest usage of mobile technology and mobile social networking, which suggest that children have a high potential to be exposed to content that is not age-appropriate (Smit, 2018).

The challenge (see 5.1) in the ECD sector is to create an environment that is “play-rich”. While there has been speculation about formal or informal teaching approaches and the significance of PBL, the reality is that many teachers do not realise the value of PBL (Walsh et al., 2017). Policies that are transcended and concentrate on the implementation of a constructive curriculum built on the foundations of PBL can be valuable (Excell & Linington, 2020).

Being the mother of a child with autism, I have personally experienced the impact of PBL and the development progress it has on a child. Besides, as a teacher in the early years, I find that the focus in the classroom is more on academic achievement and direct instruction, and less on PBL. More time is spent on academic achievement due to the pressure from the government to achieve school readiness from a very early age. I have seen that the set assessments are becoming even more challenging and the expectancy for the achievement of milestones is being set for an even younger age. We are confronted with the DBE implementing school obligation from a younger age now, forcing children to become school-

ready at a younger age. Play is starting to be scaled down in preschools, and the focus is on teaching academic skills through direct instruction, which is now replacing PBL. These didactic, academic, content-based learning methods for preschool children are forcing early childhood programmes to neglect play-orientated and child-centred learning methods.

The aim of this study, therefore, is to promote PBL in the early years by focusing on a collaborative approach to promote the holistic development of children in the early years.

1.3 Purpose of the study

The purpose of the study is to promote collaboration among teachers to support the holistic development of children in the early years through PBL. To explore this purpose, the following questions have been formulated:

1.3.1 Main research question

How can teacher collaboration enhance PBL for the holistic development of young children?

1.3.2 Secondary research questions

- What challenges do teachers face while incorporating PBL in the early years?
- How can collaborative learning help teachers to improve the use of PBL in the early years?
- What guidelines can be derived from the findings to enhance the holistic development of young children through PBL?

1.4 Clarification of concepts

Next, the main concepts referred to in the study are defined and discussed with reference to their use in this study.

1.4.1 Play-based learning

Play-based learning or PBL is defined as an educational approach that is whole-child-centred (Van Heerden & Veldsman, 2021). PBL refers to learning through play by exploring the world by developing cognitive, social, emotional, creative, and physical skills. In this study, the terms

“play-based approach” and “play-based learning” are used to refer to child-actioned participation through play (Van Heerden & Veldsman, 2021).

1.4.2 Holistic development

Holistic development considers the development of the person as a whole, including intellectual, physical, emotional, and social aspects (Miller et al., 2019). In the early years, holistic development refers to the interlinking of the learning, development, and growth of young children (Miller et al., 2019).

1.4.3 Collaboration

Collaboration is defined as working together with another individual to reach a common goal (Karbalaei et al., 2018). With regard to early childhood education, collaboration involves strong engagement and interaction among teachers and children in early childhood centres, where teachers allow children to interact with others on the playground as they learn (Karbalaei et al., 2018). In this study, collaboration entails cooperation among the teachers to promote the holistic development of young children.

1.4.4 Early learning programmes (ELP's)

As explained in the first section of this chapter, it appears as if there are different interpretations when referring to teaching and learning in ECD. Kotzé (in Parliamentary Monitoring Group, 2020) argues that ECD can be grouped into three age groups, namely conception to two years, children aged three to five years, and Grade R. DHET (2017) refers to ECCE as one component of ECD, while the ECD census (DBE, 2022) explains ELP's as pre-schools, creches, educare centres, day mothers or playgroups (but not Grade R). In this study the term “early years” and ELP's are used when referring to teaching and learning activities in classrooms for three- to four-year-olds in the ECD sector (see 1.1).

1.5 Theoretical framework

A theoretical framework (see 2.2) is defined as an empirical theory of the process that includes social or psychological levels that apply to the understanding of a phenomenon (Mertz et al., 2015). Firstly, the sociocultural theory of Lev Vygotsky (1978), where the focus is on the importance of play as a tool in a child's development, guided the study. Secondly, the ecological theory outlined by Bronfenbrenner (1979) guided the study in terms of

understanding the collaborative effect of various systems on the holistic development of a child and on play-based education. By combining these two theories, I could understand the influence of social and cultural effects on the holistic development of young children. In Chapter 2, a detailed explanation of the integration of the two frameworks is provided (see 2.2.3).

1.5.1 Sociocultural theory

Vygotsky (1978, as cited in Lake, 2012) believes that play promotes the highest form of development. The cultural term, as stated in the theory (see 2.2.2), relates to how children interact and how they make meaning of that interaction (Conkbayir & Pascal, 2015). Working with PBL in this study, it is important to understand the interaction between children and teachers. Vygotsky (in Excell & Linington, 2020) stresses that most of a child's learning will take place through play and that a child will learn best through collaboration and instruction, where a language-rich environment is achieved. According to Conkbayir and Pascal (2015), the method outlined by Vygotsky (1978), focuses on interaction in the environment through the play-based framework for learning, namely playing and exploring, active learning and creating, and thinking critically. The theory emphasises that play creates a zone of proximal development (ZPD) where development is extended through adult guidance (Stach & Veldsman, 2021).

1.5.2 Ecological theory

Bronfenbrenner's (1979) ecological theory (see 2.2.1) is also known as a systems theory where multiple systems influence a child's development (Conkbayir & Pascal, 2015). This theory highlights the many factors that influence a child's overall development and growth. Bronfenbrenner (1979) outlines the five systems that impact a child's development, namely the micro-, meso-, exo-, macro-, and chronosystems. All these systems interact and form part of a child's development (Van Heerden & Veldsman, 2021). In Chapter 2, an in-depth explanation of how these systems influence the holistic development of a young child is provided.

1.5.3 Combining the two theories

Childhood development is affected by cultural and social influences within the environment (Stach & Veldsman, 2021). For this reason, both theories are used in this study to explore how holistic development in young children can be enhanced by using PBL. Figure 1-1 depicts

the five social systems that interact with one another and influence a child's development. In these systems, social influences play a role in determining the holistic development of children. Figure 1-1 also illustrates the integration and relation of the theories of Bronfenbrenner (1979) and Vygotsky (1978) to play and the development of children.

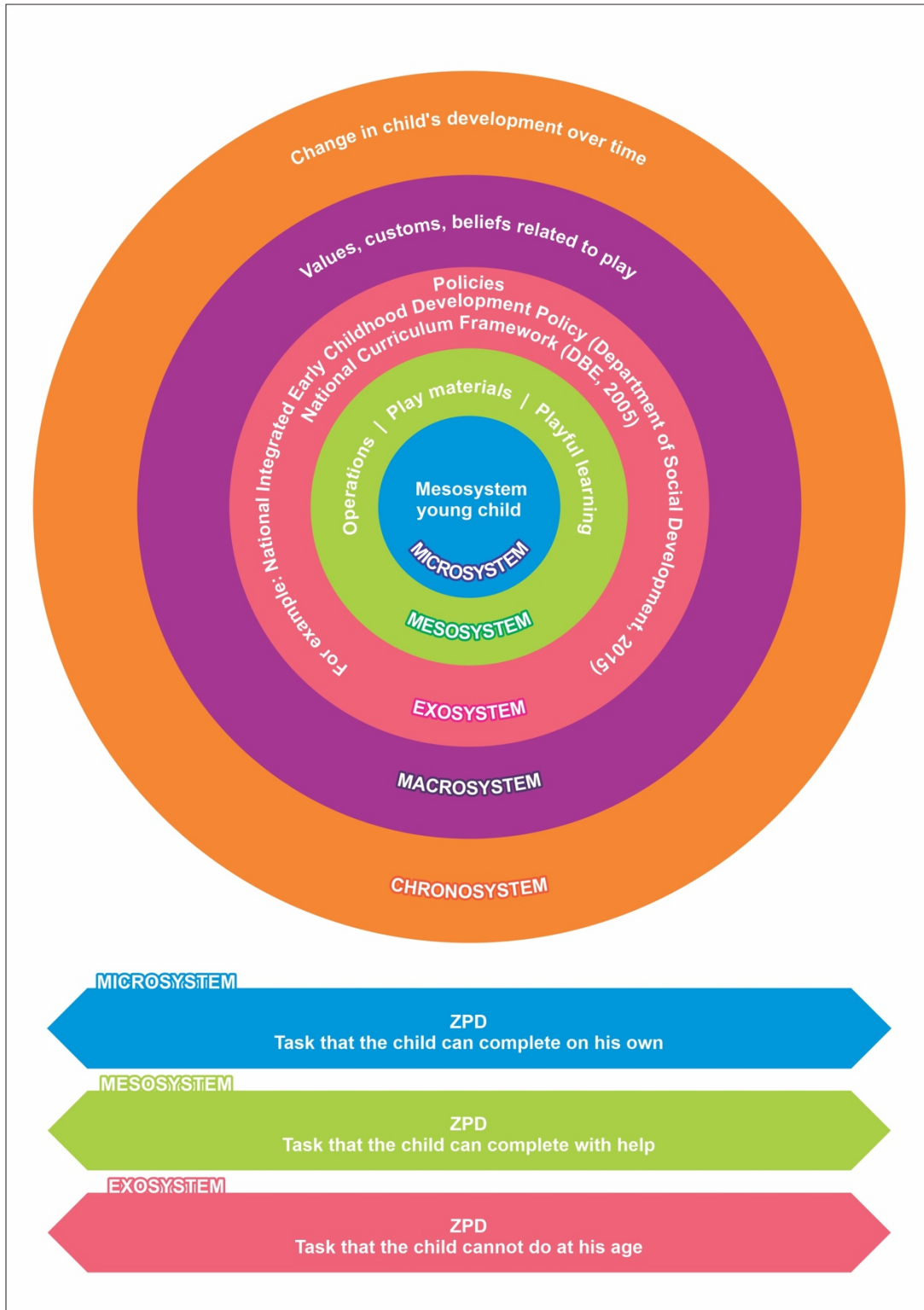


Figure 1-1: Integration of Bronfenbrenner's (1979) sociocultural model and Vygotsky's (1978) ecological theory (adapted from Stach & Veldsman, 2021)

The above figure illustrates the integrated theory of Bronfenbrenner's (1979) five social systems that interact with one another and influence a child's development, together with Vygotsky's (1978) theory that there is interaction in different environments that promotes PBL through support and guidance in those areas (see 2.8.1).

1.6 Research methodology

Research methodology (see 3.2) refers to a specific method that a research study adopts to identify, select, process, and analyse specific content on a particular topic (Wilkinson & Birmingham, 2018). The methodology offers an understanding of interpretations and constructions on a particular topic at a specific point in time and context that may lead to an in-depth understanding of why things are the way they are and why society behaves in the way it does. In Chapter 3, Figure 3-1 depicts the broad strategy and methods used to identify, select, process, and analyse the way teachers could promote collaboration between them to support the holistic development of children in the early years through PBL.

1.6.1 Qualitative approach

Efron and Ravid (2019) explain that the purpose of qualitative research (see 3.2.2) is to gain an understanding of and insight into how participants make sense of their experiences. The knowledge gained will serve as a basis for bringing about change (Efron & Ravid, 2019). Hazard (2020:27) argues that one of the characteristics of a good qualitative researcher is the ability to acquire knowledge on how to listen, make sense of an individual's story, and clarify and re-tell the story. The current study adopted a qualitative research approach because it allowed me to listen to and make sense of participants' ideas with regard to teacher collaboration to enhance PBL for the holistic development of young children.

1.6.2 Paradigm

A research paradigm represents the beliefs of the researcher and informs him or her how the research should be done (Wood, 2020). The participatory, transformative paradigm was most suitable for this study because it goes further than the mere understanding of a research phenomenon, as it requires participatory, positive social change with other people, as suggested by Wood (2020). In view of this idea, I chose the participatory and transformative paradigm for this study because it is less concerned with methodological choices and more concerned with how participants are involved in the evaluation of a phenomenon (see 3.2.1). This idea suggests that teachers can be both the generators and implementors of ideas that

may lead to pragmatic solutions based on first-hand evidence. In addition, transformative researchers are of the opinion that inquiry should be intertwined with politics and a political agenda that is used to devise an action agenda that can be used to change or transform the lives of the participants, society, and the researcher (Kivunja & Kuyini, 2017). Therefore, the study adopted this paradigm where I worked collaboratively with teachers to transform their ideas about the use of PBL to enhance the holistic development of young children (see 3.2.1).

Epistemology relates to the creation of knowledge and the knowing (Zuber-Skerritt, 2011). Zuber-Skerritt (2011) further states that epistemology is a section of philosophy that explores the nature and rationality of individual knowledge. In this study, participants worked collaboratively by sharing knowledge, ideas, and experiences to enhance PBL for the holistic development of young children. The ontological assumptions of a study are described as the perception of reality (Zuber-Skerritt, 2011). Multiple realities can exist, and in this study, the participants worked collaboratively to make sense of the use of PBL in the holistic development of children (see 3.2.1). The axiological assumptions of a study are based on the three external principles of respect, beneficence, and justice. The values of the participants were shared, and we ensured that we sustained all these values during the process of the study. I further elaborate on the ontological, epistemological, and axiological assumptions of the study in Chapter 3 (see 3.2.1.1).

1.6.3 Research design

I chose participatory action learning and action research (PALAR) as the research design of this study (see 3.2.2). PALAR sets out to have a collaborative vision whereby research members come together to share a common purpose (Wood, 2020). Wood (2020) explains that with PALAR, co-researchers² work collaboratively to address important and complex issues by enhancing people's capabilities while developing leadership and lifelong learning. She stresses that the PALAR process is the development of lifelong learning (Wood, 2020). A visual representation of the figure eight of the PALAR process is given in 3.2.2. I used PALAR as the research design because I was on a joint journey of discovering and establishing new knowledge with participating teachers, with the aim of bringing about change in the way teachers use PBL to enhance holistic development in children.

PALAR comprises a cyclical process. In this study, the participants formed an action learning set (ALS) where they collaboratively investigated how to use PBL to support the holistic

² Wood (2020) refers to members in the ALS as co-researchers but in order to secure consistency in this dissertation the term "participants" will be used when referring to co-researchers.

development of young children. According to Wood (2020), an ALS is a collaborative environment where personal growth takes place and individuals are accountable for their own actions while reflecting on their values, assumptions, and behaviour. Furthermore, in an ALS, the focus is on addressing a problem that is of mutual interest to the participants (Wood, 2020). In this ALS, I applied the three Rs suggested by Zuber-Skerritt et al. (2015) to lay a foundation of confidence and trust, namely:

- Relationship: A democratic, supportive, and trustworthy relationship was built among the participants.
- Reflection: Considering the different phases (cycles), continuous reflection was initiated while working together in the learning environment.
- Recognition: The learning and knowledge that were generated by the participants in the cycles were recognised.

Table 1-2 below illustrates the three cycles (see 3.2.2.1) that were used to incorporate planning, observing, and reflecting, as suggested by Zuber-Skerritt and Wood (2019).

Table 1-2: Cycles and data generation techniques

	Research question	Data generation technique
Cycle 1	What challenges do teachers face while incorporating PBL in the early years?	Reflective journals Audio recordings
Cycle 2	How can collaborative learning help teachers to improve the use of PBL in the early years?	Reflective journals Audio recordings Collage
Cycle 3	What guidelines can be derived from the findings to enhance the holistic development of young children through PBL?	Reflective journals Audio recordings

Table 1-2 shows the three cycles used in this study, together with the research questions and the data generation techniques used in each cycle. A detailed discussion of these cycles is provided in 3.2.2.1.

1.6.4 Research methods

The research methods of a study include the site selection, the recruitment of the participants, and the data generation techniques, and the data analysis process (see 3.3).

1.6.4.1 Site

The research site was a registered Educare centre (School A) in the Matlosana District in the North-West Province. The centre is part of a private school that accommodates children from birth to Grade R. There are 210 children in the school, and the parents pay school fees. Many parents, however, experience challenges to pay the school fees. The school has 26 teachers who are qualified to teach young children. There are four classes for the three- to four-year-olds (see 3.3.1).

1.6.4.2 Recruitment of participants

Before recruiting the participating teachers, I first obtained ethical clearance from the North-West University (see Annexure E) and applied for permission from the school principal and the school governing body to conduct the research. I designed a pamphlet in which the criteria for participation were listed and gave it to an independent recruiter who then arranged a meeting with teachers who were interested in participating in the study. The independent recruiter was a person who was affiliated with the school but not in a managerial position at the school. The independent recruiter ensured that neither rank nor power played a role in the recruitment so that no participant felt obligated or forced to take part in the study. Teachers who wanted to participate in the study then contacted me to discuss their participation. Practical aspects were taken into account when the participants were recruited, for example being able to have one research site where participants were familiar with the context and where it was convenient to meet.

I used purposive sampling to recruit participants for the study. Purposive sampling refers to a sampling method where participants are chosen with a specific purpose in mind (Pietersen & Maree, as cited in Ralarala et al., 2022).

The inclusion criteria were that the teachers should:

- teach young children aged between three and four years;
- have a minimum of two years' experience in the early childhood setting;
- have the ability to write, read, and speak English or Afrikaans;
- be available throughout the study; and
- have at least an NQF Level 4 qualification.

A meeting was held with the six participants where we discussed the purpose of the study, confidentiality and the process of the cycles.

1.7 Data generation methods

I used recorded ALS discussions, a collage, and reflective journals as data generation methods in the study.

1.7.1 Recorded action learning set discussions

The participants in the ALS met timeously to share information and experiences based on the teachers' behaviours, opinions, and input. This created a sustainable reflection platform to build trust in and respect and support for one another. An ALS is built on democratic principles (Wood, 2020) (see 3.4.1). It is understood that by using ALS as a collaborative method, it is possible to address the issue or phenomenon that is of mutual interest. By using recorded ALS discussions in all three cycles, it was possible to focus on critical reflection, identify a personal role in the process, and act in the best interest of the research topic where members could learn from one another (see Wood, 2020). The ALS discussions were audio recorded to ensure that the discussions were captured fully.

1.7.2 Collage

Collage making is defined as a methodology (see 3.4.2) in which participants in a study are granted an opportunity to select and sort materials gathered and then connect and relocate these materials to present their opinions, experiences, or concerns (Coghlan & Brydon-Miller, 2014). Printed images, pictures, and magazines were used to collect data for the collage. By using this visual inquiry, the participants could reflect on, conceptualise, and articulate challenges while working on the research at hand. Coghlan and Brydon-Miller (2014) explain that the end product of a collage is a fragmented, unfinished, and metaphorical suggestion. Collages are used to develop new gestalts and serve to integrate aspects to create new knowledge (Leavy, 2020). By making a collage, it was possible to use the representation of imagery that was integrated to make meaning of the research (Leavy, 2020).

Collage making was implemented to express what the ALS group had experienced when answering the following research questions: *How can collaborative learning help teachers to improve the use of PBL in the early years? What guidelines can be derived from the findings to enhance the holistic development of young children through PBL?* In this case, the collage helped to gain understanding in the form of art, where colours and pictures that represent feelings (together with words) created a better understanding of the phenomenon.

Resources such as coloured papers, newspaper, and magazines were used to help express the feelings and experiences of the participants. The participants needed to generate a visual representation of the above research question and represent the understanding that each had come to. Pictures were pasted in different ways and for different reasons, such as in the middle for the most important aspect of the question, and spaces were created where repetition was represented.

1.7.3 Reflective journals

By using reflective journals (see 3.4.3), one is granted the opportunity to capture one's experiences and feelings about a practice. Zuber-Skerritt (2019) explains that by using a reflective journal, one is afforded the chance to plan one's submission, act by rewriting and submitting information in the correct format, observe by sharing information with the ALS, and reflect on the comments and information gathered during a session in the class.

The reflective journals afforded the participants the opportunity to reflect on the entire process and collect data related to their experiences and feelings with regard to children aged three to four years old using play-based educational methods. The participants wrote memos for future discussions and had the opportunity to reflect on the information that had been written down during the sessions.

1.7.4 Data analysis

Data analysis (see 3.5) refers to the process of discovering useful information by using a process of labelling data (Johnson, 2022). The data collected during Cycles 1 to 3 were continuously analysed during the ALS discussions. The following steps suggested by Braun and Clarke (2021) were followed for the reflective thematic analysis of the data (see 3.5):

- Step 1 – transcription. I listened to the recording and converted it into a Word document.
- Step 2 – reading and familiarisation of the interest at hand. I familiarised myself with the data.
- Step 3 – coding completed across the whole data set. I identified specific data relevant to my study by highlighting and formulating codes for their description.
- Step 4 – searching for themes. I combined codes to identify a theme pattern.
- Step 5 – reviewing the themes. I ensured that the themes were useful and accurate according to all the data gathered.

- Step 6 – defining and naming themes. I defined the themes and ensured that they corresponded to the research questions.
- Step 7 – writing and finalising the analysis. I finalised the analysis to understand how teacher collaboration could enhance PBL for the holistic development of young children.

A more detailed discussion of the data analysis is given in Chapter 3.

1.8 Quality criteria

Research integrity supports the highest standards of professional conduct and rigour in an ethical manner (Tayeb et al., 2016). Quality criteria refer to the quality of action derived from the study and the quality of the data on which the action research is based (Herr & Anderson, 2015). The five validity criteria set out by Herr and Anderson (2015) are as follows:

- Outcome validity is determined by the action taken through reflection in order to determine how the initial problem has been solved based on the action.
- Process validity is achieved by using different data-gathering methods and by participating with the participants.
- Democratic validity is determined by the collaborative manner in which participants work together.
- Catalytic validity refers to the way participants are motivated to bring about social change.
- Dialogic validity is determined by the way in which participants collaborate and are actively engaged in the research.

The quality and validity criteria are discussed in more detail in Chapter 3 (see 3.6) and presented in table form.

1.9 Ethical considerations

Ethics can be defined as differentiating between acceptable and unacceptable behaviour (Kanazawa, 2017). Adherence to the ethical principles of respect, justice, and beneficence is part of the research process. Wood (2020) adds that an ethical agreement is key to ensuring sound participatory practices. The ethical considerations of this study are discussed in 3.7. The ethical agreement (see Annexure B) outlined how the research group would adhere to the ethical principles.

1.10 Division of chapters

Chapter 1: Introduction and overview

This chapter provides an overview of the study that includes the introduction, background, and rationale of the study. It also contains the research problem, research questions, research aims, and a clarification of concepts.

Chapter 2: Review of the literature: Holistic development through play-based learning

In the literature review, empirical work from other studies is discussed. It concentrates on studies from the past in which PBL in the early years has been analysed. Literature on collaborative approaches to teaching by using play-based techniques that can be used to promote the holistic development of children was explored. The theoretical framework that underpinned the study, is also discussed in this chapter.

Chapter 3: Theoretical discussion of the research methodology

This chapter explains the research process in detail, including the research methodology, research design, and research methods.

Chapter 4: Data analysis and discussion of findings

A detailed explanation of the thematic content data analysis, reverting to the secondary research questions, is provided in Chapter 4.

Chapter 5: Summary, conclusion and suggestions for further study

The final chapter outlines the findings of the research with reference to Cycles 1 to 3. The findings are presented in the form of recommendations for improvement to the research, future research, and suggestions for school policymakers. Furthermore, the contribution of the study is explained.

1.11 Summary

In this chapter, I discussed the gap in knowledge, the context of the research problem, the research aims, and the research questions. The introduction explained the importance of a

PBL approach and the impact of PBL on the holistic development of young children. The theoretical framework underpinning this research was set out. The theoretical framework consists of Vygotsky's (1978) sociocultural theory, where the focus is on the importance of play as a tool in a child's development, and Bronfenbrenner's (1979) ecological theory, which expresses the understanding of the collaborative effect of various systems on the holistic development of a child and play-based education. I explained how these theories could be combined to guide the study. The quality criteria to ensure trustworthiness in the study were discussed, and the data analysis and ethical considerations were explained. In Chapter 2, I will discuss the literature on PBL and the holistic development of young children.

Chapter 2 Review of the literature: Holistic development through play-based learning

2.1 Introduction

Play in the preschool years is regarded as a valuable pedagogical teaching and learning tool that assists with the holistic development of young children (Fleer, 2013). Play is known to have been at the heart of early childhood education for many centuries but has now become under threat owing to the primary school education curriculum system that is putting pressure on the early development phase to promote school readiness (Wong & Logan, 2016). Within the South Africa policy context, play is regarded as a fundamental right for children- inherent to development, learning and well-being. As discussed in Chapter 1 (see 1.1), Garrett (2013) emphasises the importance of play in the holistic development of young children, explaining that play cultivates their sense of being part of a community, enhances socialising, nurtures growth, shapes their mindset of being able to advocate or speak up for themselves, creates awareness, and supports having compassion for all.

In this chapter, teacher collaboration is discussed, to explore how it enhances the holistic development of young children through PBL by focusing on interpretations of play, classifications of play, the importance of play, and the challenges teachers face while using PBL. I also critically discuss the theoretical framework that underpins the study.

2.2 Theoretical framework

Mertz et al. (2015) state that a theoretical framework applies to one's understanding of the phenomenon at hand (see 1.5). For years, child development theories have been the foundation of educational practices, and theorists have moved towards developing a strong sociocultural framework and foundation in early childhood education (Charlesworth, 2011). For the purpose of this study, I chose to combine two theories, namely the sociocultural theory of Vygotsky (1978) and the ecological theory of Bronfenbrenner (1979). Next, I explain how a combination of the two theories guided the study.

2.2.1 Ecological theory

Bronfenbrenner's (1979) ecological theory asserts that various environmental systems affect human development (Hertler et al., 2018). This hypothesis by Bronfenbrenner (1979) explains why people may act differently in the presence of their family than when they are at school or

the workplace (Hertler et al., 2018). When it comes to early childhood education, Tudge et al. (2017) claim that Bronfenbrenner's theory (1979) is suitable to guide early childhood teachers with regard to the role these interactive environments play in the holistic development of children. Bronfenbrenner's (1979) theory claims that everyday activities in which children participate, such as the interactions they have with their teachers, parents, and friends in and outside of the classroom, are critical to their holistic development.

Children's growth is fuelled and guided by the interaction between components in their maturing biology, their immediate family or community environment, and the social landscape (Navarro et al., 2020). It is argued that any disagreement or change in one layer will have an effect on all of the others. In order to understand a child's growth, it is necessary to look at both children and their immediate surroundings, as well as the greater context in which they interact (Navarro et al., 2020). According to Bronfenbrenner (1992), the most damaging influence on a child's growth is the volatility and unpredictability of family life that the economy has created. Bronfenbrenner's (1979) ecological theory consists of five systems, namely the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. Visser and Moleko (2012) explain that all of these levels are interdependently connected to one another. It can be argued that one level of the system can influence another level of the system and that they all work together in a way that influences the holistic development of the three- to four-year-old child.

The immediate environment with which the child associates is the microsystem, which includes the family, teachers, and peers (Bronfenbrenner, 1992). Visser and Moleko (2012) explain that in the microsystem, interaction includes the school, family, and friends, as well as personal relationships with teachers. They further argue that the microsystem is the relationship and interaction of activities that the child will have with people on a regular basis (Visser & Moleko, 2012). These interactions and activities can influence the child positively or negatively and can be determined through children's home circumstances or social interactions. Visser and Moleko (2012) point out that this system can play a role in securing the child's feeling of safety and in creating communication methods that welcome the child. In this, the centre and family of a child can play a significant role, as they are directly linked and work interchangeably with the child on a continuous basis (Visser & Moleko, 2012).

The mesosystem is defined as a combination of connections between the microsystem (Visser & Moleko, 2012). This system shows the significance of the influence of one system on another (Ettetal & Mahoney, 2017). The importance of the mesosystem lies in the possibility

that the teacher and the parent of a child are now connected and can share goals of the milestones they wish the child to achieve (Ettekal & Mahoney, 2017).

The exosystem is made up of the interrelationship between the micro- and the mesosystem, as well as the other systems with which there is no direct contact but may still influence children's experience or purpose in the early years (Visser & Moleko, 2012). The organisational structure can influence the level of support and development of three- to four-year-olds. In Bronfenbrenner's systems theory (1979), the extent to which the child are supported are influenced by the exosystem (Barton & Odom, 2016). The work and income of parents or caregivers influence financial support of young children (Visser & Moleko, 2012). People are facing a tough economic climate (owing to the Covid-19 pandemic), which has had a devastating financial impact on early childhood centres and families that form part of the macrosystem. These financial implications directly influence the availability of nutritious food, infrastructure, and resources, which, in turn, influence the holistic development of children in early childhood centres (Ettekal & Mahoney, 2017).

The macrosystem is the broader system of ideology distinctive to the specific social class, ethnicity, or culture to which a child belongs (Visser & Moleko, 2012). Milestone achievements and holistic development aspects influence family members with different cultural beliefs regarding which activities should be considered in a PBL environment (Visser & Moleko, 2012). Lastly, the chronosystem, added by Bronfenbrenner (2005) to his ecological theory, refers to time and how all these levels develop in connection with one another over a period of time, influencing the individual child in an early childhood centre.

Bronfenbrenner's ecological theory was developed to capture the essence of holistic human development and is based on the dynamic impact of the contexts in which development occurs (Hayes et al., 2017). The ecological theory is well known in research about developmental areas of early childhood (Alcock & Stobbs, 2019). In this theory, children are seen in their culture and their environment in terms of how these aspects influence their learning and development (Excell & Linington, 2020). Moreover, the ecological theory explores how the immediate environment, consisting of teachers, the early childhood centre, and the family, influences the holistic development of children. Hayes et al. (2017) explain that Bronfenbrenner's theory is focused on the integrated holistic approach to child and human development. Bronfenbrenner (1979) described his ecological model of human development as "the scientific study of development as a function of the progressive, reciprocal interplay, through the life course between an active, growing human organism and the changing properties of its environment, both immediate and more remote" (p. 95).

In the following section, I explain below how Vygotsky's (1978) sociocultural theory relates to my study.

2.2.2 Sociocultural theory

It can be argued that the sociocultural theory forms the background of social interaction during learning. The sociocultural theory (see 1.5.1), according to Silalahi (2019), emphasises that "knowledge and interactions are built through social interactions with family, friends, teachers, and children" (p. 169). Vygotsky (1978) believes that play is the central development point of a child and that a child is at the centre of a learning process that considers children to be constructors of knowledge (Kingdon, 2020). Wong and Logan (2016) explain that cognitive theories argue that using a PBL approach to learning enables children to make more sense of the world around them. Two of the most influential cognitive theorists, namely Jean Piaget (1896-1980) and Lev Vygotsky (1896-1934), used a PBL approach and emphasised the importance of play. Both these theorists were advocates for early childhood education, and their ideas have been very influential in the development of the play-based approach in early childhood education across the world (Wong & Logan, 2016).

Vygotsky (1978, as cited in Chu et al., 2017) expresses the importance of providing children with opportunities to explore and access engagement that will ensure the development of metacognitive skills through learning in social environments, like play. Kingdon (2020) explains that the ZPD is created through play and teacher-parent collaboration that interlinks between play and the zone of proximal development. The ZPD is divided into two levels: the first level is what a child can achieve and do by him- or herself, and the second level is what a child can do and achieve with collaborative support (such as with teachers) to achieve holistic development through a PBL approach (Excell & Linington, 2020). Storch (2018) argues that children who collaborate co-construct knowledge in the ZPD through social interaction and directed learning. Vygotsky (1978, in Kingdon, 2020) stresses that when a child learns, learning takes place within the culture of that child, demonstrating that cognitive development takes place in a socio-cognitive environment, such as a PBL environment, and not in isolation. The ZPD emphasises the importance of collaboration and the holistic development of children through a collaborative approach to reaching a child's maximal potential (Vygotsky, 1978). It is important to understand that Vygotsky believed that the important component of play fulfilled a significant role in the holistic development of children because he saw that children achieved more and acted older in a PBL environment – "in play it is as if he was a head taller than himself" (Vygotsky, 1978, p. 129).

Next is a discussion of how I integrated the two theories in my study.

2.2.3 The significance of integrating the ecological theory and the sociocultural theory

Bronfenbrenner's (1979) ecological theory is consistent with Vygotsky's (1978) sociocultural theory (see 1.5.3) with regard to the ZPD concept that a child can achieve more with integrated and collaborative support. As a proponent of social constructivism, Vygotsky believed that children's cognitive processes were the result of their interactions with their social environments and that the setting in which they grew up had a significant impact on how and what they thought (Daneshfar & Moharami, 2018).

The sociocultural theory and the ecological model are two of the few systems of human development that support the fact that nature and nurture are intertwined and fundamentally linked (Hayes et al., 2017). Considering that collaboration has an impact on a child's holistic development, as suggested by Vygotsky (1978), I continue to explore the interpretation of the concept of play.

2.3 Interpretation of the concept of play

Going back to ancient Greece, the first written record of the word "play" is *paizein*, which has an etymological connection to the word *pais*, suggesting "child", and *paideia*, which means "training" or "education" (Wong & Logan, 2016). Considering this background information, in ancient Greece, play had a fundamentally cultural characteristic. As stated in Chapter 1 (see 1.1), play in totality can be described as a natural action conducted by children that lays the foundation of basically everything they learn in their early years of preschool (Mashiya & Excell, 2020). Play is emphasised as being the primary occupation of children during development, while the main function of play is to create engagement for the purposes of relaxation, recreation, and fun (Lombard & Du Toit, 2021). Moreover, play promotes trust and strengthens relationships in children, and it inspires creativity and designs the future (Dearybury & Jones, 2020). Play can be interpreted in different ways. Various interpretations of play by theorists are presented in Table 2-1.

Table 2-1: Interpretations of play

(Adapted from Robinson et al., 2018)

Theorist	Interpretation
Erikson	A child playing is the training ground for gaining experience by fostering imagination within the existence of guided visions and roles (Erikson, 1977).
Freud	Children become masters of a situation by repeating everything that has a great impression on them, recreating the strength of the impression (Freud, 1961).
Froebel	Play forms the largest expression of the development of humans in childhood (Froebel, 1887).
Montessori	Montessori (1967) believes that play is “the child’s work” (p. 180).
Piaget	According to Piaget (1962), play is a “happy display of known actions” (p. 93).
Vygotsky	Play promotes cognitive growth and creates a ZPD. When children play, they always behave above their average age (Vygotsky, 1978).
Sutton-Smith	Play fosters pleasure and creates a sense of life that is worth living (Sutton-Smith, 1997).

Table 2-1 shows that play can be seen as actions that promote development and create a sense of life. In the current study, play is interpreted as an intrinsically motivated procedure that supports development and learning outcomes in the early years. In the next section, the classification of play is explored.

2.4 Classification of play

Parten (1932, in Mashiya & Excell, 2020) classified play into six types that consider a child’s age and circumstances, namely solitary play, spectator play, parallel play, associated play, and cooperative play. Mashiya and Excell (2020) explain that these classifications of play form part of the development of children and indicate that teachers should work collaboratively to give children access to available resources when they plan play experiences. Parten’s classification of play (as cited in Robinson et al., 2018) was organised in a ranking order described as paralleling development. According to this classification, as children develop, their method of play evolves, and particular types of play are associated with a specific age group (Robinson et al., 2018). Parten’s work signifies that different types of play influence the circumstances of play at a particular age (Robinson et al., 2018). These different classifications of play are parallel with the theoretical framework of this study. External factors influence child development at particular ages, projecting their ZPD (Mashiya & Excell, 2020). Table 2-2 illustrates the classification of play and how it influences the development of children in their early years.

Table 2-2: Parten’s six categories of play

(adapted from Robinson et al., 2018).

Classification of play	Description	Developmental component
Solitary play	Solitary play is the type of play in which babies and toddlers normally engage. During this play, children choose to play alone (Excell & Mashiya, 2020). This type of play indicates that children play independently, with no reference to surrounding children but feeling contented with their surroundings (Stach & Veldsman, 2021).	This type of play builds the foundation that supports other play (Robinson et al., 2018). At this stage, development is focused on children mastering self-control and figuring out how the world works (Rymanowicz, 2015).
Spectator play	Spectator play can occur at any age when a child looks at others playing but chooses not to join them (Excell & Mashiya, 2020). The child may be alert to what is happening around him or her but sits passively. The child may engage in social interaction but chooses not to engage in the activity (Stach & Veldsman, 2021).	In spectator play, relationship development takes place and an understanding of social rules is gained while children are exploring different ways of playing (Robinson et al., 2018). During this stage, a child can get more comfortable with the play situation and become ready to move on to the next level of play (Rymanowicz, 2015).
Parallel play	This type of play suggests that the child may be shy because he or she may be playing with similar toys in a different activity, but not with others (Charlesworth, 2011). Thus, in parallel play, a child will play alongside other children and may want to engage with them but may not	Rymanowicz (2015) explains that during this type of play, transition takes place to motivate better social interaction. The skills that develop here are set to enhance engagement opportunities within the child’s environment (Robinson et al., 2018).

Classification of play	Description	Developmental component
	know how to do so (Excell & Mashiya, 2020).	
Associative play	Associative play is normally demonstrated by three- to four-year-olds when they start to play together without directing play towards a common goal (Charlesworth, 2011). They play together out of common interest. Imitation and interaction occur here (Stach & Veldsman, 2021).	At this stage of play, children achieve social skills that allow them to engage with others and develop that interest to become more involved (Rymanowicz, 2015).
Cooperative play	Cooperative play normally occurs from the age of five and older when children work together to achieve a common goal (Charlesworth, 2011). In such play, children take turns, work collaboratively, and communicate (Excell & Mashiya, 2020).	At this stage, negotiation skills are developed and cooperation takes place among children (Robinson et al., 2018). Developing cooperation skills is very difficult and can often cause conflict, owing to the fact that children do not like sharing or taking turns (Rymanowicz, 2015).

Table 2-2 shows how the different categories of play have an influence on the holistic development of children in early childhood programmes. In the next section, the influence of play on the holistic development of young children is explored further.

2.5 Holistic development of children

Johann Heinrich Pestalozzi (1746-1827) was the first educationalist to create a curriculum focused on holistic development in children, aiming at three dimensions, namely moral, physical, and intellectual (Wong & Logan, 2016). The 21st century, however, underpin the holistic development of children while using a PBL approach (Excell & Linington, 2021). The word “holistic” derives from Greek, suggesting “holism” (Saw, 2013). Holistic education focuses on the synergistic relationship between the developmental areas of the mind, body, and soul, all working together to enhance the efficacy of child development (Saw, 2013).

Similarly, it is argued by scholars that holistic education is more focused on the development of the individual, including his or her intellectual, social, physical, emotional, and artistic potential (Nabukeera, 2018). Holistic education is a philosophy of education based on the fact that each learner develops his or her own identity, meaning, and purpose in life (Saw, 2013).

Saw (2013) explains that holistic education aims to support the development of the cognitive, socio-emotional, creative, physical, and spiritual potential domains. The purpose of holistic education is to promote the development of the whole child in order to prepare children for challenges in the school environment and in their life (Saw, 2013). Nabukeera (2018) suggests that, if there is a focus on the holistic development of young children, the curriculum in the early childhood classroom must be adaptable to foster the domains of physical, cognitive, and socio-emotional development. These domains are discussed next.

2.5.1 Physical development

According to Archer and Siraj (2015), a child's body has an inextricable link to the brain of the child. Physical development practised through a PBL method helps the brain to respond to the stimulation it received through the experience that was created in the physical practice (Archer & Siraj, 2015). Excell and Linington (2021) explain that physical learning is the growth process through which a child can control his or her body. Throughout the growth process, a child gains additional skills that support increased control of muscular movement, referred to as "motor movement". Physical activity, such as gross and fine motor activities, supports an increase in blood flow to the brain, which increases the benefits of brain activity for children (Thomas & Harding, 2015). Movement creates the opportunity for children to improve perceptual development, learn about the world around them, and experience the environment through their senses, which helps them to develop abstract thoughts (Thomas & Harding, 2015). Archer and Siraj (2015) state that practising physical development through PBL develops a significant link between the body and the brain that creates a route to learning in young children. Furthermore, physical movement through PBL fits into all developmental areas of ECD, namely physical, communication, social, and emotional development, as well as self-regulation (Archer & Siraj, 2015)

2.5.2 Cognitive development

Cognition refers to the development of a child's thought processes and intellectual development, referring to how one gains, organises, and uses what is learnt (Excell & Linington, 2021). At birth, an infant's brain is only 25% developed, while the other 75%

develops during early childhood (Charlesworth, 2011). The basic materials of the brain are neurons, and synapses are the connectors to neurons that send messages to be carried out by the human brain (Charlesworth, 2011). A child's brain is moulded in the early years through experiences because of the procedure of synaptogenesis, myelination, and natural plasticity (Archer & Siraj, 2015). Thus, PBL creates experiences for children to develop to their maximal capacity as the brain is more sensitive to an experience in the earlier years than in later years (Archer & Siraj, 2015).

Charlesworth (2011) corroborates that play activities support the maintenance of synaptic connections in the brain. Degenaar (2020) further explains that all learning is based on a variety of integrated brain-based processes in young children. Cognitive learning is promoted by problem solving that is based on real activities (Degenaar, 2020). The better the understanding a child has of the natural world, namely its nature and surroundings, the better the enhancement of the experience the child will achieve. This experience can be supported through observation and the processing of sensory information that supports learning in context (Thomas & Harding, 2015). Cognitive development involves language development, conceptual thought, memory, reasoning, and creativity (Excell & Linington, 2021). Archer and Siraj (2015) explain that ELP's are very important for the development of a child's brain, as the holistic development of a child is influenced by the experience that is created through a PBL approach. Moreover, it is expressed that the experience that a child gets from PBL in the early years has an impact on the evolution of the architecture of the brain (Archer & Siraj, 2015).

2.5.3 Socio-emotional development

Socio-emotional development refers to the social and emotional components of development (Excell & Linington, 2021). Emotional development entails the ability of children to express and feel a variety of emotions while exploring their self-concept and self-image (Excell & Linington, 2021). It is said that people learn through their senses, that is, touching, feeling, hearing, smelling, and seeing, while responding in an emotional manner (Thomas & Harding, 2015). Social development in children promotes the ability to connect in a social context and develop independence while having the ability to express empathy (Excell & Linington, 2021). The main task of social learning is the collaboration and co-construction that are shared between children and teachers to promote a community of children (Thomas & Harding, 2015). According to Archer and Siraj (2015), PBL has an impact on a child's socio-emotional development by gaining an understanding of how to communicate, make new friends, and get along with others in the early years. PBL activities create experiences that promote social

bonds and sustain social learning and the development of healthy emotional minds (Archer & Siraj, 2015). Lastly, one must consider that all these areas of the holistic development of a child are not individual entities; they do not mature individually from one another, but there is an interconnectedness between them, and they overlap (Archer & Siraj, 2015).

The schematic diagram in Figure 2-1 emphasises the importance of stimulation in holistic development.

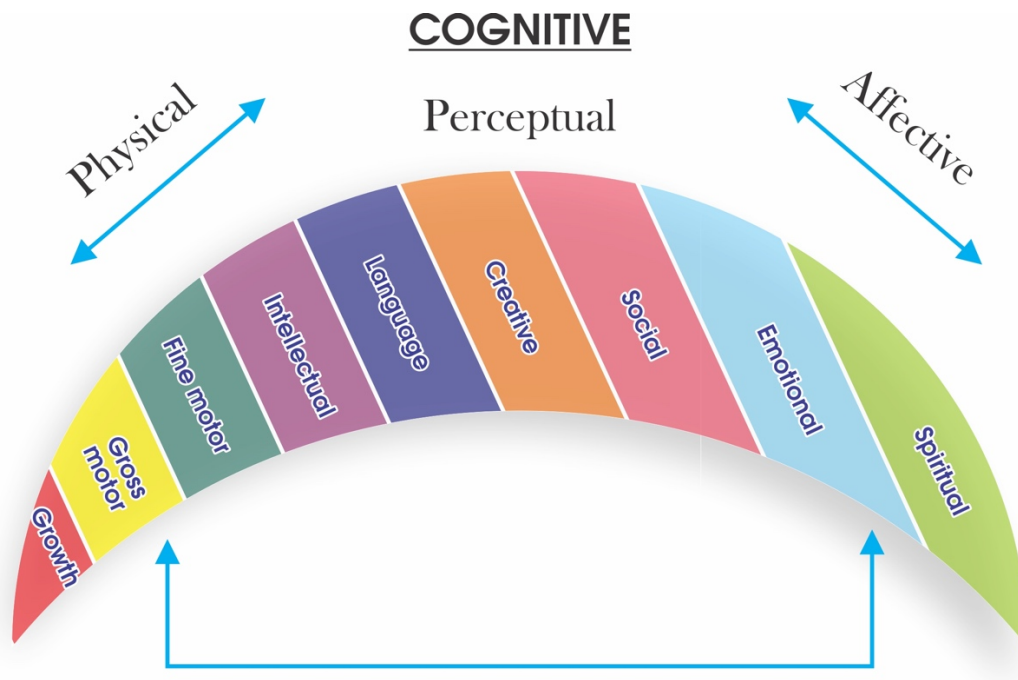


Figure 2-1: The holistic child (adapted from Excell & Linington, 2021)

Figure 2-1 shows that the development of the various domains is intertwined (Brodie, 2018). This idea suggests that development, learning, and growth in children in a play-based classroom occur concurrently and interdependently (Brodie, 2018).

2.6 Benefits of play-based learning for holistic development in young children

According to Dearybury and Jones (2020), science supports play in the early childhood classroom, and the benefits of PBL grow every day. In terms of cognitive, social, and language development, PBL has been shown to be beneficial, and it is recommended that teachers in the early childhood classroom engage in playful activities that will result in actions that are beneficial and palpable (Illingworth, 2020). Next, I elaborate on the benefits that PBL has on young children in early childhood education.

2.6.1 Cognitive benefits

Vygotsky (1978) declares that play is the central development point of a child, and through play, knowledge is constructed (see 2.2.2). Yogman et al. (2018) concur that play is significant. Play forms part of building the brain when children are occupied in PBL and has been shown to have direct and indirect effects on the functioning and structure of the brain. Through play, the secretion of the brain neurotrophic factor is triggered, which is vital for the growth of brain cells (Yogman et al., 2018). While moving and playing, a child's brain receives oxygen (Dearybury & Jones, 2020). Catecholamine, which serves to energise and elevate children's moods, is increased through play and movement (Dearybury & Jones, 2020). King et al. (2020) assert that play is not only essential for brain development but also stimulates the child's brain to be receptive to learning concepts. This is based on associated socialisation, which involves fun and enhances the learning experience (Carulla et al., 2021). Children can associate with new theories and information from the content of the games they are playing. Games make them re-enact their respective learning experiences (Carulla et al., 2021). Thus, they can build a sound understanding of the structure of games, and they have an opportunity to learn and express their ideas through symbolic approaches (Peterson, 2017).

Play and language development are linked, especially through free play in the early childhood environment (Yogman et al., 2018). According to Yogman et al. (2018), PBL-orientated games and movement support cognition in children. Play supports a resting brain, which allows a child to better create self-awareness, memory, empathy, and the ability to imagine the future (Dearybury & Jones, 2020). Following a PBL approach in the early childhood environment will help to deepen a child's cognitive skills in areas such as mathematics, literacy, and science (Stach & Veldsman, 2021).

2.6.2 Creative benefits

Creativity is complex and is associated with the character, abilities, and interests of a child (Turdiyeva & Islomova, 2021). Van Heerden (2021) states that imagination and creativity are seen as important tools for future growth in order to harvest social change. Through play, children can be creative in solving problems and building imagination, which are very important for development in children (Dearybury & Jones, 2020). The benefits of following a PBL approach include creativity, innovation, and interdisciplinary learning that also open up a window of opportunity for a play-rich environment for children in their early years.

2.6.3 Social benefits

According to Stach and Veldsman (2021), the social development of children in the early years underpins the foundation of their relationships for the future. Vygotsky's sociocultural theory states that social interaction forms a child's background during learning in the early childhood environment (Silalahi, 2019). Social skills are enhanced through play by stimulating emotional intelligence and the ability to solve conflict (Dearybury & Jones, 2020). The social benefits of PBL include opportunities for children to understand body language cues and improve their listening skills, while PBL also enhances their perspectives of others (Stach & Veldsman, 2021).

When it comes to the benefits of PBL, it is not the fun "recess" type of play that is under discussion. PBL entails playing that helps to shape one's mind (Dearybury & Jones, 2020). While development is supported by play, development is also visible in play (Charlesworth, 2011). Charlesworth (2011) explains that theory and practice shape teaching practices, and theory should always be considered within the sociological environment of children to support their holistic development. Holistic development through play is important, as play is the universal language that all children across the world speak, serving as a connecting factor between learning, home, and school (Lombard & Du Toit, 2021). These environments, namely home and school, form part of the ecological theory of Bronfenbrenner (1979) on how different systems influence the holistic development of a child. Mashiya and Excell (2020) explain that children develop a plethora of skills through play; it allows them to explore the world around them and create opportunities for them to make decisions and become independent, thereby enhancing personal growth. Figure 2-2 illustrates that play is central to a child's life and is a connection between many facets of development.

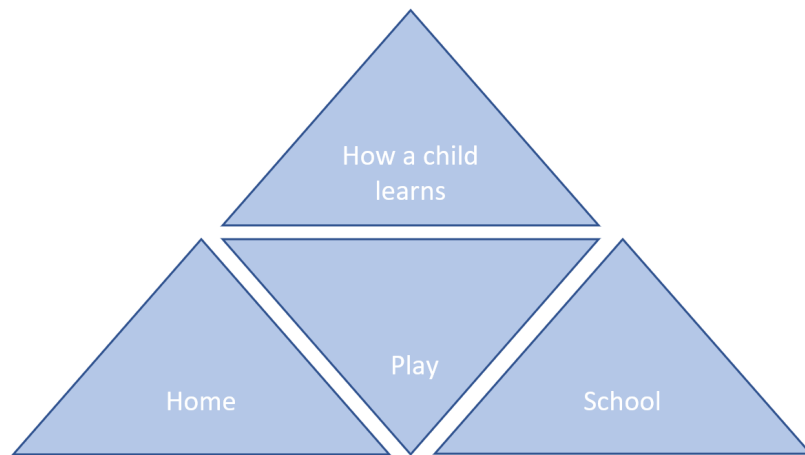


Figure 2-2: The importance of play in a child’s life (adapted from Lombard & Du Toit, 2021)

Figure 2-2 shows that play interconnects the multiple realities that children face. Also, by facilitating play, children become more aware of the properties in their own world and how to make sense of them all (Lombard & Du Toit, 2021). The figure further highlights the interconnection between home, play, and school. In the next session, I explain how teachers can collaborate when they use PBL.

2.7 Teacher collaboration when using play-based learning

Collaboration, according to Robertson (2021), means aligning people’s activities to get things done. Teacher collaboration is defined as the cooperation among teachers to achieve the objectives of the school. It is also defined as a situation where two or more teachers agree or consent to improve their teaching practices through team building and working together (Shakenova, 2017). Essential assistance should be provided to colleagues in terms of sharing and decision making without necessarily coming to a common belief or holding on to traditional values. Some decades ago, teachers only collaborated with a few people with whom they had built relationships; however, through technology, teachers can now collaborate with people around the globe (Morel, 2014). Fifty years ago, it was expected of teachers merely to accept situations in their geographical surroundings. Today, teachers need to communicate promptly with parents at home and colleagues in the school environment and around the world (Morel, 2014). A collaborative teacher approach in the early childhood environment can be compared to fibrous root splitting and finally reconnecting with one another together to the core root (Akpovo et al., 2018). Figure 2-3 illustrates the comparison between teacher collaboration and fibrous roots to achieve a goal.

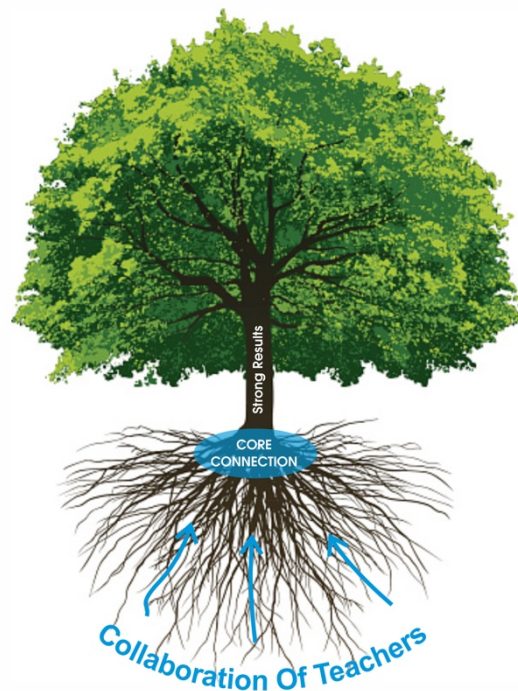


Figure 2-3: Comparison between teacher collaboration and fibrous roots (adapted from Akpovo et al., 2018)

The image in Figure 2-3 indicates that the collaboration of teachers working together towards a shared goal has strong results and a firm base. Teachers in an early childhood environment understand the core of holistic development, especially those dealing with early childhood development. Therefore, developing engaging programmes and activities for young children in class is essential to maximise learner growth (Joubert & Harrison, 2021). When teachers in early childhood classrooms work together, they can develop a well-rounded programme that ensures that young children utilise PBL as a crucial tool in their development. In addition, teachers can identify potential issues that derail holistic development, and they can develop guidelines to deal with the diverse elements that have an impact on the education process (Joubert & Harrison, 2021). Waters et al. (2018) also state that supporting professional partnerships in the ECD context opens up windows of opportunities to enable teachers to facilitate change in their teaching environment, while also giving them the opportunity to work together towards a shared common goal. Considering the fact that children develop in a holistic manner and that there are a variety of developmental areas that are addressed in PBL, it is important for teacher collaboration to take place in order to ensure that all these skills are attended to. This can be challenging if a single teacher were to guide children to develop these skills (Chu et al., 2017). If teachers are to offer quality early childhood education, it is of the

utmost importance for them to reflect and ensure a holistic approach to the PBL curriculum, which includes playful teaching and learning methods (Excell & Linington, 2021).

Working collaboratively is a useful tool that brings teachers together in the early years context so that they can ask questions, investigate, and share knowledge until clarity is reached on the implementation of PBL as an approach (Waters et al., 2018). In fact, collaboration is a viable means for education reform and a fundamental component of the reform process (Robertson, 2021). A collaborative approach leverages diversity in perspectives and skills, thereby promoting productivity in the classroom (Robertson, 2021). Collaboration is viewed as a creative strategy that promotes professional development and supports systematic changes within the classroom (Jao & McDougall, 2016). Teacher collaboration has several advantages and disadvantages that are discussed next.

2.7.1 Advantages of teacher collaboration

Shakenova (2017) sees the advantages of cooperation as diverse and even opposing at times. Some of the stated benefits of collaboration among teachers are increased teacher efficacy, professional development, opportunities for learning, work responsibility, instructional practice, reflection, and a reduction of work overload. Teamwork benefits teachers in the early childhood classroom, especially in promoting holistic development, and is often reflected in children's achievements (Shakenova, 2017). Research has found that teacher learning is supported by facilitating teacher collaboration and that teachers tend to be more satisfied with their working conditions when collaboration takes place (Robertson, 2021). Egodawatte et al. (2011) mention some advantages of professional partnerships, such as creating professional development and achieving goals, learner success, teaching opportunities and co-planning, improved technical skills, and improved communication. These benefits of teacher collaboration can be the focus of implementing a suitable curriculum for holistic development in the early childhood classroom (Stach & Veldsman, 2021). Teacher collaboration encourages motivation and accountability (Jao & McDougall, 2016). Moreover, by implementing collaboration in a classroom, professional relationships are strengthened and a learning community is established (Robertson, 2021). Teacher collaboration and teamwork foster collegiality, and the ultimate benefit is that children's achievement and developmental potential can be improved (Jao & McDougall, 2016). However, there are some disadvantages to teacher collaboration as well.

2.7.2 Disadvantages of teacher collaboration

Negative implications of teacher collaboration have been listed to include wastefulness, harm, and unproductivity among teachers (Jao & McDougall, 2016). It is argued that collaboration can result in conformist, contrived, co-optative, comfortable, and complacent teachers. Conformist teachers may result in group thinking and will discourage solitary attempts. All direction will come from the administration; hence, teachers will be working with less motivation and efficiency. Being co-optative refers to the sense of attaining goals set by others rather than by themselves, leading to teachers being complacent and comfortable owing to minimal organisation and a lack of flexibility (Burton, 2015). Other studies have also confirmed the disadvantages of collaboration, such as factionalism, loss of autonomy, intensification of work, and interpersonal conflict (Burton, 2015).

Ultimately, it has been established that there are more benefits to teacher collaboration than shortfalls, and it has been determined that teacher collaboration supports professional growth, workload reduction, and a reduction in teacher absenteeism (Robertson, 2021). PBL supports teacher collaboration by helping to cater to the differences that children have in terms of skills, knowledge, and diversity (Chu et al., 2017). Teacher collaboration in the early childhood environment provides opportunities for teachers to work together to improve one another's skills and knowledge (Waters et al., 2018). Previous research has confirmed that teacher collaboration plays a significant role in teaching and learning. Next, the challenges faced by teachers when they implement PBL are discussed.

2.8 Challenges faced by teachers while implementing PBL

The literature shows that teachers face many challenges when they implement PBL in the early childhood classroom. These include financial, social, and economic challenges, as well as challenges regarding the implementation of the curriculum and challenges in the classroom and with professional development. The impact these challenges have on teachers while implementing PBL is discussed below.

2.8.1 Social challenges

One factor that is relevant in modern times is the social exclusivity that puts children from poor backgrounds on the sidelines. A report by the United Nations Children's Fund (2018) illustrates that society is developing tendencies of limiting the integration of PBL into preschool systems. There are misconceptions about the role of play as a learning component (United Nations

Children's Fund, 2018). Parents and guardians view play as detracting from actual learning processes in an educational setting (Lunga et al., 2022). This social issue needs to be addressed by promoting awareness through parent-teacher conferences and ensuring that society understands the critical use of play in learning processes (Lunga et al., 2022). However, social issues go beyond parents' understanding and extend to the nature of the school (Lunga et al., 2022).

Social challenges limit the number of children involved in the learning process to maximise uptake and improve learning value for learners (Chen et al., 2018). However, the ability of parents to source education commensurate to their social class and status results in some parties suffering (Chen et al., 2018). Teachers find themselves with large classes that limit the implementation of play, especially in lower social class areas (Hunter, 2019). Active experiences may prove to be difficult, considering the small spaces that serve as classrooms (Hunter, 2019). Teachers can help to develop guidelines that involve rotational classes, allowing all children to experience PBL and its merits, regardless of social class (Hunter, 2019). However, social factors may extend to the provision of education services.

The social services sector that manages society-related elements often fails to capture the diversity and needs of children from various backgrounds while accessing education. Good teachers are beneficial for children who are limited by inadequate access to basic learning materials, community stereotypes, and poor quality of education (Keung & Cheung, 2019). Teachers regularly interact with young children, are aware of the challenges they experience, and can outline the best approach to dealing with these issues. Economic factors are discussed next as another challenge.

2.8.2 Economic factors

A poor economy creates a downturn where preschool admissions fall below recommended levels (Meier, 2014). Subsequently, the quality of education of young children becomes poor, and activities in PBL are not achievable when parents take their children to low-tier institutions to cut down on costs (Meier, 2014). Economic factors also have an impact on the pay scale of teachers, reducing their efforts to ensure that holistic development among all children is achieved. Enabling an environment that is conducive to child development and learning activities comes at a cost (Ebrahim, 2014). On the other hand, achieving good outcomes with holistic development becomes difficult when there is poor budgeting and funds are reallocated to other projects in learning institutions. Teachers have lodged complaints in this regard, but it is not easy to reconcile economic influences at individual levels. Still, detailed plans can be

provided to bridge the gaps for young preschool children (Murundu et al., 2014). Besides economic factors that pose a challenge, the curriculum also has an impact on the challenges faced by teachers of three- to four-year-olds.

2.8.3 The curriculum

The NCF (DBE, 2015) serves as the curriculum framework (see 1.1) for holistic development benchmarking for young children in South Africa. While the NCF (DBE, 2015) allows teachers to recognise the barriers that exist in the holistic development of young children, Edwards (2017) argues that it is time-consuming and can be very unstructured.

In South Africa, there is a partnership between the DBE, the LEGO Foundation, and the United Nations Children's Fund, all of which promote play (Stach & Veldsman, 2021). The slogan "powerful learning around you" expresses that play is interlinked with holistic learning (Stach & Veldsman, 2021). The NCF categorises ECD into six learning areas, namely wellbeing, identity and belonging, creativity, communication, knowledge and understanding of the world, and exploring mathematics, as summarised in the section on early learning and development areas in the NCF (DBE, 2015). These learning areas form part of the holistic development of a child, expressing the important role of play and how children learn through play (DBE, 2015). The role that play has in the areas of development in children can be described as holistic education by creating experiences for children to develop (Thomas & Harding, 2015). Early childhood teachers and researchers should continuously work together to create a play-rich curriculum so that children are exposed to learning through a holistic education (Guirguis, 2018). Developing a play-rich curriculum can support the holistic development of the young child by sustaining experiences that promote development (Guirguis, 2018). Holistic development of young children with regard to PBL also relies on environmental influences, and it is crucial to consider the classroom in this context.

2.8.4 Classroom environment

Holistic development in the early years take place in the classroom setting and is promoted by the infrastructure, resources, time, and space available for PBL. Space is critical because it maximises the child's participation in PBL activities. The goal is for every child to engage in learning activities while having enough room to play with peers by creating classroom corners for different activities (Taylor & Boyer, 2020). Holistic development itemises wellbeing as a fundamental goal that can be achieved by ensuring that physical health is a consideration

(Taylor & Boyer, 2020). The environment should also cater for interactive activities by providing relevant resources.

Resources include communication practices, play equipment, instruction sets, and learning materials (Bubikova-Moan et al., 2019). Holistic development through teacher collaboration benefits from having a teacher set up the classroom and sourcing relevant resources (Bubikova-Moan et al., 2019). The teacher defines the PBL activity and proceeds to ensure that the activity is a success by sourcing relevant equipment and organising the children to participate in the event (Carter, 2016). Subsequently, as a resource, the teacher provides guidelines for executing PBL and sets goals that the children can achieve for activities. Furthermore, resources can extend to nutrition and home activities that guardians and learners can undertake (Barrett et al., 2017). However, the teacher's influence in the class environment is critical, as are infrastructure and time.

The infrastructure supports holistic development by providing critical components to ensure that play is achieved. Developing a setting where children can play and learn requires time and proper resources (Joubert & Harrison, 2021). Teachers serve as the lobbyists for the infrastructure needed to ensure that PBL is achieved and holistic development is easily achievable. Time also influences the development of relationships and interaction in the classroom. Teachers rely on repeated exposure to create a working relationship between themselves and the learners (Knight, 2017). Holistic development is not procedural but relies on repetitive tasks that children learn to engage in to ensure that they develop skills. Time also increases the likelihood of creative exercises to assist children in developing initiative (Knight, 2017). As a result, teachers continue to hone their skills, and holistic development is influenced by professional development.

2.8.5 Professional development

Lalani (2020) recognises the influence of teachers in a play-based curriculum and the impact they have on the holistic development of young children. The author asserts that play is essential for developing motor, cognitive, and social skills (Lalani, 2020). In addition, PBL offers a diverse experience, which creates a learning environment that teachers can use to develop their skill set. According to Lalani (2020), teachers in early childhood classrooms who work with PBL express their concerns and offer recommendations that are essential for improving the profession and practices. Lalani (2020) corroborates the advantages of training programmes for teachers of three- to four-year-olds to help them develop new knowledge and

skills. Teachers and professionals who deal with child development have identified the critical elements in promoting the young child's holistic development.

Professional development guarantees that young children are exposed to the best teachers who can facilitate the tenets of PBL (Lunga et al., 2022). Child development in early childhood needs to account for diversity, and professionals must understand how socioeconomic factors influence each child (Lunga et al., 2022). Experience with children from different backgrounds in a play setting also educates teachers on how best to deal with variations in PBL activities. Moreover, the goals of holistic development in early childhood account for communicative practices that develop during PBL, where teachers identify the best approach to engaging with children. Therefore, teacher collaboration promotes professional development and improves knowledge retention for teachers as they learn, while also ensuring benefits such as experience and skills, which guarantee holistic development for young children in early childhood centres (Meier, 2014). However, funding is the critical element that supports the holistic development initiative for teachers in early childhood centres.

2.8.6 Funding

Collaborating with teachers requires funds to sustain projects and initiatives that arise from endeavours to provide holistic development in early childhood centres. For example, PBL relies on developing indoor and outdoor infrastructures that children can use to engage with the curriculum (DBE, 2015). In addition, the DBE (2015) confirms that elements such as feeding programmes, supporting needy parents, paying teachers, and classroom resources also require budgetary allocations. Teachers can evaluate costs and provide budget estimates to ensure access for young children to the relevant facilities (Ebrahim, 2014). Setting up fundraisers is an excellent way to source money to support young children's learning and development efforts. Entities conversant with the need for the holistic development of children in ELP's recognise the need for funds and fundraising initiatives to cover the extensive costs thereof (Ebrahim, 2014). Funding can also be obtained through other approaches.

Direct and indirect funding for PBL is critical to the learning process of young children (Fesseha & Pyle, 2016). Direct funds are obtained from grants, government programmes, and private sources, while indirect funding stems from the approval of projects by independent entities seeking to ensure that childhood education is prioritised. Teachers collaborate with institutions to prepare documentation and reports that illustrate the needs of children and the NELDS curriculum (Fesseha & Pyle, 2016). These reports indicate the gaps that need to be filled to meet the needs of parents affected by socioeconomic factors. As a result, funding is

sourced on a projection and estimation basis, with teachers evaluating the potential number of learners they will facilitate. It is crucial to note that collaboration among teachers in the early childhood classroom extends to working together to guarantee the holistic development of young children that improves team performance. Holistic education promotes the development of the whole child (Saw, 2013).

2.9 Summary

This study focused on how teacher collaboration can enhance PBL for the holistic development of young children. In this chapter, I explained how the sociocultural theory of Vygotsky (1978) was combined with the socioecological theory of Bronfenbrenner (1979) to guide teachers in supporting the holistic development of young children through PBL. I also explored the interpretations and classification of play, together with the holistic development of children, collaboration in using PBL, and the challenges faced by teachers in implementing PBL. Furthermore, teacher collaboration and the advantages and disadvantages thereof were explored. In the next chapter, the research methodology will be discussed and justified.

Chapter 3 Theoretical discussion of the research methodology

3.1 Introduction

In the previous chapter, the theoretical framework and literature that underpin the importance of a play-based approach in ECD were discussed. Chapter 3 offers a detailed explanation of the research methodology and research methods as described in Chapter 1 (see 1.6).

3.2 Research methodology

Research methodology offers an understanding to a specific method that research studies adopt (see 1.6). There are three main research methods, namely quantitative, qualitative, and mixed-methods (Creswell & Creswell, 2018). In this study, I used the qualitative research approach, which is a process of collecting, analysing, and interpreting data in a non-numerical form (Wilkinson & Birmingham, 2018).

The qualitative research approach offers a subjective understanding of an individual perception; hence, it gives meaning to social realities (Creswell & Poth, 2018; Mohajan, 2018). This means that in a qualitative study, the world or its reality is not a single fixed or agreed-upon phenomenon but contains numerous interpretations and constructions of reality that change with time (Mohajan, 2018). I used a qualitative research approach with the aim of understanding how teacher collaboration could enhance PBL for the holistic development of young children (see 1.6.1). The research paradigm is discussed in the following section.

3.2.1 Research paradigm

A research paradigm refers to different ways of thinking that will influence a research process (Wood, 2020). According to Mackenzie and Knipe (2006), a research paradigm is a worldview, which is a school of thought or a set of shared beliefs that are used to interpret the meaning of research data. In this action research study, I employed a participatory and transformative paradigm (see 1.6.2). Wood (2020) explains that by using a participatory paradigm in PALAR, social justice is enhanced, and this contributes to a more democratic society. For the purpose of this study, the participative paradigm helped me to understand the reality from the participants' point of view, as suggested by Wood (2020). A transformative paradigm is said to promote inhibitory action towards social freedom and is based on comprehension that is sustainable. According to Zuber-Skerritt et al. (2015), a transformative paradigm creates an opportunity for collaboration and lifelong learning among participants. Working collaboratively

in generating knowledge also leads to transformation among participants or in an institution (Zuber-Skerritt et al., 2015). This study acknowledges that play is crucial for holistic development in the early years; therefore, discovering ways to create an environment that favours PBL is essential. This requires a transformative and participatory paradigm (see 1.6.2), which is necessary for the generation of ideas on how teachers can collaborate and support the holistic development of young children through BPL.

3.2.1.1 Ontological assumptions

Ontology is understood as a division of metaphysics that is concerned with the creation of being (Zuber-Skerritt et al., 2015). Therefore, ontological assumptions (see 1.6.2) are a reality perception that is centred on the creation of being (Zuber-Skerritt et al., 2015). Wood (2020) explains that ontology in participatory research concerns the understanding of the world through what people experience in connection with one another. With regard to ontology, multiple realities could exist in this research project where the participants worked together in our core project group to address the issue under investigation, to reflect on the collective experiences, and to acknowledge the unique contributions brought forward. During the research study, I encouraged the participants to work collaboratively to make sense of the holistic development of children in the early years, as it would lead them to create sustainable guidelines to be able to work collaboratively to ensure holistic development and eliminate challenges.

3.2.1.2 Epistemological assumptions

Epistemological assumptions (see 1.6.2) refer to creating knowledge and the knowledge of particular information (Zuber-Skerritt, 2011). Wood (2020) states that epistemology deals with self-reflection and reflection in communication where all stakeholders form part of a larger whole and the focus is on the development of knowledge. In this study, the participants were, therefore, co-creators of knowledge of the importance of PBL that focuses on holistic development in children (see 1.6.2).

3.2.1.3 Axiological assumptions

The vision of axiological assumptions (see 1.6.2) is based on fundamental aspects of humanity (Wood, 2020). Axiological assumptions, as described by Wood (2020), in alignment with the United Nations Education, Scientific, and Cultural Organisation (2015), are that education and development are a humanistic vision. This vision is based on the concept of

equality, respect, diversity, solidarity, and shared responsibility, as fundamental aspects of humanity (Wood, 2020). By adopting axiological assumptions, it is understood that I have to adhere to ethical principles by respecting each person's rights, cultural diversity, and human dignity, and acknowledging that shared responsibility is of great importance (Wood, 2020). During the study, I ensured that I was well informed on how to make all the participants feel respected, and if any ethical issue arose, I addressed it. This ensured that moral issues were kept to a minimum during the research process. In the pre-ALS meeting (introduction meeting), I came to an understanding of each participant's needs, which helped me to understand and respect all the participants and their contributions while conducting the research in a peaceful and respectful manner.

3.2.2 Research design

Action research is a qualitative research approach where the researcher and the participants work together to identify social and educational problems that can lead to social change (Wood, 2020). PALAR was the research design (see 1.6.3) used for this study. Zuber-Skerritt (2011) explains that PALAR is very powerful in studies that foster change (see 1.6.3). As discussed in Chapter 1, PALAR incorporates the integration of action research and action learning. It is a transformative, collaborative, and democratic way of addressing difficult and complex problems (Wood, 2020). PALAR puts its focus on a few individuals within a community who are collaboratively involved in addressing a significant yet complex challenge that directly affects them and the solution of which is important to them (Zamanzadeh et al., 2014). In this regard, teachers who engage with children on a daily basis participated in this study, as they were in a good position to work together to bring about new insight into the subject of PBL and how it can be used to enhance holistic development. Figure 3-1 shows how PALAR resembles infinity with the figure eight sign (see Wood, 2020) and that its relationships and research are a continuous element in this research study.

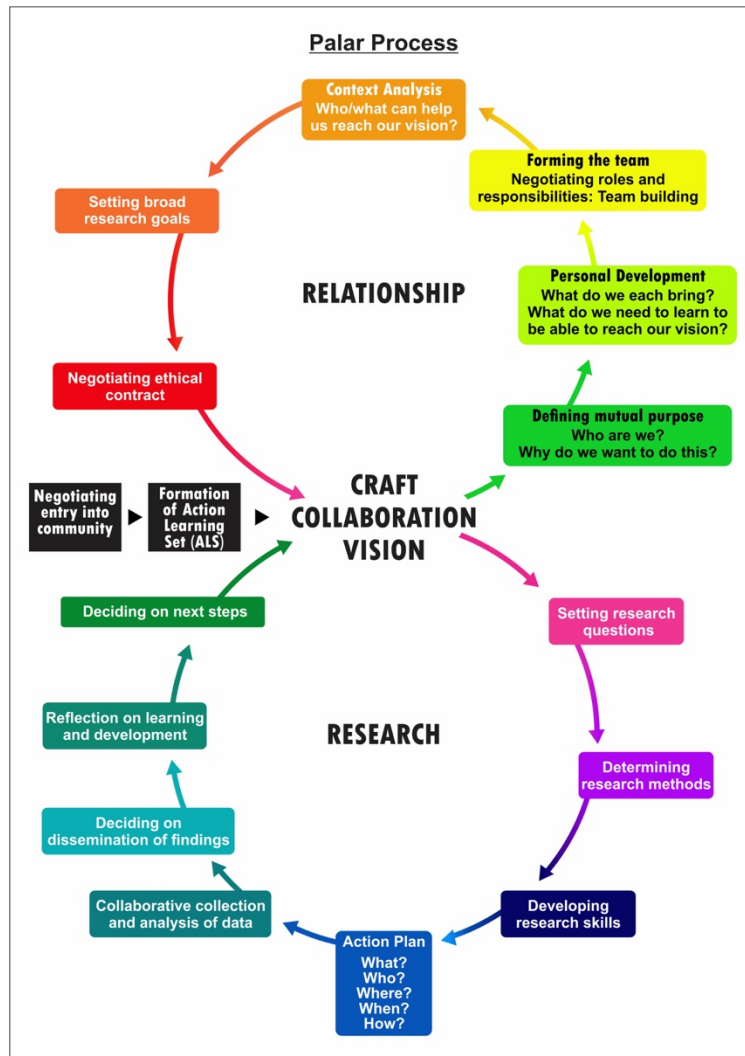


Figure 3-1: PALAR research process (adapted from Wood, 2020)

The schematic figure above depicts the PALAR process where the focus is on the building of relationships and a continuous critical reflection. Both cycles are integrated to craft a collaborative vision. I used three cycles to incorporate the PALAR process. The three cycles of this study, as set out in 1.6.3, are discussed next.

3.2.2.1 Cycle 1

The first cycle included a relationship-building session to organise the group and conclude a needs analysis (see 3.2.3). The ethical agreement (see Annexure B) was negotiated, and the following questions were posed and answered:

- Who are the participants?

- What is the purpose of our involvement?
- What are our personal outcomes of this participation?
- What contributions are expected in this study?
- What do you want to bring to this study?
- What do you wish to gain from this study?
- How can you describe the role of each participant?

Consent forms were distributed beforehand, and once everyone was in agreement, we proceeded to answer the first secondary research question:

What challenges do teachers face while incorporating PBL in the early years?

During each ALS meeting, the relationship building was revisited while focusing on the research questions set out in this study, as suggested by Zuber-Skerritt and Wood (2019). The participants met on a continuous basis during Cycle 1 to share their personal experiences with regard to the challenges they, as individuals, faced in trying to incorporate PBL.

In the ALS, we learnt from one another's experiences and opinions while reflecting on collaborative support. While these discussions were in verbal form, we also made written notes in our reflective journals. With permission from all the participants, audio recordings were made of the discussions to ensure that the information collected was correct.

3.2.2.2 Cycle 2

In the session held in Cycle 2, relationship building continued. We reflected on the ideas of Cycle 1 and explored the following secondary research question:

How can collaborative learning help teachers to improve the use of PBL in the early years?

We used reflective journals and a collage in Cycle 2 to generate data about collaborative learning by teachers. In Chapter 3 (see 3.4.2), it is explained how a collage was used to gather information, and it is displayed how collaborative learning could help teachers to improve PBL in the classroom. The pictures that were brought to the session were explained in detail; all the participants expressed their views, and we had discussions about these.

While working in collaboration, the pictures were joined to form a collage (see 3.4.2) with narratives to create a visual presentation of how the participants believed collaboration with regard to guidelines could enhance the holistic development of young children.

The suggestions were applied in the classrooms to see how PBL would enhance the holistic development of young children.

3.2.2.3 Cycle 3

In Cycle 3, reflection took place again, and Cycles 1 and 2 were revisited to address the third and final secondary research question

What guidelines can be derived from the findings to enhance the holistic development of young children through PBL?

During this final cycle, guidelines were designed by evaluating and clarifying the data gathered in the first two cycles (see 3.4.3). In this cycle, we also determined a sustainable approach for the strategic planning and collaborative work to be done in implementing guidelines to bring about change for the PBL approach to be implemented in preschool classrooms.

Next, the research site and recruitment methods used for the purpose of this study are set out in detail.

3.3 Research methods

The research methods for this study include the site, recruitment of participants, and data generation methods (see 1.6.4).

3.3.1 Site

An Educare centre in the Matlosana District in North West (School A) was used as the research site (see 1.6.4.1). This centre is part of a private preschool that accommodates 210 young children from birth to Grade R. A private preschool is a school that is funded privately and does not rely on the DBE for funding (Jerrim et al., 2015).

There are 26 teachers and four classrooms where children aged three to four years were taught (see 1.6.4.1). Each class has two teachers. Next, the recruitment of the participants is discussed.

3.3.2 Recruitment of participants

Ethical clearance from the North-West University was granted to conduct the low-risk study (see Annexure E). The site where the research took place was a privately owned preschool and I obtained permission from the school principal and school governing body to conduct the study.

I designed a pamphlet in which the criteria for participation were listed and gave it to an independent recruiter. The recruiter distributed the pamphlet and then arranged a meeting with teachers who were interested in participating in the study. The independent recruiter used in the study was affiliated with the school but not employed in a managerial position. This ensured that power did not play a role in the recruitment, as the teachers would not feel obligated in any way to participate in the research.

Table 3-1 below indicates the minimum required criteria for being able to participate in this study.

Table 3-1: Criteria used for the recruitment of teachers

Criteria for teacher recruitment	Participants						Minimum requirement
	P1	P2	P3	P4	P5	P6	
Teacher's class age	3-4 years	3-4 years	3-4 years	3-4 years	3-4 years	3-4 years	3-4 years
Teacher's experience in ELP's	2 years	2 years	5 years	4 years	2 years	3 years	2 years
Afrikaans or English	Bilingual	Bilingual	Bilingual	Bilingual	Bilingual	Bilingual	Either Afrikaans or English
Availability	Lunchtime or after school	Lunchtime or after school	Lunchtime or after school	Lunchtime or after school	Lunchtime or after school	Lunchtime or after school	Sufficient time for research
Teacher's qualification	NQF level 4	NQF level 4	NQF level 5	NQF level 5	NQF level 4	NQF level 5	NQF level 4

Purposive sampling was used to recruit participants for the study. I used purposive sampling because participants were chosen with a specific purpose in mind (See 1.6.4.2). A meeting was arranged with the six teachers to discuss the purpose of the meeting and to sign an ethical agreement. Next, the data generation methods are discussed.

3.4 Data generation methods

The data generation methods used in this study, as mentioned in Chapter 1 (see 1.7), included recorded ALS discussions, a collage and reflective journals. Leedy et al. (2019) explain that data are expressed not to be the absolute reality but the truth underlying a phenomenon that is observed. Furthermore, data are managed by the process where observations and measurements are defined (Zozus, 2017). The data are collected and documented, and the information gets processed (Zozus, 2017). Table 3-2 explains the data generation method that was used in each cycle.

Table 3-2: Data generation methods used in the three cycles

ALS discussions	Purpose of the sessions	Data generation method	Documentation of data
Cycle 1	Organise the group Conduct needs analysis Negotiation of ethical agreement	Reflective journals Audio recordings	Audio recordings Reflective journals
Cycle 2	Reflection of ideas of Cycle 1	Reflective journals Audio recordings A collage	Audio recordings A collage
Cycle 3	Evaluating and clarifying data from Cycles 1 and 2	Reflective journals Audio recordings	Audio recordings Guidelines for a play-based approach

Referring to Table 3-1 above, it is seen that the reflective journals were the primary data generation method, together with the audio recordings of all the sessions. We referred back to our reflective journals to revise and regather our thoughts on previous sessions and also going forward. In Cycle 2, we used a collage as data generation method. This method supported the visual aspect of gathering data and created images that explored our question in that cycle. This method was used to make a visual interpretation of participants' thoughts. Cycle 3 ended with the reflective journals and audio recordings that enabled us to gather guidelines from the information gathered.

3.4.1 Recorded action learning set discussions

Research guidelines and rules of operation for the group to be followed were set. Some of the activities within a group included presentations on information obtained and improvements in a research process, asking questions for clarification by the presenters or listeners during the presentations (see Wood, 2020). In this study, all the teachers shared what they had learnt, and the facilitator and other teachers offered reflective information to the person presenting. A reflection of the effectiveness of each set in attaining its goals was also evaluated.

All the participants met regularly to collect data and share experiences and information obtained based on their behaviour, input, and opinions (see 1.7.1). A sustainable platform of reflection was created that enabled trust building, respect, and support among the ALS members, as suggested by Wood (2020). In this regard, the ALS helped to address issues of mutual interest, which made it easier to concentrate on critical reflection, perform personal role identification, and work towards meeting the best interests of the research topic.

Audio recordings of the ALS discussions were made. In these discussions, a research question was addressed in each discussion cycle. The research questions were designed to address the challenges that teachers faced during the incorporation of play-based approaches ELP's. Opinions and personal experiences were welcomed as input in the discussions.

3.4.2 Collage

Collage making is a visual method that research participants can use to select and sort material or evidence gathered to be analysed and connected together to present their opinions, experiences, or concerns (see 1.7.2). Collages are used to conceptualise a "phenomenon by fleshing out different facets in order to get a nuanced understanding of it" (Butler-Kisber & Poldma, 2010, p. 4). Moreover, collage making is a reflective process that brings out meaning through the conceptualisation of ideas from multiple realities (Gerstenblatt, 2013). In this regard, making a collage in this study allowed the participants to select and sort material, which they connected and relocated to present their experiences, opinions, and concerns, as described in Coghlan and Brydon-Miller (2014).

3.4.3 Reflective journals

A reflective journal is an account of an individual's learning experiences that can be used to record and reflect on things learnt; it is typically in written form but may also contain other

items, such as images and drawings (Bjerkvik & Hilli, 2019; Williams et al., 2020). According to Zuber-Skerritt (2019), the use of a reflective journal is vital in offering participants a chance to plan their submission, rewrite and submit information obtained in the expected format, be observant while sharing information in the ALS group, and reflect on knowledge gained and comments made during a session.

Zuber-Skerritt (2019) explains that a reflective journal gives one an opportunity to plan and then act by rewriting and submitting information in the correct format to the ALS group, while also allowing room for comment and feedback (see 1.7.3). The ALS used reflective journals to record information on the research participants' experiences and feelings about how play-based educational methods could be used to improve learning in the ECD classroom. This enabled the ALS to capture the experiences, feelings, and behaviour of the research participants who had implemented play-based educational methods to give an account of how these influenced ECD.

3.5 Data analysis

Data analysis is the primary step in qualitative research and refers to the classification of verbal or visual resources to make statements about direct or indirect dimensions of the material and what it represents (Flick, 2014). Furthermore, Dawadi (2020) states that data analysis is used by researchers to systematically arrange and analyse complex amounts of data (see 1.7.4). For the study, I used Braun and Clarke's (2021) seven steps of reflective thematic analysis, as set out in Chapter 1 (see 1.7.4). I applied the steps as follows:

- *Step 1 – Transcription of ALS discussions*
The recorded ALS discussions were transcribed verbatim as Word documents. The resultant transcripts of the ALS discussions were then validated against the recorded ALS discussions to ensure that the transcripts were accurate.
- *Step 2 – Reading and familiarising oneself with data*
I read the transcripts three times to familiarise myself with the data and get a sense of the important information addressed in the ALS discussions with regard to methods that could be used to enhance ECD through PBL. In addition, during the second step of the thematic data analysis, I wrote notes and recorded my early impressions of the research data.
- *Step 3 – Generating initial codes*
After familiarising myself with the research data, I organised the data in a meaningful and systematic way in relation to the research objectives and questions of the study. In view of this, any information that captured something interesting about the research

objectives and questions of the study was coded. Consequently, not every piece of information in the ALS discussion transcripts was coded. Open coding was used in the data, which allowed me to develop and modify the codes during the thematic data analysis process.

- *Step 4 – Searching for themes*

I combined the codes that were associated with each research objective to create themes that captured something significant about a research objective or question of the study.

- *Step 5 – Reviewing themes*

After the preliminary themes had been developed, I reviewed each theme to assess whether it made sense and to evaluate whether the data associated with each theme were relevant without trying to fit too much information into a theme.

- *Step 6 – Defining and naming themes*

During this step, I refined the themes of the study by identifying what each theme was about or was trying to address, including how the themes identified related to one another.

- *Step 7 – Writing and finalising the analysis*

After the refinement of the themes identified in the study, the outcomes of the thematic data analysis were written up and important information findings of the study were highlighted. This part of the data analysis is addressed in Chapter 4.

3.6 Quality criteria

Korstjens and Moser (2018) explain that trustworthiness in qualitative research is of the utmost importance because it evaluates whether the findings of a research study can be trusted (see 1.9). Science Europe (2015) concurs and explains that integrity is seen as the heart of the research process because it has an impact on people's lives. Moreover, ensuring that research findings are trustworthy is essential because it promotes the knowledge claims of a research project (Science Europe, 2015). I applied the quality criteria provided by Herr and Anderson (2015) because they were relevant to this study and would serve as quality assurance for the purpose of this study. Herr and Anderson's (2015) quality criteria include five indicators, namely process validity, dialogic validity, catalytic validity, democratic validity, and outcome validity. These are briefly described in Table 3-3 below:

Table 3-3: Quality criteria of the study

Goals of action research	Quality criteria	Relevance to this study
Quality and appropriate research methodology	Process validity	The findings from the study were based on realities that were experienced while sustaining knowledge generated to ensure ongoing learning. By reflecting regularly, process validity was ensured.
Developing new knowledge	Dialogic validity	Collaborative reflection and reviews from the ALS members enhanced the dialogic validity of new knowledge that was presented in this study.
Educational contribution of both the researcher and the participants	Catalytic validity	Constant reflection ensured catalytic validity through the transformation of the research participants' perceptions, which led to actions that fostered change.
Considering multiple perspectives while working in collaboration with relevance to the local setting	Democratic validity	The research participants worked collaboratively as equal partners with equal learning experiences and equal contributions. This aspect enhanced the democratic validity of the study.
Successful achievement of goal-orientated outcomes	Outcome validity	To ensure collaborative input, the outcomes were formulated based on all contributing views of the participants, and not only on my personal goals. This endeavour enhanced the output validity of the study.

(Adapted from Herr & Anderson, 2015)

Considering the quality criteria of this study, it is important to ensure that the findings can be trusted. Hence, all these steps were implemented to sustain the validity of the findings.

3.7 Ethical considerations

Adherence to ethical principles of respect, justice, and beneficence should be part of any research process (see 1.9). According to Steenkamp and Tsoukatos (2020), researchers should ensure a sustained ethical agreement (Annexure B) between them and the participants in the research process. Similarly, Artal and Rubinfeld (2017) note that ethical principles ascertain trustworthiness in the process a researcher's engagement with the research participants. It also ensures the believability and credibility of research findings. The fundamental ethical principles include respect for the persons involved in the research process. In this research study, I gave the participants autonomous space to make their own

decisions and agree only to the ideas they felt free to concur with. In addition, the privacy and confidentiality of the research participants were respected and preserved throughout the data collection process. In this regard, no personal information was provided, and this ensured the anonymity of the research participants. To further ensure their anonymity, they are referred to as Participant 1 to Participant 6 in the study. Furthermore, the research process was conducted in a way that was beneficial to others. In view of this, the data collection process did not expose the participants to harm, and social distancing and health protocols were observed to ensure the safety of the research participants in light of the Covid-19 pandemic. Also, the ethical principle of justice was adhered to during the research process. In light of this, I ensured that the participants were exposed to fair conditions or fair terms of requirements during the data collection process. Likewise, the process of recruitment was fair in that it gave equal chances for all the participants who were within the bracket of the research population.

3.8 Summary

This chapter set out the methodology that I adopted for this study. I explained the paradigm that I used, that is, the participatory transformative paradigm. Using this paradigm in my study supports the vision of creating opportunities for collaboration and lifelong learning. I further explained that purposive sampling was used, to form an ALS. I discussed how I adhered to the ethical guidelines of the university and how we signed an ethical agreement. I discussed the data generation methods that had been implemented in Cycle 1 to Cycle 3, namely reflective journals, audio recordings, and a collage. I explained the data analysis used for the study as reflective thematic analysis to help identify patterns and group themes together.

In the next chapter, the findings of my study from Cycle 1 to Cycle 3 will be discussed. A detailed explanation of the qualitative data analysis of this research study will be provided by reverting to the secondary research questions.

Chapter 4 Data analysis and discussion of findings

4.1 Introduction

In Chapter 3, I explained the aim of my study as teacher collaboration to enhance the holistic development of young children through PBL (see 3.2). I also described how PALAR was used as a research design in this qualitative study by discussing the research methodology and research methods. The ethical considerations, ethical agreement, and measures to validate the findings of the study were discussed as well.

In this chapter, I critically discuss the various themes that were identified by using thematic content analysis (see 3.5) to answer the research questions. The main research question was: How can teacher collaboration enhance PBL for the holistic development of young children?

The secondary research questions were as follows:

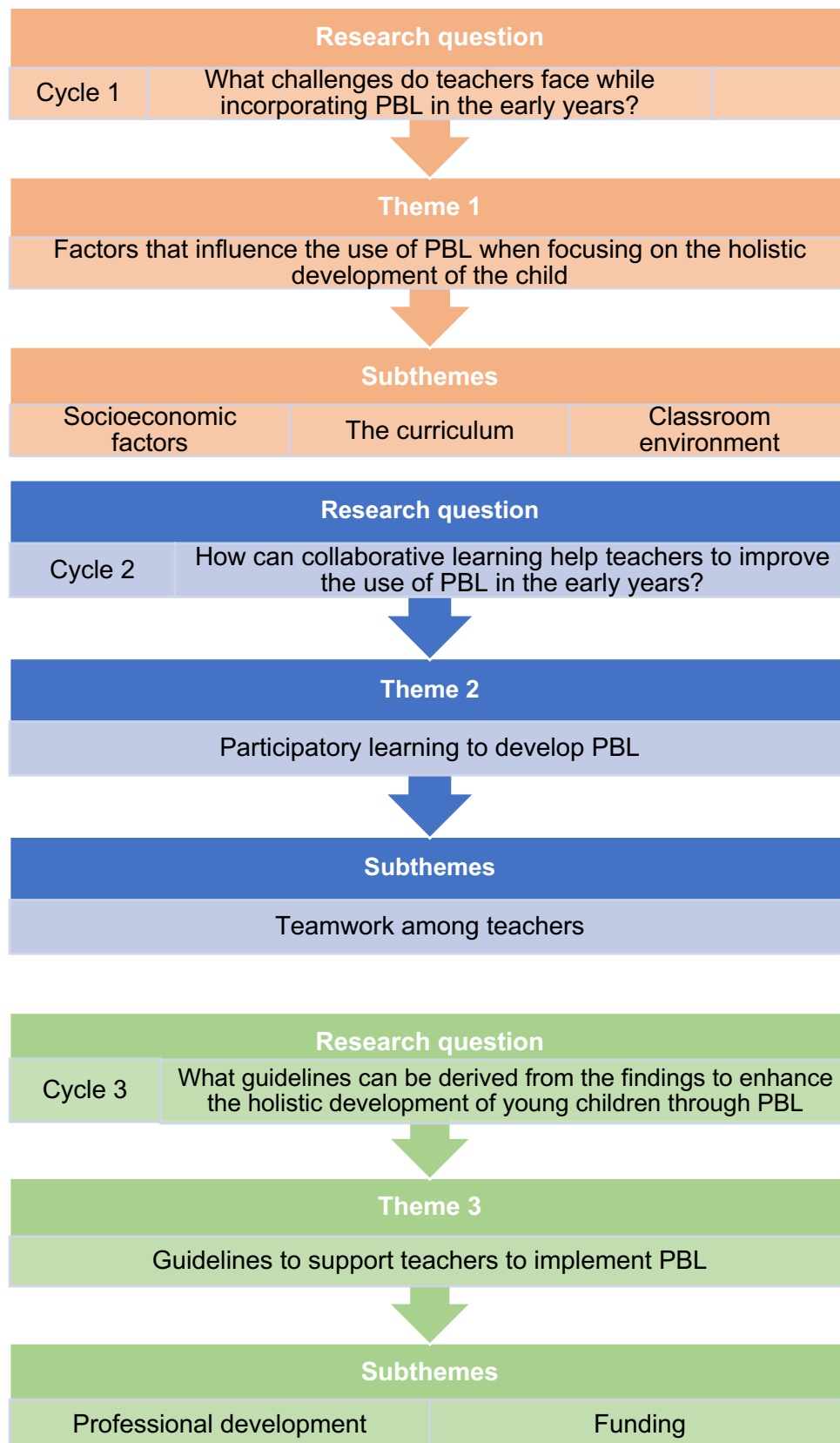
- What challenges do teachers face while incorporating PBL in the early years?
- How can collaborative learning help teachers to improve the use of PBL in the early years?
- What guidelines can be derived from the findings to enhance the holistic development of young children through PBL?

The themes derived from the data are discussed next.

4.2 Main themes emerging from the data

The literature in Chapter 2 highlights that teacher collaboration is important when using PBL to enhance holistic development in the early years. There are, however, various challenges that influence the use of PBL. To understand the complexities of these challenges, I identified the following three main themes: factors that influence the holistic development of children; participatory learning to develop PBL; and guidelines to support teachers in implementing PBL. Each of these themes is discussed below with supporting evidence from the data. The research questions and the way in which the PALAR cycles were linked to the research themes are outlined in Table 4-1.

Table 4-1: Summary of PALAR cycles linked to research questions and themes



The above table shows how the themes emerged in answering the research questions in the three cycles (see 3.2.2). Below follows a discussion of the themes that emerged from each cycle by integrating ideas from both the literature and the research data in order to explore teacher collaboration to enhance the holistic development of young children through PBL.

4.2.1 Theme 1: Factors influencing the use of play-based learning when focusing on the holistic development of the child

The first cycle started with relationship building in the ALS (see 3.2.2) when we organised a group and did a needs analysis. Roles and responsibilities were negotiated in the relationship-building phase, as discussed in Chapter 3 (see 3.2.2). The ethical agreement (see Annexure B) was negotiated with the participants, and they completed consent forms. During the relationship building in Cycle 1, the participants met on a continuous basis and shared their personal experiences of using PBL in the classroom. The data indicated that the teachers faced many challenges when implementing PBL if they focused on the holistic development of children. In the next section, the following subthemes are discussed: socioeconomic factors, the curriculum, and the classroom environment.

4.2.1.1 Subtheme 1: Socioeconomic factors

Holistic development (see 2.5) refers to a child's physical, cognitive, emotional, social, and spiritual domains. In Chapter 2, it is indicated that using PBL can potentially play a positive role in the holistic development of young children (see 2.5). The participants, however, identified obstacles such as income, a lack of stimulating resources, a lack of parental involvement, and finances as factors that have an impact on the use of PBL when focusing on the holistic development of children. One of the participants explained the impact parents' income has on preschools as follows:

The income of parents does in fact play a big role in preschools. Some preschools I know of personally are much more affordable and offer much less to children. They are not in a position to purchase PBL materials or equipment, thus, offering [sic] schooling at a basic rate that is more affordable to parents.
(P4)

Another participant agreed that finances played an important role in the use of PBL for quality education –

Parents' income also supports the development of the school, considering fundraisings and the contributions they make to enable some preschools to be

in more fortunate positions to offer a better PBL environment. So, if parents do not have a medium- to high-income bracket, it impacts the school's sustainability and offering. (P1)

The participants also added that community safety could play a role in the holistic development of children, as many children are obligated to make use of public transport. One participant expressed her concern about the fact that many children missed classes or were late when they used public transport services. She said:

We have both English and Afrikaans classes, and it is notable that many of our English children make use of taxi [public transport] services. This poses such a danger and risk, as some children do not arrive at school for a week due to taxi fares that went up or even missing transport, that has a big effect on their holistic development at school. (P4)

Children who use public transport may then come late or miss class and the opportunity to be involved in PBL activities. A safe environment plays an important role in the socio-emotional, cognitive, and physical wellbeing of young children (see 2.6). Children who stay with family members are reliant on them to offer them social developmental skills and growth to help sustain milestones and developmental aspects at home. These caregivers sometimes do not have knowledge of PBL (see Section 2). One participant stated that some family members did not provide socio-emotional support to young children –

Also, children who stay with their grandparents and other family members sometimes don't get the social and emotional support they require. (P2)

It is described in Chapter 2 (see 2.6) how social and emotional development has an impact on the holistic development of a child. Socio-emotional skills can be offered by using various forms of play (see 2.6.3). It is important for the holistic development of children for them to express their feelings and emotions and explore their self-concept and self-image (see 2.5.3). The important role of the social context in the holistic development of the young child was expressed as follows by a participant:

The environment a child lives in sets the foundation for the development of critical social-emotional skills and knowledge. Through play, children learn to create friendships with others, share, negotiate, solve issues, and improve self-advocacy skills. Play also teaches them leadership and teamwork skills. Through re-enacting fictional heroes, children can acquire perseverance and adaptive abilities as they learn to navigate relationships, react to social challenges, and combat phobias. (P5)

The above discussion highlighted some of the challenges in the immediate environment that might influence the holistic development of the young child. In Chapter 2, Bronfenbrenner's (1979) theory explains the child's immediate environment as an important factor in holistic development. It is also highlighted that socioeconomic factors can influence the holistic development of young children (see 2.5) and the classroom context (Bubikova-Moan et al., 2019).

The participants indicated that knowledge and the application of the curriculum were important factors to consider when focusing on PBL for the holistic development of young children.

4.2.1.2 Subtheme 2: A curriculum-related policy

While there are various important documents that teachers use to guide them in teaching three- to four-year-old children (see 2.8.3), the participants mostly focused on the way they implemented the NCF policy (DBE, 2009). They agreed that applying this curriculum was very time-consuming, as was stated in Chapter 2. Edwards (2017) explains that teachers are often frustrated by policy documents and claim that implementing some of the policies can be time-consuming and unstructured. The participants added that the NCF (DBE, 2015) included various topics and they found it difficult to apply some of the suggested activities when using a PBL approach. They indicated that it appeared as if the PBL curriculum was unstructured; therefore, they found it difficult to manage their time and complete all the activities. One of the participants explained that there were not enough hours in a day to complete all the suggested activities –

PBL is unstructured and we easily run away with the time, which poses problems to get through the day's planning. (P1)

Another participant pointed out that it takes a long time to prepare for classes –

Time management is crucial for academic achievement, from recognising the importance of preparedness to having a solid understanding of how long tasks will take and developing the habit of prioritising activities. (P3)

Edwards (2017) states that preparation for classes is very important (see 2.8.4). While the participants indicated that they understood the importance of preparing for classes, they explained that they sometimes did not know how to prepare for and create a lesson plan. Participant 1 said:

Implementing a PBL curriculum causes confusion on what to do. There is no specific structure to indicate specifically what the BPL outcomes are, making it difficult to achieve certain objectives. (P1)

Another participant explained that she found it difficult to incorporate PBL activities into the lesson plan –

There are no guidelines or specific lesson plans in which a PBL activity should be implemented to achieve certain outcomes. It is up to us to develop an activity that is play-based, which is very hard. (P4)

This puts teachers under tremendous pressure to be able to complete the tasks that are expected of them. One of the participants portrayed the challenge of implementing the curriculum in her reflective journal, as shown in Figure 4-1.

The play-based approach is not structured, thus it is difficult for teachers to plan

- Play-based approach was considered to have no clear structure. (can't help the teacher to draw up a lesson.)
- Challenge of curriculum implementation.
- Teachers have to plan for the time when learners are meeting for a self-directed or guide play, at same time, they ensure that the curriculum benchmark meetings are scheduled and objectives achieved.
- Most suggested that they play-based teaching approach structured like direct teaching method.
- There is also the challenge of child control during play-based teaching.
- Time obligation for activities, teacher must exercise control and ensure that they are flexible to attend to all play issues in all parts of classroom.
- Children's ideas drive play-based approach not easy for children to control teacher

Teachers have to work under pressure

Figure 4-1: Photograph 1 extracted data from reflective journal of Participant 1

The image above emphasizes on the challenge teachers face by implementing the curriculum, I further corroborate on classroom management. Marzano et al. (2003) assert that classroom

management or being in control is an important factor to create an environment conducive to teaching and learning (see 2.8.4).

Participant 3 stated that she often felt as if she was not in control when she implemented PBL –

You don't have so much control in a PBL classroom environment, and as a teacher, you need to ensure flexibility to attend to all play issues and ensure children reach their curriculum goal. (P3)

In addition to classroom management, language barriers and communication make it difficult to use a PBL approach. The participants experience challenges in communicating with learners on how to use PBL activities in a diverse classroom. One participant said:

Children are enrolled in linguistically varied environments. Language barriers reduce the understanding of the activity, and unresponsive children in play-based learning activities are among the obstacles we face. (P1)

Another participant added that language barriers had an impact on effective communication –

The language barrier makes it difficult for instructors and preschool children to communicate effectively and to ensure proper contact between the children and teachers. We often find it hard to understand some children that don't understand English or Afrikaans, and the communication barrier is hard to adapt to. (P2)

The above discussion highlighted numerous challenges that the teachers experienced when they implemented the curriculum. The importance of a positive learning environment was foregrounded and is discussed in the next section.

4.2.1.3 Subtheme 3: Classroom environment

Arthur et al. (2021) assert that the classroom environment should be designed in such a way that it provides opportunities for children to learn and express themselves (see 2.8.4). It is suggested by Taylor and Boyer (2020) that a classroom environment should cater for interactive activities and be promoted by good infrastructure, resources, and sufficient space (see 2.8.4). The classroom must allow children to engage in teaching and learning activities because these activities support holistic development. The classroom should ideally engage the minds of the children in all dimensions, including their respective sensory needs, and give

them a chance to exercise their academic activities (Marston, 2021). The data suggest that teachers need time, space, and relevant play materials to implement PBL effectively (see 2.9.4). One of the participants shared this concern and was worried about resources that could stimulate PBL –

Our classrooms are not designed to accommodate additional “corners” such as free-play, sensory, and art corners. We have limited space, and that is challenging. We need to create free-play and fun corners outside to accommodate different learning environments. (P2)

Another teacher mentioned that the size of her classroom really limited her opportunities –

The classroom we have really limits our opportunity to be creative in exploring the PBL curriculum due to the limited space and number of children we have. We also do not have sufficient space to create fantasy corners and enjoy free play which enhances creativity in our children. (P5)

If a teacher does not have space to stimulate children’s creativity, it could prevent creative playing, as suggested by Participant 5 in Figure 4-2 below.

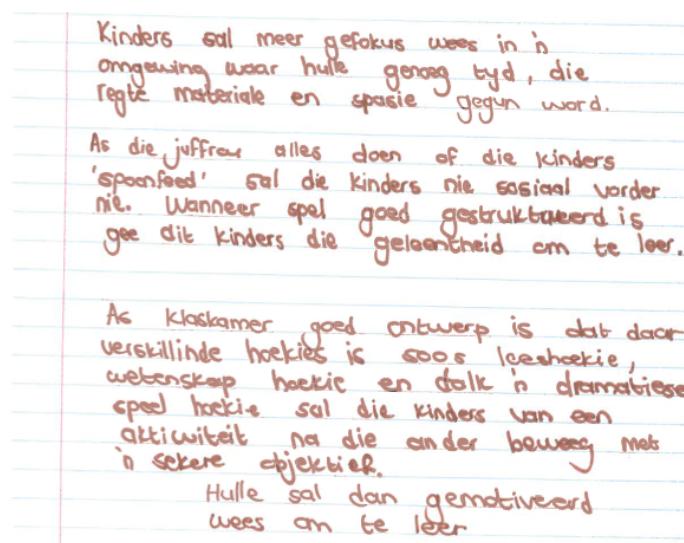


Figure 4-2: Photograph 2 extracted data from the reflective journal of Participant 5

Photograph 2 (Figure 4-2) from Participant 5 expresses that classroom layout is important and influences the implementation of using PBL. Carulla et al. (2021) mention that when classrooms are designed well, children will move from one activity to another with a focused objective. In the art corner, they will be able to do construction of all forms of creation (see 2.8.4). Different corners in the classroom facilitate creativity and enhance children’s

development. Although the layout of the classroom with a variety of play corners is ideal, the infrastructure frequently does not allow for this to be possible. One participant gave the following explanation about the infrastructure at the school:

We are fortunate that our classes have sufficient clean air, windows, and light. However, we have about 20 children in a class with a teacher and assistant, whereby [sic] we need to make turns to do activities to ensure we have enough space to conduct the activity correctly. The classes don't offer space for playing, but only table activities. (P3)

Participant 5 mentioned that they had quite large numbers of children in their classes, making classroom management difficult –

We have a large number of children in our classes and our classes are small, which makes working in groups with materials rather difficult to manage. (P5)

In addition to the infrastructure, the participants were concerned about resources for stimulating PBL. Resources are crucial elements to enhance creativity in children (see 2.9.4). It is argued that when young children have access to such materials and resources, they will be motivated to learn. Other materials that initiate sensory skills should also be involved, such as the sensory tables and soil that help learners to interact with worms and learn the science about soil and its components (Danniels & Pyle, 2017). The list of materials is long, and teachers should be guided to choose resources that will have direct implications for child development (Danniels & Pyle, 2017). The participants expressed that there was a great need for resources in the preschool classroom. Participant 4 said:

The need for resource materials is always very high. We constantly make use of sensory art and building materials that seldom last long. Dealing with pre-schoolers also makes the sustainability of resources difficult, as there are very often big wastages or overuse of a specific resource. (P4)

Photograph 3 (Figure 4-3) from Participant 4 explains the need for material resources.

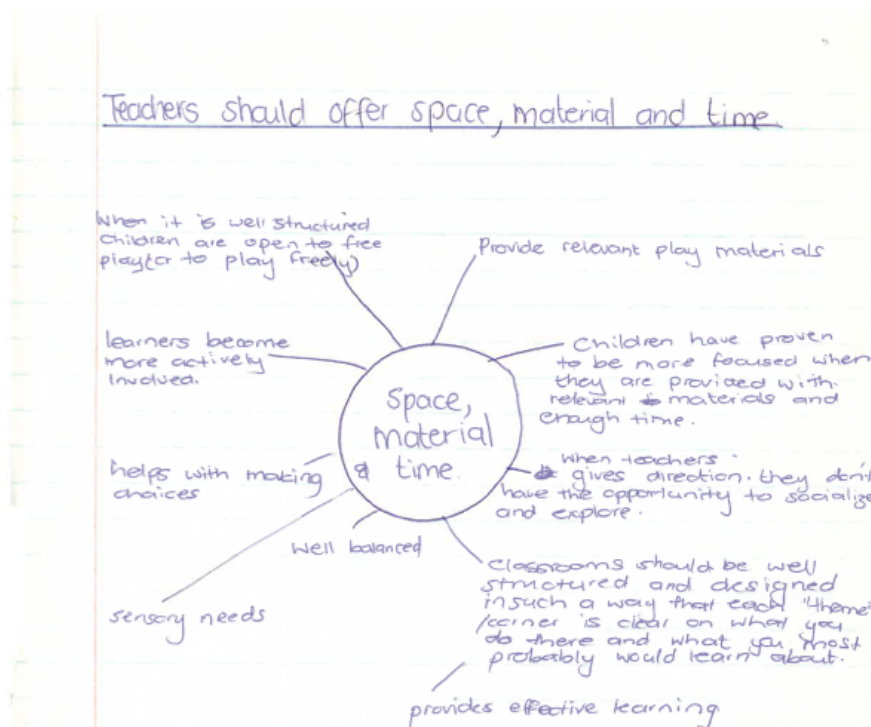


Figure 4-3: Photograph 3 extracted data from the reflective journal of Participant 4

It becomes clear that when PBL activities are implemented, children should have access to available resources (Mashiya & Excell, 2020). The classroom environment is suggested to offer good space, infrastructure, and resource materials to facilitate holistic development in PBL (see Chapter 2).

Theme 2, where the focus is on the importance of participatory learning to develop PBL, is discussed next.

4.2.2 Theme 2: Participatory learning to develop play-based learning

Cycle 2 started with an ALS session that revisited relationship building and reflected on the ideas of Cycle 1. During the sessions in Cycle 2, the ALS used recorded group discussions, reflective journals (see 3.4.3), and a collage (see 3.4.2) to explore the research question. The subtheme of teamwork among teachers emerged.

4.2.2.1 Subtheme: Teamwork among teachers

Shakenova (2017) argues that teamwork among teachers in classrooms for three- to four-year-olds promotes holistic development in children (see Chapter 2). Furthermore, it is stated

that when teachers work collaboratively as a team, they are more satisfied in their working environment (see 2.7). Participant 3 indicated that teamwork among teachers facilitated the learning process in PBL and supported maximum child growth. She said:

When working as a team with PBL activities, we listen to each other, collaborate, and support one another to accomplish shared goals. (P3)

The comment above highlights that active listening and speaking are important when collaborative goals are shared. It is explained that teamwork and partnerships (see 2.7) facilitate the development of the skills, information, understanding, behaviour, and attitudes necessary to build a PBL classroom. Such a positive classroom environment encourages social fairness and promotes stability. One of the aspects that promote stability is good communication among partners.

Participant 1 argued that good communication strengthened respect and said:

Teachers who partner with one another improve their strengths and sharpen their flaws while maintaining a high level of respect for each other. The teachers' performance can be positively influenced by exchanging ideas and debating approaches. As a result, I value partnership and teamwork in my classroom. (P1)

Good relationships and communication among teachers are expressed as participatory learning methods to develop PBL. One of the participants stressed the importance of communication –

Where there is communication, there is understanding. When working together and a relationship is built on good communication, you know what can be expected and also what is expected from you. (P3)

This statement above suggests that good communication leaves no space for uncertainty and supports a shared vision and expectations to reach the same outcome in PBL. According to the literature (see 2.7.1.), the advantages of teamwork include achieving shared goals, co-planning, good communication, and shared teaching opportunities (see 2.7.1). Teachers who share goals for learners' accomplishments create a pleasant working environment and a positive learning atmosphere for young children in the PBL classroom. The following participant expressed that teamwork led to better outcomes in learning:

As a team, we can enhance children's PBL outcomes by collaborating with other teachers more. We can come up with fantastic ideas for improving PBL by brainstorming and problem solving together. (P5)

Participant 5 agreed with the idea mentioned in Chapter 2 (see 2.7.1) that teamwork fosters collegiality and the ultimate benefit is children’s achievement and developmental potential.

In the third session, we discussed the value of teamwork by using a collage. While discussing the pictures in the collage, the following ideas were foregrounded: partnership, good relationships, support, communication, and teamwork.

Participant 2 summarised the value of partnership by emphasising the value of teamwork –

There are many aspects of teamwork that bring great value to one’s classroom environment and build relationships. (P5)

The collage in Figure 4-4 depicts the advantages of PBL that was conducted by the participants while working collaboratively.



Figure 4-4: Photograph 4 extracted data from all the participants making the collage

Photograph 4 (Figure 4-4) reflects that working together as a team promotes many advantages in the PBL environment, including support and partnership, communication, building relationships, and working as a team. Participant 1 further expressed that working collaboratively promoted shared responsibilities and elaborated as follows:

Teamwork makes the dream work. As teachers, we have a lot of responsibilities in the PBL class, including reaching specific outcomes, planning lessons, and so. But when teachers are working together, we share workload and responsibilities, we support each other, and help each other when the need arises. (P1)

According to Participant 1, participatory learning in PBL can have a positive effect on teachers who need help and can support one another in particular areas. The images in the collage confirm that participatory learning among teachers can improve the implementation of PBL. These ideas and the teachers' vision inspired their action plans. The participants reflected on the ideas of collaboration and how they used PBL. Next, I discuss Theme 3 – guidelines to support teachers to implement PBL.

4.2.3 Theme 3: Guidelines to support teachers in implementing play-based learning

The aim of Cycle 3 was to reflect on and determine what guidelines could be used to enhance the holistic wellbeing of young children by using PBL. The participants first considered professional development and explained how specific actions could be implemented to use PBL to enhance the holistic development of young children.

The above-mentioned discussion highlighted that collaboration could lead to a better understanding of PBL. The participants began to think collaboratively about guidelines that could be implemented to enhance the holistic wellbeing of children by using PBL.

4.2.3.1 Subtheme 1: Professional development

It is stated in the literature that professional development is important as it guarantees that young children are exposed to the best teachers who can facilitate PBL (see 2.7). Furthermore, it is expressed that professional development is important due to the fact that it improves the skills and knowledge teachers need when they implement PBL lessons (see 2.7). Teachers are held responsible for attaining the highest achievable standards in exertion and behaviour within the preschool classroom while valuing the education of their learners (Samson, 2012). Therefore, teachers may benefit from professional development courses (see 2.7) to improve their time management and organisation skills. One of the participants expressed that teachers had a lack of confidence in presenting BPL lessons as they had not received training and did not have the know-how on presenting PBL lessons. She said:

Training and guidance help us as teachers to gain more knowledge in specific areas and help us to be more confident in our PBL classroom. (P2)

Continuous teacher training can renew and enhance professional expertise, skills, and teaching methods (see 2.7). One of the participants referred as follows to the value of short courses as a way to develop professionally:

We often don't know how to direct a PBL activity, as we don't have the training in PBL methods. If we can just be sent on short courses, at least we will gain knowledge to be able to do so. (P1)

The participants indicated that by completing single PBL learning courses, they accumulated great insight into and knowledge on the PBL approach in classrooms for three- to four-year-olds. Lalani (2020) states that training programmes hold significant advantages and advises teachers to regularly go for training on PBL topics to enhance their knowledge and keep up to date with new developments (see 2.7). Participant 1 expressed her experience of the PBL workshop as follows:

I had such a great experience. The workshop was rich in PBL knowledge, how to conduct different approaches that I was not aware of. This really assisted me to gain new skills in presenting PBL lessons. (P1)

Another participant mentioned her experience of the workshop and elaborated on the fact that PBL could be structured depending on how one managed and planned ahead. She said:

The workshop gave me new insight into how play-based activities can be implemented in a manageable way, through pre-planning and working in smaller groups. I gained knowledge on aspects of PBL that I was not aware of, and it gave me insight into some of the doubts I had with regard to conducting PBL activities. (P3)

Some of the participants suggested that short courses could support them in using PBL. There are, however, financial implications if teachers have to pay to attend these courses. One participant said:

We want to learn, go on courses and gain knowledge, but it is not financially affordable to acquire these courses out of our own pocket. This is the reason why many teachers don't have additional training on PBL learning, because they cannot afford it on their own. (P3)

It is argued that teachers need more external funds for continuous development. In Chapter 2, it is explained that professional development adds value to develop skills for supporting holistic development in young children. One participant explained the role of in-service training as follows:

In-service training focuses on providing learning settings that allow us, teachers, to enhance our classroom efficiency, as well as retain or upgrade professional certifications without financial issues. It may also be discretionary with the sole objective of improving skills. (P2)

Participant 3 argued that teachers found the training to be necessary to develop knowledge in PBL. Her explanation is depicted in the photograph below.

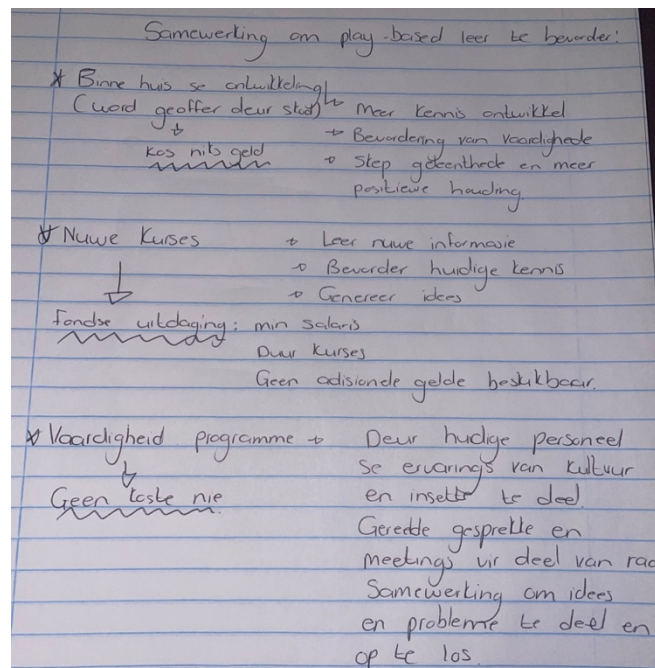


Figure 4-5: Photograph 5 extracted data from the reflective journal of Participant 3

Photograph 5 (Figure 4-5) depicts teachers' need for training opportunities. During the discussion of the above reflective journal, it became clear that courses were needed to enhance development and knowledge, but it was not always affordable. Classroom success relies on effective knowledge transfer to enhance the development of teachers (Scales, 2012). It is expressed that if teachers can improve their skills (see 2.7) and use knowledge retention, they can better provide for the needs of their learners in a PBL classroom. The participants expressed that improved knowledge retention benefitted collaborative learning (see 2.7) in the PBL classroom. One participant explained this idea as follows:

During learning, apart from having and giving information to children, there is a need to preserve such information and have the same applied in the future.
(P5)

Another participant explained that knowledge retention improved confidence, which promoted being better teachers –

With greater knowledge retention, teachers get more confident and are empowered to be even better teachers among themselves. (P4)

Figure 4-6 emphasises the advantages that knowledge retention in professional development has for teachers.

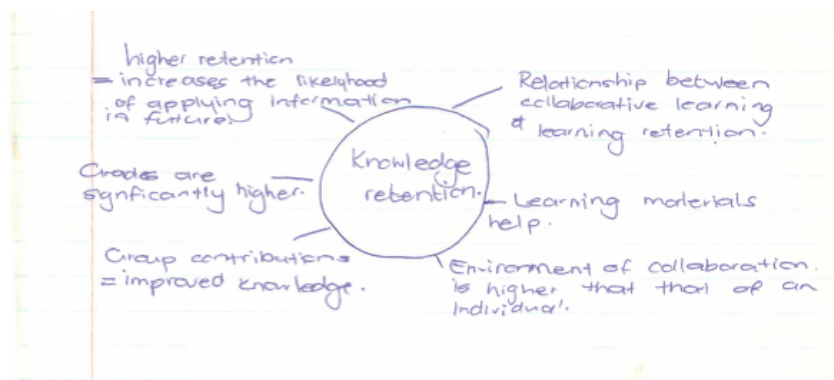


Figure 4-6: Photograph 6 extracted data from the reflective journal of Participant 4

Photograph 6 (Figure 4-6) of Participant 4 suggests that with knowledge retention in professional development, there is an opportunity for applying the information in the future and improving individual knowledge.

Participatory learning in PBL demands thoughtfulness and pre-planning in order to apply it properly (Meier, 2014). It involves the creation of the right guidelines for child engagement and the development of the proper tools for the performance of the activities (Lalani, 2020). This encourages professional development to help develop teachers and support them to gain the necessary knowledge to implement PBL in the classroom (Lalani, 2020).

Figure 4-7 illustrates the participants experiencing professional development by attending a workshop.



Figure 4-7: Photograph 7 extracted data from the ALS meeting of Participant 1 who attended the PBL workshop

Photograph 7 (Figure 4-7) is a visual image of a participant who attended a workshop based on PBL. It indicates that participating in professional development workshops helps teachers gain knowledge and assists in the development of skills. It is stated in Chapter 2 that professional development workshops and courses are essential, as it is a mechanism for teachers to develop their teaching practices and become lifelong learners (Creemers, 2013). According to Banks and Mayes (2016), professional development workshops should be regarded as a priority, as it promotes lifelong learning. Participant 2 stated that professional development was valuable and a guideline to develop lifelong learning –

Professional development, such as attending workshops, creates lifelong learners of teachers to continuously learn new skills and supports the generation of new knowledge. (P2)

In addition, it was expressed that professional development was a guideline to develop reassurance and confidence in the classroom environment. One participant explained:

Attending professional development workshops helps to expand your knowledge in your area of work, and this generates confidence and helps dissolve the uncertainties in regard to applying PBL in the classroom. (P4)

Participant 1 explained that professional development could likely increase earning potential, which could support even more professional development opportunities in the future. She said:

Attending professional development courses or continued education will help develop skills. There you can gain additional certifications that can boost your income potential in your workplace and support future development again. (P1)

The participants reflected on the way professional development was implemented and discussed the value of these actions. They attended the PBL workshop and expressed that they gained new knowledge and skills on PBL and how to work together to implement a PBL curriculum. They indicated that they had gained confidence in how to manage a class in a PBL situation by attending the workshop on PBL. Furthermore, the participants received in-house training from management, which helped with knowledge retention of different approaches of PBL that could also be applied in the future. New ideas were formed with regard to the best possible way to handle the classroom environment considering the current infrastructure by attending the in-house training from management. When they evaluated the actions, they realised that they were confronted with new challenges, for example external funding. Next, the second subtheme – funding – is discussed.

4.2.3.2 Subtheme 2: Funding

Adequate and sustainable financing is crucial because it ensures that learning resources, infrastructure, and other equipment are enough for the smooth running of learning activities (Blainey et al., 2017). According to the literature (see 2.8.6), preschool teachers require funds to create sustainable projects and initiatives that arise from endeavours to provide holistic development in preschools (DBE, 2015). The participants explored their actions and reflected on how the availability of funds could support teachers when implementing PBL in the early years. A participant commented:

When there is funding available, it really helps us to create wonderful resourceful lessons and enables us to make use of materials that support our lessons. (P4)

Inadequate funding can limit opportunities, while sufficient funding can overcome many barriers in terms of resources. Another participant expressed that they had very limited opportunities to take part in the fantasy corner of the school –

Our children love playing in the fantasy corner; if there is funding available, more fantasy corners can be implemented that does not limit play opportunity but rather supports play. (P2)

The participants acknowledged the importance of funding and brainstormed about ways to create opportunities to raise funds. One participant revealed that the school made use of fundraisers to obtain additional funding –

As a school, we host fundraisers, like Miss and Mr spring pageant when we have to raise funds for a specific goal. (P3)

Another participant added that according to her knowledge, the school was not a non-profit organisation and did not receive subsidies from the local government. She said:

We do not receive additional donations or subsidies from the Department. We are not an NPO [non-profit organisation] either. This enables us to make use of good fundraising ideas throughout the year to raise funds for what we require at different times of the year, such as a school concert and derby days. (P4)

The above statements show that while funds are a change driver in providing quality education, some teachers are unsure about how to raise funds, while others take action to create channels for financial partnerships. Creating public-private sector partnerships is an important guideline to provide resources and material for PBL (see 2.8.6) in early childhood learning.

In Figure 4-8, Participant 2 explains that funding is vital to make PBL meaningful.

financing in our play based ECD centre
financing plays an important role in our centre as we are under constant pressure to ensure that our play-based school has enough material and resources to keep learners entertained, safe and aiding our education methods.
Some of these include our playground areas and sets, our fine-motor skills development and gross motor skills development. Not to mention sand-pit up grades, fantasy corners, imagination stations and reading corners.
These need to be safe for kids to play with, age appropriate and helpful to their academic progress.
With our school not reviewing subsidies, sponsors or regular donations and we are only able to do fundraisers once or twice a year, it becomes difficult to keep up.
We need funds for materials such as beads, pins, clay, rollers, etc, all to aid our fine-motor skills programs that will help in primary school. This is just an example of things that seem simple and undervalued makes a difference in a play-based school.

Figure 4-8: Photograph 8 extracted data from the reflective journal of Participant 4

The importance of funding is evident. Funding plays a significant role in early childhood centres to ensure good infrastructure, the availability of resources, professional development, and sufficient nutrition for the holistic development of children.

The following guidelines in terms of funding were derived from Cycle 3:

- The availability of funding supports the professional development of early childhood teachers where they can learn more about the effective use of PBL.
- Funding is a guideline to support infrastructure when using PBL in early childhood centres.
- The availability of various resources, equipment, and PBL activities can create optimal opportunities for the implementation of PBL, but it is driven by the availability of funds.
- Sufficient funds create the opportunity for optimal development.

The above guidelines emphasise the importance of funds for creating opportunities for teacher development and the holistic development of young children by using a PBL approach.

4.3 Conclusion

In this chapter, I reported on the findings of my study. The research question that guided Cycle 1 was: “What challenges do teachers face while incorporating PBL in the early years?” The participants indicated that there were particular factors that had an influence on PBL to develop children holistically, namely socioeconomic factors, the curriculum, and the classroom environment. The research question in Cycle 2 was: “How can collaborative learning help teachers to improve the use of PBL in the early years?” We also determine how participatory learning could develop PBL. The participants expressed that teamwork among teachers could support the development of PBL. In Cycle 3, the research question was: “What guidelines can be derived from the findings to enhance the holistic development of young children through PBL?” With regard to this question, the participants stated that guidelines to support teachers to implement PBL included professional development and funding. Moreover, as guidelines to enhance the holistic development of young children through PBL, the participants identified continuous professional development and ensuring the availability of funding to support the holistic development of children in early childhood centres.

In the next chapter, I will revisit the purpose of the research, provide a conclusion, and make recommendations for further study.

Chapter 5 Summary, conclusion and suggestions for further study

5.1 Introduction

This study was inspired by my son who was diagnosed with autism, which encouraged me to learn more about the ways in which PBL could be used for the holistic development of young children. It appears as if children in the early years are spending too much time on academic work and being instructed (see 1.2) instead of learning through exploration and play. To me, it became evident that it was a challenge to create a play-rich environment in the early years. I also believed it was vital to explore the value of collaborations between teachers to use play had on the holistic development of children. In Chapter 2, it is argued that there is a lot of pressure these days on young children to reach milestones and to be school ready at younger ages. It appears as if the focus is more on formal tasks than learning through play (see 1.2).

I have realised that PBL not only enables children to express and explore their learning environment but also supports holistic development in children (see 1.1). Science supports the benefits of PBL as a holistic approach to the development of young children. The benefits of PBL (see 2.5) for the holistic development of children include physical, cognitive, academic, creative, and social benefits. It is said that through teacher collaboration, children's achievement and developmental potential can be improved. Teacher collaboration (see 2.7.1) increases quality teaching, learning opportunities, and work opportunities, to name but a few.

This study took place in a private Educare centre in Klerksdorp in the Matlosana District of the North-West Province. Six teachers participated in the three cycles of the research. In this chapter, I revisit the research questions and discuss the conclusions. I also refer to the limitations and the contribution of the study, provide guidelines and summarise the importance of teacher collaboration to enhance PBL for the holistic development of young children.

A summary of the chapters of this study is provided next.

5.2 Summary of chapters

Chapters 1 to 4 of this study are summarised below.

5.2.1 Chapter 1: Introduction and overview

This chapter provides an overview of the study that included an introduction, background, and rationale for the study. In this chapter, I also expressed my personal experience in education in the early years and the reason why this study was important to me. The chapter also contains the research problem, research questions, research aims, the theoretical framework that guided the study, quality criteria, ethical considerations, and a clarification of concepts.

5.2.2 Chapter 2: Review of the literature: Holistic development through play-based learning

In the literature review, I discussed empirical work from other studies and concentrated on studies from the past that analysed PBL in the early years. I explained how Vygotsky's (1978) sociocultural theory was combined with Bronfenbrenner's (1979) ecological theory to guide teachers in supporting the holistic development of young children through PBL. Thereafter I explored the interpretations and classification of play and discussed the holistic development of children, the benefits and challenges of PBL, and collaboration when using PBL.

5.2.3 Chapter 3: Theoretical discussion of the research methodology

In Chapter 3, the research methodology was discussed and justified. The chapter offers a discussion of the research process, including the research design, participant recruitment, data generation methods, and data analysis, which enabled me to answer my research questions. I explained and motivated how PALAR was used as the research design. Furthermore, I discussed how the integrity of the research process was guaranteed and gave an account of the ethical procedures followed in the research process.

5.2.4 Chapter 4: Data analysis and discussion of findings

In this chapter, I reported on the way I conducted thematic content data analysis. The three main themes and subthemes that emerged from the analysis were discussed. The following themes and subthemes emerged from the data analysis process:

- Theme 1: Factors influencing the use of PBL when focusing on the holistic development of the child.
Subthemes: Socioeconomic factors, curriculum-related policy and classroom environment.
- Theme 2: Participatory learning to develop PBL.
Subtheme: Teamwork amongst teachers.
- Theme 3: Guidelines to support teachers in implementing PBL.
Subthemes: Professional development and funding.

5.3 Answering the research questions

The main research question guiding this study was: How can teacher collaboration enhance PBL for the holistic development of young children? The following discussion of the secondary research questions presents my conclusions.

5.3.1 What challenges do teachers face while incorporating PBL in the early years?

At first, during the relationship-building phase, the participants met regularly to share their personal experiences related to the PBL classroom. They indicated the challenges they faced with regard to the implementation of PBL for the holistic development of children. During our ALS sessions, the discussions were focused on the following factors that influenced the use of PBL: socioeconomic factors, the curriculum, and the classroom environment.

Socioeconomic factors such as income, a lack of resources, and a lack of parental involvement (see 4.2.1.1) were identified as obstacles when teachers want to use PBL in the early years. As a matter of fact, it is a challenge that parents are unable to provide any additional funding, besides basic school fees, to fund PBL curriculum initiatives. Furthermore, the school only has limited resources for PBL activities, and it poses a challenge to ensure that there are resources for the activities, as there are no additional funds available from parents to sustain PBL initiatives. Moreover, if parents are not involved in the school, it could pose a challenge to obtain additional resources, materials, and equipment. It appears that the best way to overcome these challenges is to create teamwork among teachers.

The findings indicated that participants regarded the PBL curriculum as time-consuming. They also indicated that creating and applying a PBL activity could create a time management crisis because they experience it to be complicated and unstructured (see 4.2.1.2). A lack of training and knowledge in the PBL approach could be problematic. The teachers indicated that they

are ill-equipped in terms of implementing PBL, but teamwork could generate valuable ideas to gain knowledge and skills to better implement the curriculum.

The classroom environment is a challenge due to the lack of space and the teachers' inability to offer a BPL environment rich in resources (see 4.2.1.3). The classroom space limits opportunities to encourage free play, and the number of learners in small classrooms also poses classroom management challenges when implementing PBL activities. Ideally, it would be best to have PBL activities or lessons outside where there is more space. Hence, planning lessons that can be presented outside is more sufficient. Furthermore, dividing the children in the class and working in smaller groups at a time can generate possible space within the classroom. Consequently, one group can work inside while the other group goes outside to be engaged in outdoor PBL activities.

5.3.2 How can collaborative learning help teachers to implement PBL in the early years?

During the ALS sessions, we reflected on the ideas generated in Cycle 1. Teamwork among teachers (see 4.2.1.1) was identified as a method of collaborative learning that could help teachers to improve the implementation of PBL in the early years. The participants explained that with teamwork, the outcomes are achieved much faster, as the team members are able to share the workload in some activities. Teamwork facilitates the learning process in PBL, supports maximum child growth, and enables teachers to work together towards shared goals by supporting one another. Moreover, teamwork can be the steering wheel to raise funds by, for example, organising events and getting sponsors to generate more resources and materials that can be used in PBL lessons.

The participants expressed their insight into teamwork by presenting a collage that expressed the advantages of teamwork while promoting PBL. These advantages included communication, good relationships, and support. Through better communication, the participants were able to solve problems much easier and communicate ideas to help implement different methods of PBL activities to reach specific outcomes. By working as a team, resources are better utilised for PBL activities, as they can be used for different classes, which supports sustainability in the use of resources and saves the school the spending of additional funds. Through the implementation of teamwork, teachers' workload and responsibilities can be shared to implement PBL more effectively.

5.3.3 What guidelines can be derived from the findings to enhance the holistic development of young children through PBL?

During the ALS session of Cycle 3, we reflected on both Cycles 1 and 2. The above question led us to develop guidelines in supporting teachers to enhance the holistic development of young children through PBL. The process of this study was based on reality, involving the voices of all the teacher participants who worked collaboratively towards a shared goal. Two important themes were identified, namely professional development and funding. The participants identified the following guideline, namely: Professional development appeared to be beneficial for improving skills, as well as attaining new knowledge to implement PBL in the early years.

The value of professional development lies in the following aspects:

- By attending workshops or receiving training, new knowledge and skills are developed to help the participants gain better insight into the implementation of the PBL curriculum.
- Uncertainties with regard to classroom management were resolved due to the insight gained in the workshop on how to structure a PBL classroom for three- to four-year-old children.
- Knowledge retention for future development was one of the advantages the participants gained due to in-house training from management.
- To support the infrastructure issue of small spaces and large groups, management training supported the participants to get a better understanding and develop new ideas from collaborative input to make the best use of the available space.

The other theme entailed how funding could support teachers implementing PBL in the early years. It came to light that sufficient funding is crucial to sustaining resources and infrastructure and providing useful equipment to enable the smooth running of activities in the PBL classroom. The following guidelines based on funding were derived from Cycle 3:

- Professional development is supported through sufficient funding that supports teachers in classrooms for three- to four-year-olds to gain knowledge, develop new skills, and retain knowledge.
- Infrastructure is supported through funding due to providing the possibility of additional classrooms or developing additional spaces where activities are done.
- Funding helps support teachers to be able to offer resource-rich PBL activities that are interesting and valuable for children.

- Optimal development for the holistic development of children is ensured through funding to create opportunities for healthy children to learn.

The participants agreed that the above-mentioned guidelines support sustainability in implementing PBL in the early years. It can be concluded that transformation and experiential learning took place within the ALS among participants. The participants worked collaboratively to learn and express their needs and concerns while reflecting on improving personal practice within the early childhood environment.

5.4 Personal reflection

I was excited to embark on this study, as PBL played a key role in my life. Having a son living with autism I experienced the vital role that PBL plays in the holistic development of children, especially for children living with learning disabilities.

When I commenced with this study, I established a trusting relationship with the participants we shared a collaborative goal. While conducting this study, it was a challenge to stay open-minded and avoid forcing my own ideas and perspectives on the participants. I accommodated the participants' feelings and thoughts and remained empathetic.

Being a novice researcher, I was not prepared for the mixed feelings that arose when I did the research. A feeling of vulnerability and uncertainty often surfaced. But it became clear that these feelings were normal. The participants expressed their fear and uncertainty too, and a shared vision was established in the trusting and collaborative ALS. We implemented an art-based method, namely a collage, as a tool to generate data. This approach enabled the participants to explore their creative side. Being early childhood teachers, they are creative and enjoyed being involved in this method of expressing themselves. This method supported creativity and elicited the thoughts and feelings of the participants. It was inspiring to experience teamwork among the group and to see the support from the participants. The collage method also encouraged conversations and explored different ways of thinking that supported new ideas and formed a fun aspect of this study.

During Cycle 3, when we designed guidelines to assist teachers to support the holistic development of young children. It was rewarding to see the social change in the way participants' viewed the value of collaborative learning and the way they implemented shared ideas to enhance the holistic development of young children through PBL. I wrote in my reflective journal: "We gained so much knowledge during this study; it is so wonderful to reach

this point where suggestions seem to implemented and can bring about change” (4 November 2021).

I was motivated when I saw that the teachers were driven and willing to learn and bring about change while collaboratively working towards a common goal. I am positive to continue to learn and broaden my knowledge the holistic development of young children through PBL.

5.5 Limitations of the study

This empirical study began during the Covid-19 lockdown period of limited access to schools, but fortunately adjusted alert level 1 was in place from October 2021.

My findings are based on data generated from the experiences, fears, and feelings of a small number of participants. Working with a small group means that the feelings and expressions of the members of this group cannot be generalised across other contexts.

5.6 Conclusions

This study aimed to promote teacher collaboration to enhance PBL for the holistic development of young children. The research questions focused on the following issues. Firstly, we explored the teachers’ challenges and needs while implementing PBL in their classrooms working with three- to four-year-old children. Secondly, we explored the way collaborative learning could help teachers to implement PBL. Thirdly, we determined what guidelines could be derived from the findings to enhance the holistic development of young children through PBL.

Sustainable professional development among teachers promotes lifelong learning. It also enables teachers to generate new skills and knowledge to capacitate them to use PBL. Using teamwork to implement PBL could enhance the holistic development of young children. It appears as if the participating teachers found it difficult at first to implement PBL. However, it appears that professional development opportunities have value to enhance the understanding of PBL in the early years. The ALS discovered that there are several professional developmental opportunities available through in-house training or by attending free online courses.

Based on the findings, it is clear that sufficient funding is key to implement PBL lessons that are rich in resources and stimulate the holistic development of young children. Sufficient

funding ensures proper infrastructure to maintain quality PBL activities This can be achieved through teacher teamwork by organising events, planning fundraisers, and getting sponsors. Furthermore, funding is key for professional development to assist teachers developing their skills and knowledge of PBL.

5.7 Contribution of the study

The aim of the study was to explore how a PALAR approach could be used to enhance the holistic development of young children by focusing on PBL. This study may contribute to a better understanding of the value of PBL, the impact of teacher collaboration, and how PBL and teacher collaboration foster holistic development. On a practical level, the teachers were motivated to collaborate, share ideas on PBL, and act as change agents in their setting. The methodological contribution of this study entails information on how PALAR can be used for transformative learning in creating a democratic society.

5.8 Guidelines

The following guidelines to enhance PBL for the holistic development of young children through teacher collaboration have been drafted:

- Training on how to use a PBL curriculum should be provided to teachers.
- Teamwork between teachers is essential when implementing PBL for the holistic development of children.
- Good communication among teachers leads to good partnerships.
- Continuous professional development is important for effective implementation of PBL
- Financial support is a key factor to create a PBL environment conducive to teaching and learning.

5.9 Suggestions for further study

The following suggestions in the form of research questions are made for further study:

- How can teachers in the early years use a PBL curriculum to accommodate children living with disabilities?
- How can teachers use an outdoor PBL curriculum?
- How can the government support teachers to provide quality early childhood education through PBL?
- How can policy create funding opportunities to implemented PBL in early childhood education?

5.10 Concluding remarks

This study aimed to promote teacher collaboration to enhance PBL for the holistic development of young children. This study created awareness among the participating teachers by creating different ways of thinking and sharing experiences to gain new knowledge. Teachers were provided with opportunities to collaborate and to improve skills and knowledge about PBL. This study helped teachers to become aware of the importance of the way teacher collaboration and teamwork greatly contribute to the holistic development of young children. Teachers realised that effective communication addresses concerns more effectively and working together saves time when implementing PBL activities. This study was beneficial to the ALS and myself as a novice researcher, because we realised that a PALAR design can enrich teaching and learning experiences. I think that this research design is a powerful tool to help young researchers to learn about ways to improve their practices and to contribute to social change.

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Annexures

Annexure A: Language editor certificate

PROOF OF EDITING

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DECLARATION

To whom it may concern

I hereby confirm that I have proofread and edited the following dissertation, including the references.

Title of dissertation

Teacher collaboration to enhance play-based learning for the holistic development of young children

Candidate

Bonita van der Westhuizen



Lariza Hoffman
Klerksdorp
26 October 2022

Annexure B: Ethical agreement

1



1. Ethical agreement between

North-West University COMBER Project NWU

and

Teacher collaboration to enhance play-based learning for the holistic development of young children

I hereby pledge as an Med student from the North-West University (NWU), that I will adhere to the rules of the Research Ethics Committee of the Faculty of Education (EduREC). This includes all NWU policies, laws and regulations applicable to my field of study. Furthermore, I will abide by the ethical principles and responsibilities as outlined in the Singapore Statement on Research Integrity (22 September 2010) when embarking on my research journey as a NWU researcher.

2. Focus of the project

To conduct a MEd research study namely Teacher collaboration to enhance play-based learning for the holistic development of young children using a participatory action learning and action research (PALAR) Design on the topic:

AIMS OF THE PROJECT

Teacher collaboration to enhance play-based learning for holistic development of young children.

- The aim of this study, therefore, is to promote PBL in the early years by focusing on a collaborative approach to promote the holistic development of children in the early years.
- The objectives are to explore the current experiences and challenges teachers face in the early years classroom
- Investigate the effects of collaborative learning between teachers in the early years classroom.
- Derive guidelines to enhance holistic development of young children through play-based learning.

For NWU COMBER

- To have access to all data generated in the project for research purposes.
- All outputs will acknowledge the input of the participants by name and / or photographs.

For participants

- To have access to all data generated as part of the study on utilising movement play for school readiness.
- To remain the first source of communication between community and university (supervisors).
- To create guidelines that can be used in fostering school readiness through movement play.

3. ACTION LEARNING SET (ALS)

Each one signing the ethical agreement, will form the Action Learning Set (ALS) or core research team.

- Attend all meetings as agreed upon.
- All members of the team participate.
- Data will be provided to participants.
- Share all data generated and make it available for use by all of us.
- Translate data and outputs as needed.
- Keep group discussions confidential as needed.
- Participate in all activities.
- Respect and value each member's contributions and responsibilities of each party.

4. Protection from harm

- All members of the group give informed consent to participate in the project.
- In the three cycles (three to four sessions per cycle) the participants in the ALS will explore and share their perspectives and experiences.
- It will allow the co-researchers and me to express our feelings in a safe environment.
- Recorded ALS discussions, and arts-based data generation methods including photovoice, collage and drawings will be used to generate the data.

5. Monitoring of ethical agreement

We will review this agreement ONCE a month and reflect on our performance in the project.

By signing the agreement, we indicate that we are satisfied that the research project will be conducted ethically.

NWU



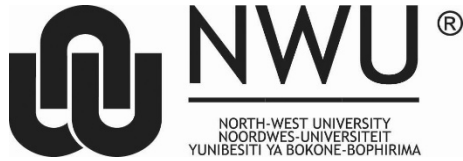
Bonita van der Westhuizen



Participant 3

Date: 20 October 2021

Annexure C: Permission letter from school principal



Private Bag X6001, Potchefstroom
South Africa 2520
Tel: 018 299-1111/2222
Web: <http://www.nwu.ac.za>

FACULTY OF EDUCATION RESEARCH ETHICS
COMMITTEE
Contact person: Ms Erna Greyling,

The Principal/ Centre Manager
Little Leaders Klerksdorp
8 Donald street
Elandia
Klerksdorp
2571

Date 21/06/2021

PERMISSION LETTER: SCHOOL PRINCIPAL/OTHER RELEVANT PERSON

We herewith wish to request your permission for the early childhood teachers to participate in this research, which involves teaching three-to-four year old children. Prior to granting permission, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

A collaborative approach to enhancing the ability of teachers to use play-based learning for the holistic development of young children.

ETHICS APPLICATION NUMBER:

PROJECT SUPERVISOR: Prof. Mariette Koen
CO-SUPERVISOR: Dr. Stef Esterhuizen

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

This study has been approved by the Research Ethics Committee of the Faculty of Education of the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also obtained from the provincial Department of Basic Education/other relevant body.

Teachers in your school are being invited to take part in a research study that forms part of a project. Please take some time to read the information presented here, which will explain the details of the study. It is very important that you are fully satisfied that you clearly understand what this research is about and how your school might be involved. Also, the participation of your school

is entirely voluntary and you are free to say no to participate. If you say no, this will not affect your school negatively in any way whatsoever. Your school is also free to withdraw from the study at any point, even if you do agree to take part now.

What is this research about?

To investigate how early childhood teachers can work in a collaborate manner to enhance Play based learning.

Participants

- Early childhood teachers (three-to-four-year-old children)

What is expected of the participants?

It is expected from teachers to participate in the collaborative group discussions. The sessions will be recorded and participants will be asked to give consent to record the sessions (See page 5). The group discussions will take place during the following three cycles:

Duration of one cycle: +- 45 minutes

Cycle 1:

The first session will include a relationship-building phase to organise the group and to conclude a needs

Consent forms will also be distributed beforehand and once all are in agreement the first cycle of this research will proceed in order to answer the first secondary research question.

During each ALS meeting, (ALS is defined in 1.6.3) relationship-building will be revisited while focusing the research questions set out in this study (Zuber-Skerritt & Wood, 2019).

During this cycle the participants will meet to share their personal experiences verbally on the challenges they face while incorporating a play-based approach in early childhood. Ideas will be shared on a play-based approach in early childhood. With the written permission from all the participants, audio recordings will be made during the sessions. One of the data gathering methods will be reflective journals. We will start working on these journals from session 1 where participants will write their reflections. I will also keep a journal and we will share our entries at the beginning of each session.

Cycle 2:

In this session, we will reflect on the ideas of cycle 1 and then the next question will be explored.

During this cycle, discussions will take place and reflective journals (as defined in 1.6.4) will be used to reflect on ideas. At this point I will invite an expert on PBL to join our session and

to explain to the participants how PBL can be used to support the holistic development of young children.

Participants will be asked to take pictures with their cell phones to show how collaborative actions between teachers could be used to support the holistic development of young children. Participants will be requested to print the picture and during the next session we will use the pictures to make a collage. We will also use expressive words from the discussion and add it to the visual presentation of how the participants believe collaboration can enhance their ability to use a PBL guidelines.

Cycle 3:

Reflection will once again take place and cycles 1 and 2 will be revisited to address the third and final research question.

During this final cycle we will discuss and reflect on the previous cycles. We will design guidelines to improve participants' ability to enhance the holistic development of young children while using a play based approach
(Please note that the concept Action learning set (ALS) refers to the group and group discussions)

Benefits to the participants

- There is a contribution of having a better understanding and gaining knowledge of early childhood practices and early childhood development.
- The importance of collaborative work between teachers will be highlighted to enhance PBL.
- The project will promote quality education for sustainable development in early childhood .
- This project will support to enhance Sustainable Development Goals 2030.
- The project will be contributing to theory and practice and also new knowledge.

Risks involved for participants

- **Legal harm** – this will be prevented by receiving all the required permissions from the participants, and by explaining and emphasising to the participants all their rights in respect of the study, and the right to withdraw if needs be.
- **Physical harm** – Covid19 may present a challenge, but all the Covid19 regulations will be observed. These includes washing and sanitising hands, wearing mask and social distancing.

Confidentiality and protection of identity

- An ethical agreement and consent letters that guarantee confidentiality, respect, and privacy will be signed by the teachers and the parents.
- No anonymity is possible in a group interview situation because the research will be conducted in a participatory collaborative manner. Even though no participant's input could be private, autonomy will be ensured by respecting one another's voices, rights and opinions. Pseudonyms will be used to protect participants' identity in transcriptions and voluntary participation will be ensured when participants sign a letter of consent prior to participation.
- Data generated and pictures, will be used solely for the research purpose and pseudonyms will be used for identity purposes.

- Only the researcher will have access to recordings and transcribed data otherwise it will be made available to the participants on request.

If you have any further questions or enquiries regarding your participation in this research, please contact the researcher via email for more information (Bornlyroyal@gmail.com).



Yours sincerely

B. vd Westhuizen

DECLARATION BY PRINCIPAL/OTHER RELEVANT PERSON:

By signing below, I agree to give permission for the research to take place with the identified participants in the study entitled:

[Enter title here]

I declare that:

- I have read this information and consent form and understand what is expected of the participants in the research.
- I have had a chance to ask questions to the researcher and all my questions have been adequately answered.
- I understand that taking part in this study is voluntary and participants will not be pressurised to take part.
- Participants may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- Participants may be asked to leave the research process before it is completed, if the researcher feels it is in their best interests, or if they do not follow the research procedures, as agreed to.
- I am aware that the findings of this study will be anonymously processed into a research report, journal publications and/or conference proceedings.
- I agree that the sessions may be recorded.

Signed at (place) Klerksdorp on (date) 01/06 /2021

Annexure D: Participant information and consent form



The ECCE Teacher
Little Leaders Klerksdorp
8 Donald Street
Elandia
Klerksdorp
2571

Private Bag X6001, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Web: <http://www.nwu.ac.za>

Faculty of Education

FACULTY OF EDUCATION RESEARCH
ETHICS COMMITTEE
Contact person: Ms Erna Greyling,

21 June 2021

PARTICIPANT INFORMATION AND CONSENT FORM

I would like to request your consent to participate in this research, which involves teacher collaboration in play-based learning. Before you give consent, please acquaint yourself with the information below.

The details of the research are as follows:

TITLE OF THE RESEARCH PROJECT:

A collaborative approach to enhancing the ability of practitioners to use play-based learning for the holistic development of young children

ETHICS APPLICATION NUMBER

PROJECT SUPERVISOR: Prof MP Koen
CO-SUPERVISOR: Dr Stef Esterhuizen
ADDRESS: 2 Koedoepraai, Woodland Hills Lifestyle Estate, Bloemfontein, 9301

CONTACT NUMBER: 083 308 4230

MEMBER OF PROJECT TEAM MEd-Student: Bonita vd Westhuizen
ADDRESS: 8 Irene St, Klerksdorp
CONTACT NUMBER: 0842992153

FACULTY OF EDUCATION RESEARCH ETHICS COMMITTEE

Contact person: Ms Erna Greyling, E-mail: [REDACTED]

This study has been approved by the Research Ethics Committee of the Faculty of Education at the North-West University and will be conducted according to the ethical guidelines of this committee. Permission was also requested from the provincial Department of Social Development.

What is this research about?

A collaborative approach to enhancing the ability of teachers to use play-based learning for the holistic development of young children.

The aim of this research is:

To promote collaboration with teachers to enhance the holistic development of children in their early years through PBL. To explore this purpose, the following questions have been formulated:

- How can teacher collaboration contribute to promoting their ability to use play-based learning for the holistic development of children?

Secondary questions:

- What challenges do teachers face while incorporating a play-based approach in the early years?

- How can collaborative learning help teachers to improve their ability to use play-based strategies in the early years?
- What guidelines can be derived from the findings of this study to improve teachers' ability to enhance the holistic development of young children through a play-based approach?

Participants
ECCE teachers

What is expected of the participants?

- You will be asked to participate in collaborative group discussions. The sessions will be recorded and you will be asked to give consent for these sessions to be recorded. There are three cycles, as explained in form 8, that you will be expected to participate in.

Benefits to the participants

- Having a better understanding, and gaining knowledge, of ECCE practices and early childhood development.
- The importance of collaborative work between teachers will be highlighted to enhance PBL.
- The project will promote quality education for sustainable development in ECCE.
- This project will support Sustainable Development Goals 2030.
- The project will be contributing to theory and practice, as well as to new knowledge.

Risks involved for participants

- **Legal harm** – This will be prevented by receiving all the required permissions from the participants, and by explaining and emphasising to the participants all their rights in respect of the study as well as the right to withdraw if needs be.
- **Physical harm** – Covid19 may present a challenge, but all the Covid19 regulations will be observed. These includes washing and sanitising hands, wearing mask and social distancing.

Confidentiality and protection of identity

- An ethical agreement and consent letters that guarantee confidentiality, respect, and privacy will be signed by the teachers.
- No anonymity is possible in a group interview situation because the research will be conducted in a participatory collaborative manner. Even though no participant's input can be private, anonymity will be ensured by respecting one another's voices, rights and opinions. Pseudonyms will be used to protect participants' identities in transcriptions and voluntary participation will be ensured when participants sign a letter of consent prior to participation.
- Data generated and pictures will be used solely for research purposes and pseudonyms will be used for identity purposes.
- Only the researcher will have access to recordings and transcribed data, otherwise it will be made available to the participants on request.

Dissemination of findings

The findings of this project will be shared with the Department of Social Development. The findings will be shared with all co-researchers to support the sustainability in PBL in ECCE.

If you have any further questions or enquiries regarding your participation in this research, please contact the researchers for more information.

Yours sincerely
(Bonita van der Westhuizen)

BV

DECLARATION BY PARTICIPANT:

By signing below, I Robin Lee agree to take part in a research study entitled:

[Enter title here]

I declare that:

- I have read this information and consent form and understand what is expected of me in the research.
- I have had a chance to ask the researcher questions. All my questions have been adequately answered.
- I understand that taking part in this study is voluntary and I have not been pressurised to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the research process before it has finished, if the researcher feels it is in my best interests, or if I do not follow the research procedures, as agreed.

Signed at (place) Klerksdorp (date) 20 / 10 / 21


Signature of participant


Researcher

Annexure E: Ethics approval NWU Edu-REC



Private Bag X1290, Potchefstroom
South Africa 2520

Tel: 018 299-1111/2222
Fax: 018 299-4910
Web: <http://www.nwu.ac.za>

Senate Committee for Research Ethics
Tel: 018 299-4849
Email: nkosinathi.machine@nwu.ac.za

ETHICS APPROVAL LETTER OF STUDY

Based on approval by the **Faculty of Education Research Ethics Committee (EduREC)** on 26 August 2021, this committee hereby **approves** your study as indicated below. This implies that the North-West University Senate Committee for Research Ethics (NWU-SCRE) grants its permission that, provided the special conditions specified below are met and pending any other authorisation that may be necessary, the study may be initiated, using the ethics number below.

Study title: A collaborative approach to enhancing the ability of teachers to use play-based learning for the holistic development of young children																													
Study Leader/Supervisor (Principal Investigator)/Researcher: Prof MP Koen																													
Student / Team: B van der Westhuizen (MEd student – 21845670), Dr S Esterhuizen																													
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N	W	U	-	0	1	0	0	6	-	2	1	-	A	2															
Institution			Study Number				Year		Status																				
<p><u>Status:</u> S = Submission; R = Re-Submission; P = Provisional Authorisation; A = Authorisation</p>																													
Application Type: Single study	Risk: <table border="1"> <tr> <td>Low</td> </tr> </table>	Low																											
Low																													
Commencement date: 26 August 2021																													
Expiry date: 26 August 2022																													
<p>Approval of the study is initially provided for a year, after which continuation of the study is dependent on receipt and review of the annual (or as otherwise stipulated) monitoring report and the concomitant issuing of a letter of continuation.</p>																													

Special in process conditions of the research for approval (if applicable):

<p>General conditions:</p> <p><i>While this ethics approval is subject to all declarations, undertakings and agreements incorporated and signed in the application form, the following general terms and conditions will apply:</i></p> <ul style="list-style-type: none"> The study leader/supervisor/principal investigator/researcher must report in the prescribed format to the EduREC: <ul style="list-style-type: none"> annually (or as otherwise requested) on the monitoring of the study, whereby a letter of continuation will be provided, and upon completion of the study; and without any delay in case of any adverse event or incident (or any matter that interrupts sound ethical principles) during the course of the study. The approval applies strictly to the proposal as stipulated in the application form. Should any amendments to the proposal be deemed necessary during the course of the study, the study leader/researcher must apply for approval of these amendments at the EduREC, prior to implementation. Should there be any deviations from the study proposal without the necessary approval of such amendments, the ethics approval is immediately and automatically forfeited. Annually a number of studies may be randomly selected for an external audit. The date of approval indicates the first date that the study may be started. In the interest of ethical responsibility, the NWU-SCRC and EduREC reserves the right to: <ul style="list-style-type: none"> request access to any information or data at any time during the course or after completion of the study;
--

- *to ask further questions, seek additional information, require further modification or monitor the conduct of your research or the informed consent process;*
- *withdraw or postpone approval if:*
 - *any unethical principles or practices of the study are revealed or suspected;*
 - *it becomes apparent that any relevant information was withheld from the EduREC or that information has been false or misrepresented;*
 - *submission of the annual (or otherwise stipulated) monitoring report, the required amendments, or reporting of adverse events or incidents was not done in a timely manner and accurately; and / or*
 - *new institutional rules, national legislation or international conventions deem it necessary.*

The EduREC would like to remain at your service as scientist and researcher, and wishes you well with your study. Please do not hesitate to contact the EduREC or the NWU-SCRE for any further enquiries or requests for assistance.

Yours sincerely



Prof JAK Olivier
Chairperson NWU Faculty of Education Research Ethics Committee

Original details: (22351930) C:\Users\22351930\Desktop\ETHICS APPROVAL LETTER OF STUDY.docm
8 November 2018

Current details: (22351930) M:\DSS\18533\Monitoring and Reporting Cluster\Ethics\Certificates\Templates\Research Ethics Approval Letters\9.1.5.4.1 ES-REC Ethical Approval Letter.docm
5 December 2018

File reference: 9.1.5.4.2

Annexure F: Turn it in report

21656568:B_Vd_Westhuizen_8_November.docx

ORIGINALITY REPORT

14%	14%	4%	3%
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