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How to cite this thesis

Surname, Initial(s). (2012). Title of the thesis or dissertation (Doctoral Thesis / Master's Dissertation). Johannesburg: University of Johannesburg. Available from: http://hdl.handle.net/102000/0002 (Accessed: 22 August 2017).

DRAMA IN EDUCATION AS A METHOD TO TEACH GRADE 1 LIFE SKILLS WITH SCIENCE AS INTEGRATING THEME

by

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Submitted in fulfilment of the requirements for the degree

Childhood Education

in the

Department of Childhood Education

of the

Faculty of Education

at the

University of Johannesburg

supervised by

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31 OCTOBER 2018

Affidavit

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Acknowledgements

My parents taught me to always work hard and never give up, my mother's words always remain in my mind:

"Never give up, and be confident in what you do. There will be numerous challenges and difficulties, but these will only make you more determined to achieve your objectives and to succeed against all the odds."

(Janice Williamson)

I, therefore, would firstly like to thank my parents for giving me this valuable attitude towards life. I would also like to thank my partner Wynand Pretorius for his loving support in the 3 years of completing this study

Mr Francois Naude was a Godsend supervisor and friend. I would like to extend my deepest appreciation to this very special person, who without I would not have been able to endure. Thank you for your continued enthusiasm, incredible academic support, unconditional patience and love throughout my studies. Completing this dissertation has been an amazing experience and I thank Francois wholeheartedly for giving me one of the most wonderful opportunities in my life.

Thanks to Prof. Ragpot, Dr Ramsaroop, Ms Lang and many other friends and colleagues who unknowingly assisted me to achieve my goal. Only one kind word of encouragement made all the difference to inspire me to work harder and ensure I reach my goal of obtaining my degree.

I would like to thank the University of Johannesburg's Childhood Education department for welcoming me into their department and always supporting me in all my research challenges.

Special mention goes to Prof Marie-Heleen Coetzee, my supervisor of my honours research project, for initially (in 2014) encouraging me to embark on the educational path, and for providing me with a fantastic drama in education training and motivation.

You and Mr Naude have awakened and nurtured my enthusiasm and love for drama in education.

Finally, I, dedicate this dissertation to God, the Almighty, who gave me the strength, will and ultimate perseverance to never give up.

Abstract

When children start their engagement with science content, they lay the foundation for future learning. This study describes the views of Grade 1 teachers and learners on the use of science content to integrate the teaching of the Grade 1 Life Skills curriculum of the third term. The central premise of this study was to develop a programme that will integrate the Grade 1 Life Skills curriculum by using drama in education as an integrating tool and science content as conceptual fodder for the programme. The premise of the inquiry is that learners can benefit from an integrated curriculum as it enables learners to value the content taught and how it connects to other curriculum topics with real world implications. I argue that drama in education conventions can be used as an integrating tool as it allows for active participation and student centred learning experiences. The study proposes that using science content as the driving for the programme allows for early exposure to this neglected learning area in the foundation phase and ensures that concepts are understood before more advanced terminology is learnt in the intermediate phase. The study was conducted at a private primary school in the northern suburbs of Johannesburg. In a design based study, utilising qualitative data in three modalities, the study investigated teachers' perspective on the way in which Life Skills is currently addressed in Grade 1 and the perceived success of the integrated program. These modes of data collection were individual interviews, observation protocol and video recordings. The unit of sampling was three Grade 1 teachers and 6 Grade 1 learners in this schools. The analysis was done using deductive coding. The pattern that was composed from the data analysis shows, in three themes, that the teachers were aware of the benefits of teaching Life Skills but due to the limited time available for teaching this subject area, they hardly focus on this learning area's vast variety of content. With this in mind, eleven categories emerged from the analysis of the observations and post interviews with the teachers and learners that indicated that the teachers had positive attitudes towards the integration of the subject area and excitement arose from both the children and teachers when unpacking the success of each activity. The study discusses the data in the framework of third generation Cultural- Historic Activity Theory. This study recommends that FP teachers consider using science-based activities along with drama in education conventions to integrate the teaching of the

Life Skills content. The content taught in Life Skills is essential to the holistic development of learners. By using science content to integrate the teaching of Life Skills content teachers can evoke the learners' interest in subject matter that improves the development of skills needed for learning in the 21st century. The study concludes that the integrated programme addressed most of the tensions that were identified within the activity and can possibly be used to integrate the Life Skills curriculum.

Keywords: Science Education, Drama in Education, Curriculum Integration, Primary School Education, Foundation Phase Teaching, Life Skills.

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List of Abbreviations

LS   Life Sciences
NCS   National Curricula Statement

UJ   University of Johannesburg

ZPD   Zone of Proximal Development

CAPS   Curriculum Application Policy statement

CHAT   Cultural Historical Activity Theory

FP   foundation phase

SA   South Africa

Chapter 1 An overview of the study

1.1 Learning and the national school curriculum

An integrated curriculum that evokes innovative thinking and learning benefits learners in gaining lifelong skills to function in a rapidly changing world, assisting them to critically analyse real-life situations. Hull and Schultz (2002) state that integrated and accessible teaching content can prepare and provide learners with necessary skills for succeeding in the real world. Streit, Davids and Hildebrandt (2015) add that learners must be able to construct a complex picture of the world in order to formulate their understanding of their place in that world. Being able to integrate facts and concepts helps learners to develop creative skills and cognitive expansion, in order to function optimally in an ever-changing world. Integrated teaching provides an opportunity for learners to enhance critical thinking and develop skills such as problem solving, creative and innovative thinking and higher conceptualisation and the development of ideas. This is why O'Byrne, Dripps and Nicholas (2015) argue that all content in the curriculum should be taught holistically; teachers should not only teach content knowledge, but rather teach learners to use their intuition to find connections between the different subjects and to formulate a holistic understanding thereof.

The cognitive psychologist and well-known conceptual change theorist, Susan Carey, proposes that when learners engage with the natural world, they use methods of observation, hypothesising and testing to construct intuitive theories, much like young scientists (Carey, 2009). This analogy of learners as young scientists adapting to, and interacting with, an ever-changing world is supported by Alison Gopnik, a cognitive theorist (Gopnik, O'Grady, Lucas, Griffiths, Wente, Bridgers & Dahl, 2017). Much of the formalised theoretical hypothesising and conceptual development happens during the initial school years when synaptogenesis is at its peak, as this is the developmental period when the pre-frontal cortex matures dramatically (Marcos, Tsujimoto & Genovesio, 2017). One could argue that the FP provides a window of advantageous and opportunities during which the child's initial interest in exploration can be engendered for lifelong learning.

The South African National Curriculum Statement (NCS) for the foundational school years often focus on the acquisition of basic numeracy and literacy skills that are necessary for further education (Department of Basic Education, 2011), which in turn, often dictates term planning classroom tasks. The FP curriculum focuses on three subjects, namely Language, Mathematics and Life Skills. Mathematics covers the study areas with regard to numerical knowledge. Language includes the study areas of home language and first-additional language, and all their linguistic factors. All the remaining subject areas in the curriculum; beginning knowledge and personal and social wellbeing, are included under Life Skills, for example, areas such as Social Sciences, Natural Sciences, Technology, Life Orientation, the Arts and Physical Education. It is evident that Life Skills consists of a wide variety of important, diverse subject and content areas that contribute widely to the development of a FP learner (Shaldon, 2015). This study supports the necessity of Life Skills for the FP learner to function independently in an ever-changing world.

Life Skills, as a subject, plays a vital role in the FP curriculum (Department of Basic Education, 2011). According to Naude (2015), Life Skills focuses on the cognitive expansion of learners, improves areas such as social relations and interactions, as well as affecting aspects of imperative developmental areas. Caldwell, Smith, Wegner, Vergnani, Mpofu, Flisher, & Mathews (2004) adds that Life Skills also contributes to personal wellbeing and improves physical development. Life Skills aims to create attentiveness in learners with regard to the natural world; hence, it encourages learners to reason critically, in order to better understand their world and their place in it, as well as their relationship to the people around them (Browne & Haylock, 2004). It appears, therefore, that Life Skills greatly contributes to children's natural quest to better understand their world.

In South Africa, the Life Skills curriculum is aimed at social issues such as HIV/AIDS; with preference for, and recognition of, difference and diversity; and an appreciation for democracy. Life Skills thus emphasises issues of social justice and multicultural education (SA Department of Education, 2002; SA Department of Basic Education, 2011 and Nieto & Bode, 2012). Thus according to Nieto and Bode (2012: pp 40), Life Skills is "anti-racist, basic, inclusive, pervasive and critical". However, Life Skills is not

only aimed at exploring key personal and social issues, but also includes scientific, technological, numerical and linguistic topics and issues. Hence, foundation phase[1] (FP) Life Skills encompasses most of the knowledge, skills, and values a learner needs in order to successfully function in society (Department of Education, 2002; Department of Basic Education, 2011 and Nieto & Bode, 2012). It is thus evident that a great body of content is compressed into a single subject.

Despite the condensed nature of this subject area, which seems so indispensable to many areas of the learner's development, there is more pressure on teachers to focus on teaching Language and Mathematics, as they are seen as crucial subjects for a FP learner's future (Sheldon, 2015). Life Skills is often seen as less important, which results in the neglected teaching of this learning area.

Constraints on the availability of time in the FP classroom negatively affects the focus on the Life Skills curriculum. Initial informal conversations with FP teachers highlighted the need for activities and teaching methods that take less time, but can still achieve the various outcomes as set out by the NCS (Department of Basic Education, 2011). Vaughn & Baker (2004) deduced that an optimal teaching methodology requires a holistic strategy that includes mental, physical and social collaboration among learners, between learners and teachers, as well as learner introspection.

I completed a honours degree in education at the University of Pretoria exploring ways in which drama can be used to teach Life Sciences in the FP. Drama innovatively integrates different content areas across the curriculum. One of the main findings of my honours study was that learners are not adequately prepared in understand and grasp the skills necessary for the content of Natural Science and Technology in the intermediate phase. Therefore, this study included the challenge in addressing the time constraints for the vast subject area. A programme was created that could integrate the Life Skills curriculum to address the issues identified by the teachers and the literature, by using Life Skills and drama in education conventions as a driving

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[1] Foundation phase (FP) is the first phase of formal schooling in South Africa which ranges from grade R to grade 3. In this phase the basic of the school curriculum is established. Learners who develop appropriately and adhere to the curriculum outcomes in the foundation phase proceed to the intermediate phase. (Department of education, 2011)

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force to teach an integrated Life Skills curriculum to grade 1 learners. The main aim of drama in education is to enable the learner to understand the content and its context in everyday life rather than just memorising it for a short time period. The use of drama in the classroom as a means of teaching helps learners learn holistically in the academically, social and developmental fields (Güven & Adıgüzel, 2015). Drama in education is centred on analysing and critically engaging learners with knowledge rather than just transferring it to the learner, essentially basing lesson plans on drama-based conventions. The drama in education activities that were used in the study were derived from O'Neill's (2014), drama in education conventions and implemented in an integrated programme to teach Life Skills.

1.2 Background to the research study

Jenkins, Purushotma, Weigel, Clinton, and Robison (2009), confirm that, in order for learners to function in a rapidly changing scientific and technological world, education should provide them with scientific knowledge/concepts, scientific process skills and scientific values and attitudes. For learners to achieve these skills they need to develop a keen interest in the field of Science and Technology from an early age. Primary science has the potential to be a catalyst in developing learners' interest in the sciences. In doing so, it could provide opportunities for learners to expand their inherent curiosity about the natural world (Driver, Leach & Millar, 1996). Chittleborough (2014), believe that by creating the role of science specialists in primary schools, and investing in science as a specialised knowledge area, science can be promoted, science teaching resources better managed, and teachers who are not confident in science can be mentored to implement the programme effectively.

It is of the utmost importance that teachers give awareness to developing learners' interest in science at the primary school level (Haney, Czerniak & Lumpe, 1996; van Aalderen-Smeets, & van der Molen; 2015). The FP at school lays the foundational learning skills for all learners.

"The National Curriculum Statement grades R-3 aims to produce learners that are able to (1) identify and solve problems and make decisions using critical and creative thinking, (2) work effectively as individuals and with others as members of a team, (3) organise and manage themselves and their activities responsibly and effectively, (4) collect, analyse, organise and critically evaluate information,

(5) communicate effectively using visual, symbolic and/or language skills in various modes, (6) use Science and Technology effectively and critically showing responsibility towards the environment and the health of others; and (7) demonstrate an understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation."

<div align="right">Department of Education (2011)</div>

Scientific skills should thus be introduced in a rudimentary and explorative way to be properly incorporated into the 'toolkit' of skills needed by the learner (Murphy, 2016). During the intermediate phase the learners can then access these foundational learning skills to further their content knowledge, by using prior knowledge in order to obtain new knowledge. Prior knowledge, according to Castillo (2003), refers to the knowledge that we already have of a topic before learning more about it. This knowledge, according to Signoret, Andin, Johnsrude & Rudner (2015), is constructed by analysing experiences and interactions. To gain knowledge is thus a process of knowledge and skill construction.

Constructivism is the notion of learning through the construction of knowledge, which has been superseded by new ideas gained from neuroscience (Sousa, 2014); however, it is one lens through which we could view the building of knowledge.

Constructivism is a way to describe how "people construct their own understanding and knowledge of the world, through experiencing things and reflecting on those experiences" (WNET-Education 2004;1). Piaget and Inhelder (1980) viewed the learning process as schemes by organising information in accordance with how it works; assimilation as the construction of new information according to the schemes and accommodation is building on new schemes or compiling new ones. Learning,

according to Piaget and Inhelder (1980), involves taking current information/knowledge (prior knowledge), and reconstructing and analysing it to formulate new knowledge. According to Piaget and Inhelder (1988) an ideal learning environment, learners should be allowed to construct knowledge that is meaningful to them; this is similar to building a house. The foundation is built to ensure a steady structure for the house to be built on, thereafter the bricks are layered to build the walls of the house that ensures security and stability. The skills and knowledge obtained in the FP is represented, in the above analogy, by the foundation of the house. Prior knowledge supports the new knowledge gained in the next phase, represented by the bricks in the analogy. It is evident that if learners do not develop the necessary scientific skills and gain the necessary prior knowledge in the FP it will be detrimental to the processes of constructing and analysing their own knowledge in the later, formal operational stage, of the learner's schooling.

1.3 Motivation for the study

The FP curriculum states that the time allocated for Life Skills in FP is 20 hours per term for grade R – 3 learners. The Life Skills learning area thus has the least amount of time allocated to teach many diverse topics in the curriculum. However, time allocation is not the only challenge in the teaching of Life Skills - the subject also seems to be hurried and unstructured (Sheldon, 2015). Teachers mostly use teacher-centred approaches when teaching Life Skills, just to cover all of the prescribed content (Sheldon, 2015), which leaves little time for learner-centred activities and individual interactions.

Sheldon (2015) discusses how Life Skills is viewed and addressed in the FP classroom: (1) teachers had limited to no engagement with, or understanding of the Life Skills curriculum, (2) teachers used little diversity of knowledge to address the content under Life Skills, and (3) teachers have varied understandings and interpretations of the Life Skills curriculum. These findings could result in varied and uninformed teaching of the Life Skills content. These aspects are critical factors in the teaching of a crucial subject, such as Life Skills. The subject areas that fall within the Life Skills subject are currently taught independently of one another, as these areas are seen as individual entities (Moodley et al., 2016). Biology and Art topics, for

example, are taught independently of one another as they are viewed unconnected to each other. This study aims at presenting an integration of the topics from Life Skills curriculum content to formulate teaching activities that engaged and motivated learners as well as encouraged teachers to participate in the learning experience and gain more knowledge alongside the learners.

According to Puffer (2007), integrated learning comprises assimilated lessons that help learners make connections across the curriculum. This concept is distinct from the primary and high school 'integrated curriculum' movement in South Africa (Dagada, 2009). According to Cooper, Orrell and Bowden (2010), integrated learning helps the learner develop on more than one level; these levels can include social, cognitive and physical levels, resulting in the brain being more active and more information to be processed by the learner, encompassing various learning areas, all integrated in one activity (Gross & Masters, 2017). As the content in this study will be integrated, the learners were able to engage in creative arts, physical education and personal and social wellbeing, within Life Skills learning area, simultaneously. Drama conventions and art games were used to teach science concepts incorporating real life experiences. Learners were able to engage with concepts in the natural world in an active and fun way, thus initiating interest in science. This programme thus aimed to cater for diverse ways of learning in the classroom.

One of the aims for the programme in the study was to benefit the teacher in being economical in time. As several topics under Life Skills are integrated, teachers had time to focus on all the outcomes set out by the curriculum. The study strove for greater motivation to teach and address Life Skills in a creative manner.

1.4 Problem statement and research question

Sheldon (2015) posits that there is minimal learner engagement and understanding of science concepts within Life Skills in the FP learning. However, the curriculum states that engagement and understanding of the content in all subjects are a key factor in preparing learners for further education. What becomes clear is that the intention of the curriculum does not meet the reality of the classroom.

The research question of this study therefore is: In what way can drama in education contribute to the integrated teaching of the grade 1 Life Skills by utilising science as integrating theme?

The main aim is to design an integrated teaching programme for the grade 1 Life Skills curriculum, by utilising the science content components to incorporate the proposed drama in education conventions as methods to facilitate the learning of the content.

The above-mentioned research question was addressed and answered in the study by using the data collected from pre- and post-interviews with the learners and teachers; evaluation sheets filled in by the teachers; and critical engagements with selected literature.

1.5 Research methodology and design

Descriptive research is used in this study to obtain information concerning the effect of integrating the Life Skills national curriculum and to describe 'what exists' with respect to curriculum integration, drama in education conventions and optimal teaching strategies. This study utilised the following steps explained by Singh (2007) to formulate the research design (Singh's steps are italicized, Singh, 2007:pp. 22-28):

(i) *Statement of the problem*: the problem that was identified is the fact that Life Skills as a subject is neglected in the FP.

(ii) *Identification of information needed to solve the problem*: observations and interviews were used as data collection methods in this study to identify the information needed to solve the problem. The teachers in each of the classes observed the activities being taught and completed an observation sheet that was used to determine the success and usefulness of the activities in the classroom. Interviews were conducted with each teacher before and after the programme was done. The interviews that were conducted before the implementation of the programme were designed to ascertain the teachers' attitude towards Life Skills. The interviews conducted after the activities were designed to serve as a reflection on the usefulness and success of the programme. All the information gathered in the interviews and observation sheets was used to predict the findings of

the success of the programme and to make suggestions on how the activities can be adapted for a larger study.

(iii) *Selection or development of instruments for gathering the information*: an observation sheet was designed to gather insight into the perception of the teachers regarding each activity. These observation sheets (refer to Appendix D) were given to each teacher at the beginning of the lesson and collected at the end. The pre-interviews consisted of 15 questions designed to gather individual insight into how the teachers perceive Life Skills in the FP. The post-interviews consisted of five discussion points that served as a guideline for the discussion of the findings and perceptions of the teachers towards the programme as a whole. The pre-interview with the learners consisted of five questions that gained insight into their perception of Life Skills. The post-interview consisted of three discussion points that guided the reflective discussion of their experience of the activities.

(iv) *Identification of target population and determination of sampling procedure*: the target population in this study was three grade 1 teachers from a private school in Johannesburg and the learners in the three classes were included in the sampling to gain greater insight into how the programme affected them.

(v) *Analysis of information*: the analyses were done using open coding (Henning, 2004). Categories from each data set were identified and themes were abstracted that were discussed in the data collection section of the study.

(vi) *Generalisation and/or predictions*: predictions regarding the study were made after the first interviews with the teachers and learners.

(vii) *Trustworthiness*: in order to ensure trustworthiness, the ethical guidelines regarding the use of people's interpretations as guiding information were strongly adhered to, including consulting literature and unbiased analyses and interpretation of the perceptions of the individuals (Guion, 2002).

(viii) *Ethical clearance*: general guidelines of ethical research were adhered to in this study (Cohen, 2017). Ethical clearance from the Research Ethics Committee of the Faculty of Education at the University of Johannesburg (Appendix G) were obtained. The principal of anonymity was maintained by

using numbers to refer to the participants. The notion of voluntary participation was communicated to all participants, and the right to withdraw from the activities at any time was conveyed clearly. All results and other data collected was kept in a file in a locked cabinet and seen by no one else except the supervisors of the study and myself.

1.5.1 Sampling

This study investigates an integrated teaching programme for the grade 1 Life Skills curriculum, by utilising the science content components and to incorporate the proposed drama in education conventions as methods to facilitate the learning of the content. Drama in education conventions were used as a tool to integrate the content and science was a vehicle to teach the content of Life Skills. An integrated programme was designed using the prescribed Life Skills content. The participants of the study were learners from three grade 1 classes at a private primary school in the northern suburbs of Johannesburg and their teachers. Overall 30 learners participated in the study. The learners were from diverse backgrounds in terms of race and culture but were all from middle class families. Low socio-economic status was thus not a factor.

Activities were planned using the grade 1 curriculum for the third term and the outcomes were aligned with appropriately chosen science concepts; the drama in education conventions that best suited each outcome were then selected. Each activity was designed to consist of predicted outcomes, tools needed to complete the activity, the drama in education convention and a detailed explanation of the procedure.

1.5.2 Data Analysis

The analysis was done using Coding as proposed by Henning (2004). Coding thus suggests that the raw data is used to extract codes, in this study the codes were divided into primary and secondary codes. From the codes categories emerge that are used to derive themes that serve as the findings of the study.

1.6 Plan of the study

The study is divided into five chapters.

Chapter 1 describes the background and motivation to the study; the problem statement and research questions relating to the study, and the aim of each aspect. This chapter provides a brief overview of the design and methodology of the study, which will be discussed in more detail in further chapters.

Chapter 2 provides an overview of the literature consulted to direct the structure of the programme for the study. The learning process and optimal learning strategies is investigated, using drama in education as an integration tool. The importance of scientific literacy is explored and the conceptual framework for the study based on CHAT is explained.

In Chapter 3 the design and formation of the programme, using drama in education conventions and science concepts that is used in the study, is explored. It further elaborates on the methodology, data collection and data analysis methods employed. Trustworthiness, reliability, validity and ethical consent are also discussed.

Chapter 4 consists of all the results from the data collection protocol discussed as categories and Chapter 5 concludes with a discussion of the themes, recommendations and limitations of the study.

This chapter provided an overview of the study and how the research will take place. The next chapter presents a detailed discussion of the theoretical framework that underpins this study by reviewing and analysing literature in the field of curriculum integration and beyond.

Chapter 2 Literature review

This chapter comprises a review of a selection of the literature pertaining to the civic importance of scientific literacy including STEAM(Science Technology Engineering Art and Mathematics education), drama in education as an integrating teaching tool and the implementation of teaching strategies. These concepts are aligned with the theory of social constructivism to teach the content, skills and implied values of the curriculum.

Firstly, the notion that society would benefit from a populace that is scientifically literate is presented; in order to achieve this aim, individuals are exposed to scientific literacy and the nature of science at an early stage of their lives. Driver, Leach and Millar (1996) argued why science should be taught at an early stage of a child's development, he stated this in an article, which emphasises the importance of scientific literacy. Lederman and Tobin (2002) summarises the importance of understanding the nature of science in the following four rationalisations: (1) it is essential for informed decision-making; (2) it is imperative to appreciate the value of science as part of contemporary culture; (3) it facilitates the development of an understanding of the norms of the scientific community that embodies moral commitments, which are generally beneficial to society; (4) and lastly it expedites the learning of science as a subject matter. Therefore, early exposure to scientific literacy could equip learners with skills, knowledge and values that will greatly enhance their quality and value of life. However, in spite of the evidence that indicates the importance of incorporating science into learner's learning trajectories at an early age, the current South African FP curriculum encompasses little scientific literacy in its content.

According to the curriculum, science as a stand-alone subject, is only formally introduced to learners in the intermediate phase (grades 4 – 6). This fact is in direct contrast to one of the fundamental principles of the curriculum: "Progression: content and context of each grade show progression from simple to complex information" (Department of education, 2011:pp. 8). The science content as found in the current curriculum is haphazardly scattered throughout the grade R-3 curriculum and shows little progression. I argue that for optimal progression to take place, rudimentary

scientific knowledge should be introduced in the FP in a structured manner that builds on the concepts found in the earlier grades. The FP is inevitably the stage where learners are initially formally introduced to the curriculum. Progression is evident in the home languages, first-additional languages and Mathematics throughout all three phases of the Department of education (2011), but there is no significant progression in the remaining subjects, which are all condensed into one subject called Life Skills. As mentioned in Chapter 1, Life Skills consists of strands called 'beginning knowledge', 'creative arts', 'physical education' and 'personal and social wellbeing'. Science is only evident within 'beginning knowledge' in conjunction with other subject areas, such as history, business economics and geography. Green (2011) explains that in the one hour allocated to Life Skills in grade 1, science content is absent in most classrooms. He identifies the issues of progressive learning in both the intended and implemented curriculum of Life Skills. Following his argument, it is concluded that the intended curriculum has too little focus on scientific literacy. Additionally, the implemented curriculum mainly focuses on literacy and numeracy, therefore, more time is allocated to these subjects, as they are perceived to be more important (Green, 2011) The fact that more emphasis is placed on numeracy and literacy does not echo the aims of the Department of education (2011):

> "This curriculum aims to ensure that learners acquire and apply knowledge and skills in ways that are meaningful to their own lives. In this regard, the curriculum promotes integrated knowledge in local contexts, while being sensitive to global imperatives."

> Department of education (2011, pp. 8)

The above-mentioned aim thus implies curriculum integration; however, the curriculum currently presents the subjects independently of one another. The question arises if learners are expected to integrate the knowledge themselves or should the teachers take the onus to teach the content in an integrated fashion. One could argue that the teachers should make connections between the different subjects or that it is the teacher's responsibility to integrate the curriculum. Green (2011) mentions that preservice teachers, in particular, have little to no exposure of how to implement curriculum integration. Therefore, in this chapter the focus is on the integration of science teaching in the Life Skills curriculum as an integrated subject, in the FP;

resulting in the design and development of a programme that integrates the Life Skills curriculum to develop skills needed to uncover the correlations between the various subjects.

Such a programme should have a triad focus: to adhere to the aims, objectives and outcomes of the current curriculum; to incorporate the knowledge, skills and values of science as a subject; and to consider enriching learning theories and processes. Vygotsky's view of social constructivism is used as a guide to understand the ways that learners learn best. I thus focus on situated embodied cognition theory in order to present a possible optimal teaching method, with drama in education used as a tool in the FP classroom. I suggest that the utilisation of drama in education conventions to present the content of science in a way that adheres to the curriculum principals, and includes the skills, knowledge and values of science, could awaken the learner's curiosity in a subject that has been neglected in FP.

2.1 Self-directed learning

Science, according to Houseal, Abd-El-Khalick and Destefano (2014) is a way of knowing; although, there are other ways of knowing, such as religion and philosophy, science is a specific way of knowing and understanding the natural world. Science assumes a certain amount of order and consistence in the natural world. However, scientists follow their curiosity, they develop investigations and make observations. Scientists gather information from known sources to formulate their own hypothesis. The initial hypothesis is then woven into an explanation which either proves or negates the hypothesis. Scientists do, however, know that this knowledge is tentative and that change will accrue as knowledge and understanding of the natural world develops. Much like these scientists are investigators seeking knowledge, learners have the same curiosity when they learn and this is prominently identified in their natural curiosity in the first years of their life and develops from there.

Gopnik (2017) refers to this natural process of innate hypothesis, which is continuously tested with the senses and reasoning, as the 'theory-theory' of conceptual development. The 'theory-theory' postulates that learners incrementally build and develop an understanding about the world in which they live, play and interact with

others. This theory proclaims that individuals hold a naïve or simple theory of others based on people's beliefs, desires or emotions and these theories change over time because of outside influences (Gopnik, 2017). A learner starts school with some background knowledge as well as cultural historical influences; then they seek new information and are curious to learn from each other and the teacher (Stein, Maier & Hähner, 2017). However, in a school system where knowledge is forced upon the learners, as the teacher must reach all the curriculum outcomes, their curiosity and investigative nature is oppressed, leaving the learners with gathering and remembering skills rather than intuitive and investigative skills (Stein, Maier & Hähner, 2017). In contrast, this study advocates the use of investigative skills and science as a platform to investigate, incorporate and develop scientific skills set out by the curriculum specifications.

Brown (2002) makes the following statement: "Imagine a classroom where learners determine what they will learn, how they will learn it and how they will demonstrate what they know." Brown's words echoes the idea of child-centred learning, or as Brown (2002) refers to it, "self-directed learning." Beane (2016), concurs with Brown's educative vision and adds that teachers strive to use approaches such as learner choice, curriculum integration, differentiated learning and self-assessment to engage learners in an optimal level of learning where they are given a voice of reason. Learners must be able to adapt the use of information according to the purpose of it in the current situation. However, Coman and Solomon (2016), adds that processing information also entails reflection on what has been learnt in order to incorporate new experiences. Furthermore, self-directed learning allows learners to relate present situations with previous experiences and to reorganise current experiences based upon this process. As defined by Knowles (2009), self-directed learning is a process in which individuals i) take the initiative with or without the help of others. This enables these individuals to ii) diagnose their needs, iii) formulate goals and identify human and material resources. Thereafter, they iv) choose and implement appropriate strategies, and v) evaluate the outcomes in order for the process to start again.

Learners thus take responsibility for, and control of, their own learning. If self-directed learning skills are a prerequisite for the 21st century, then learners should be

encouraged and assisted to develop these skills as part of their education. Topping (2003), mention that the majority of teaching in schools traditionally relies on didactic and teacher-dominated methods of teaching, which have done little to help learners develop either the skills or the right attitudes for lifelong learning. Schmidt, Dauphinee and Patel (2005), adds that learning through curiosity, exploration of knowledge and critical evaluation of evidence should be promoted and ensure a capacity for self directed learning.

Self-directed learning may be helpful to develop skills that will assist FP learners to investigate the connection between the different subject areas (see Chapter 1, Paragraph 1.3), and to apply the corresponding knowledge in their everyday world. Learners build knowledge as they explore, observe, interact, converse and engage with others, and make connections between new ideas and prior understandings (Chowdhury & Stoica, 2015). Over the centuries many theories have attempted to define learning, for example, according to Cetron, et al. (2017), learning builds on prior knowledge and involves enriching, building on and changing existing understanding. They used the analogy that "one's knowledge base is a scaffold that supports the construction of all future learning" (Cetron, 2017:pp. 18). Motta (2016), adds that learning occurs in a complex social environment and should not be limited to being examined or perceived as something that happens in isolation. Learning is situated in an authentic context that provides learners with the opportunity to engage with specific ideas and concepts on a need-to-know or want-to-know basis (Goodfellow, Bengio, Courville, & Bengio, 2016).

This study investigates and employs Vygotsky's ideas as a seminal theorist, but also incorporates the ideas of other related theorists, who share his views on the optimal way to learn, which is known as social constructivism. His views, together with other theorists such as Gopnik et al. (2017), Carey (2009) and DiSessa (1993), were used to design the programme used in this study.

2.2 How learners learn: The use of constructivism in the classroom

Kiraly (2014), explains Vygotsky's views on constructivism as a theory of knowledge, learning and teaching, based on the idea that humans actively construct new understandings. Learners are thus co-constructers of knowledge; together they help each other build and improve on, what they already know. Constructive learning, according to Hay (2016), results from comparing new knowledge with existing knowledge to form fresh connections and understandings.

Constructivism consists of two schools of thought, namely cognitive constructivism and social constructivism. Cognitive constructivism reflects the work of Swiss psychologist Piaget, who was interested in the cognitive processes of knowledge construction (Demetriou, Shayer, & Efklides, 2016). Piaget theorised that all knowledge is held in cognitive structures called schemas, which contain all of the descriptions, experiences, memories, relationships, connections et cetera, that relate to a particular idea (Piaget & Cook, 1952). This study, however, focuses on the use of the second school of thought, social constructivism, introduced by Russian psychologist Lev Vygotsky, who researched the role social interaction plays in learning. Vygotsky does not counter the works of Piaget, but he studies learning from a different perspective, adding a dominant social perspective of learning to constructivist theory and practice. Vygotsky stresses that social interactions are critical, and that knowledge is constructed via interactions with the environment and people (Vygotsky, 1967).

2.3 The use of social constructivist theory to enhance learning processes

Vygotsky found that learning is driven by external forces including culture, language and social interactions and that every mental function has a social component (Deulen, 2013). Social constructivism emphasises the importance of culture and the social context needed for cognitive development (Powell & Kalina, 2009). More knowledgeable individuals are needed as a tool to help learners grasp and understand content that might be difficult to learn on their own; in this study the 'more knowledgeable individual' is used as the facilitator of the programme. A social constructivist teacher, according to Vygotsky (1967:pp. 17), adheres to the following

traits: (1) "Guides learners while encouraging collaboration"; learners are encouraged to critically analyse information and collect information from various individuals through collaboration to formulate knowledge that is relevant to them in a given situation. (2) "Supports the learner by providing advice for real-life experiences"; the content learnt is made relevant to the learner by creating situations that depict real-life settings and situations. Knowledge is thus not seen in isolation; (3) "questioning is used to evoke critical thinking and engagement". Learners need to be able to adapt the knowledge that they have according to relevance in the current situation.

These traits were used to design the activities that were included in the programme to ensure learner engagement, social interaction and content interaction. Vygotsky (1967) proposed two types of conceptual development; spontaneous concepts and scientific concepts. Spontaneous concepts are ideas that are individually and independently constructed as a result of everyday life experiences (Vygotsky, 1967). Scientific concepts are more formalised ideas which are imposed upon a learner by more knowledgeable individuals (Vygotsky; 1967). The programme aims to use both types of concept building in order to focus on the lived experiences of the individual with the help of a facilitator to guide the learning process. According to Powell and Kalina (2009), Vygotsky believed that, with assistance, a child's potential for learning is much greater than his or her independent potential to master spontaneous concepts; the difference between a child's spontaneous potential and potential with assistance is known as the Zone of Proximal Development (ZPD) (Roth, 2014). Vygotsky (Roth, 2014) claimed that learning occurs best within a learners' ZPD, refer to Figure 2.1, teachers can make use of instructional support, later referred to as scaffolding, to keep learners active within their ZPD in order to foster meaningful construction.
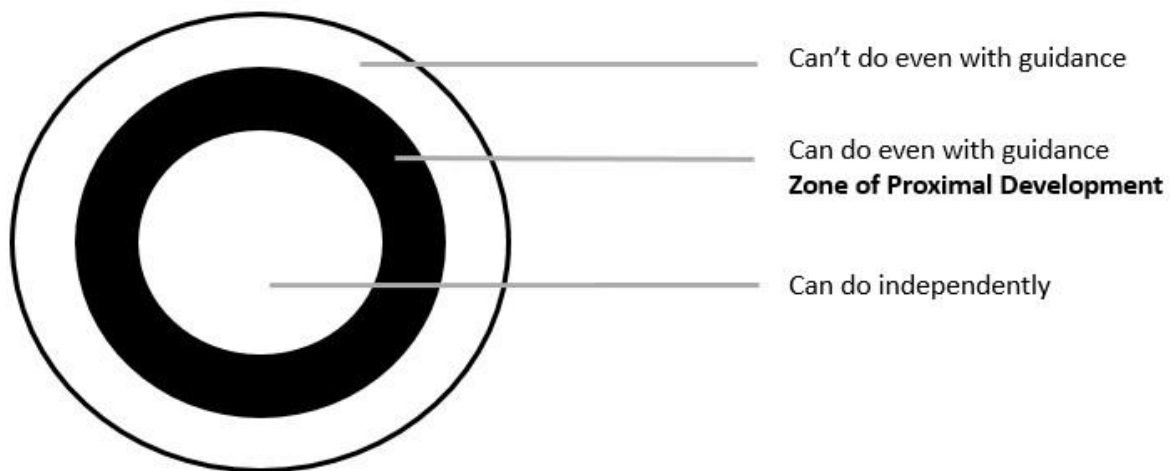
Figure 2.1: Zone of Proximal Development (Vygotsky, 1967)

Vygotsky's illustration shows that there is knowledge that learners cannot understand, even with the help of a facilitator, this knowledge is above the learning capacity of the individual (Roth, 2014). The second or middle circle is the ZPD, the knowledge that the learners gain through the assistance of a more knowledgeable individual. The inner circle illustrates the knowledge that an individual can obtain without the guidance of an outsider. The activities included in the programme of this study aimed to guide the learner from the middle circle to, in the end, be able to function in the innermost circle.
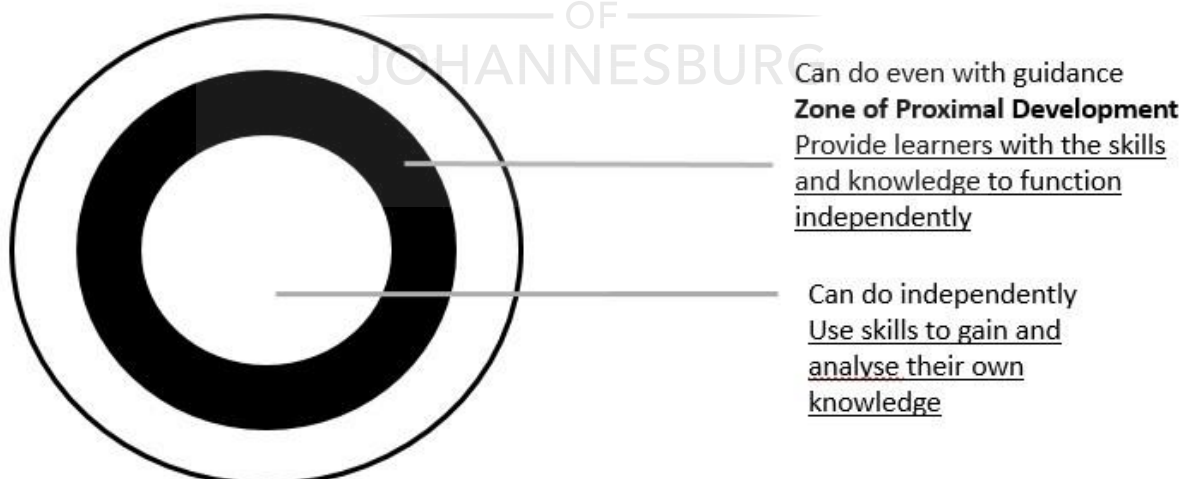
Figure 2.2: Adapted illustration of ZPD

The revised illustration, Figure 2.2, shows how the learner is guided from not being able to understand and obtain knowledge, with the help of a facilitator, to constructing

his or her own knowledge, shown in the centre circle. This method is utilised in the activities of the programme implemented in this study. Learners were actively involved in activities where the teacher guided the process by teaching skills needed to gain the knowledge set out by the outcomes of the activity. These skills served as prior knowledge building on a schema-like structure used to gain knowledge independently by making connections between different activities. Even though schemas are the basic building blocks of cognitive models, with the assistance of social interaction, knowledge is enhanced and developed in the same way. Piaget and Cook (1952:pp. 18) defined a schema as "a cohesive, repeatable action sequence possessing component actions that are tightly interconnected and governed by a core meaning". Carey is the author of Conceptual Change in Childhood, which reconciles Piaget's work on animism with later work on learners' knowledge of biological concepts. Piaget (1952) called the schema the basic building block of intelligent behaviour, thus a way of organising knowledge. The group as a whole thus integrates their knowledge to formulate more informed and structured new knowledge, in turn the knowledge is organised and evaluated. Piaget found that learners started out with specific sensory motor schemes and then transformed those schemes into adult's abstract representations. However, Carey's (2009) own studies, along with those of others, have shown that this is not a feasible option; contra to the empiricists, even infants have abstract structured knowledge; and contra the nativists, conceptual theory change based on experience takes place even in childhood, without the infrastructure of adult science.

Vygotsky (1967), refers to the building of new knowledge, engaging with knowledge and constructing own knowledge as meaningful learning. When learners can apply knowledge to their own lives it helps them to retain more of what they have just learnt resulting in learners engaging more fully in the activity that they have just learnt (Zhang et al., 2016). When the learners are engaged in the activity they are able to explain and elaborate on their thoughts. The programme's activities create an environment that sparks and evokes curiosity and this environment aims to illustrate a real-life setting. Vygotsky, according to Engeström (1987), uses the 'Learning Cycle' illustration, Figure 2.3, to describe this process of learning used in the programme.
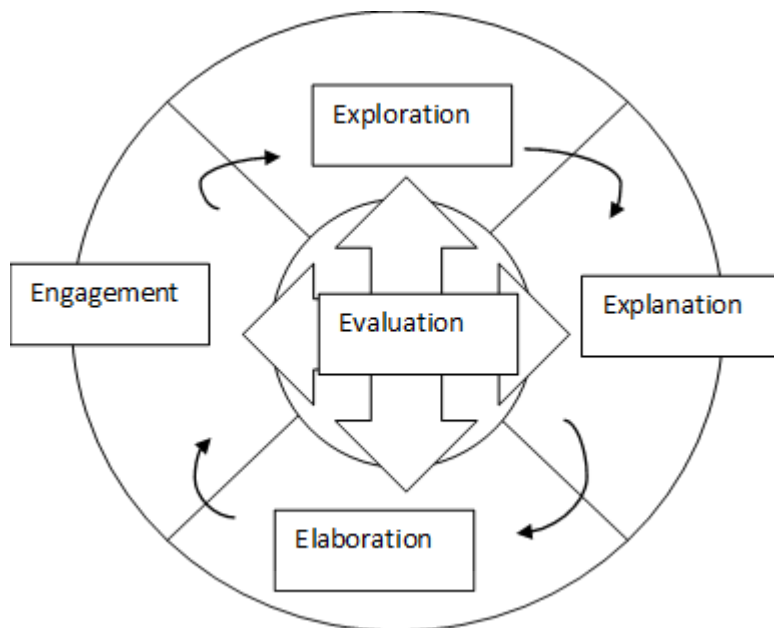
Figure 2.3: Learning Cycle illustration (Engeström, 1987)

The outer circle suggests that the learning process happens in a constant rotating fashion, where each one of the outer labels (exploration, explanation, elaboration and engagement) influences the next one. When exploration is practised, the learners can explain his or her findings, elaborate on the new or revised knowledge gained, and thus engage in meaningful analyses of the new knowledge; then the cycle starts again. Each stage is evaluated to get to the next stage, as the knowledge is analysed and reconstructed for the needs of the individual.

The programme used this circulation of analysing information with each activity. In the activity stage of the programme the learners engaged in situated and distributed cognition learning and active learning which is discussed in paragraph 2.3.1. In this study learners engaged and explored the possible learning outcomes through drama in education conventions which will be further discussed (see Paragraph 2.5.1).

2.3.1 Embodied situated and distributed cognition learning

Embodied situated and distributed cognition learning, according to Clancey (1994), is a social and situated activity; the learning process includes the social context of what is learnt, essentially, in what setting the content is valid. The content thus guides the learning process. In this study the science topic of the curriculum was used as the guiding content. Clancey (2000), found that the learning process should correlate

closely to the processes that experts in the field follow. Clancey (2000), found that if you want to experience what experts in the field experience then one needs to try and replicate what the experts do. Gardner (1999), suggests that when we separate learning from doing this leads to the learning becoming inert. So, if we learn but do not connect the knowledge to a relevant real-life context then our knowledge will be essentially unusable.

All the activities in the programme were based on real-life situations. The learners needed to reflect at the end of each activity to make the connections between the fictional world that they encountered during the activity and the real world they live in. However, it was noted that learners with different learning preferences (suggested by Goodwin (2000), refer to discussion in the next paragraph) engaged in the activities in different ways. For this reason, all learners could not be viewed and approached in the same way. The different types of learners, explained by Goodwin (2000), guided the study to distinguish the different types of learners and provided suggestions in how they could be approached in the activities.

Goodwin (2000), explains that embodied situated and distributed cognition learning distinguishes between three types of learners: novice, expert and just plain folk. Novice refers to a person who comes into a new learning environment, they will look at a scenario and see the "school learnt equation" of solving the problem (Goodwin, 2000). Goodwin (2000) refers to any memory related learning as "school learnt equations." The content is taught without explaining its value in a real life setting, so the learner gathers the information and memorises it, in order to fit into a certain situation. Learners who learn in this manner would try and solve problems using any formula (content) memorised in school and with all the steps in place, they would reach the answer accurately. However, the learners would not fully understand how they arrived at the answer nor its relation to a real-life situation. Novice learners will be identified in the activities implemented in the programme of the study. This type of learner has to be guided in the reflection activity to make a connection between the "school learnt equations" and real life (Goodwin, 2000).

Expert refers to a person who draws on their lived experiences; these learners would give the correct answer to a question by using past experiences (Goodwin, 2000). The expert will look at the problem and from experience in working with the familiar content for a long period, they will apply what they know or what their experience guides them to. This is an optimal learning preference; however, the learner answers from habit and not because they understand its value in real life. In the activity these types of learners would interact in the questioning, but not in the reflection of the activity. These learners would be guided and challenged to understand the value of the content that they are familiar with.

Just plain folk refers to the optimal learner that the programme strove to develop as these learners could develop a coping strategy that worked in the given environment. The learner's responses to a scenario were logical as they analysed a situation and developed a suitable solution.

The programme developed in this study attempted to develop all the learners to think and learn the 'just plain folk'. It is based on the theory that what we do and think develops in a fundamentally social context (Duranti & Goodwin, 1992). 'Just plain folk' suggests that knowledge is a lived practice (Henning, 1998a); learners cannot just know something, they have to live it out to fully understand its value. To live out a situation the learners needed to get in touch with their emotions and evoke empathy with the situation that they encountered in the activity. The programme utilised effective learning to evoke emotion and empathy. For example, if a learner discovered a lion that killed a buck they would more than likely think that the lion was cruel; however, if the learner empathised with the fact that the lion killed to get food to eat and survive they would better understand the circle of life and death. Affective learning, according to Martin and Briggs (1986), is the acquisition of behaviours involved in expressing feelings in attitudes, appreciations and values that are driven by emotional experience.

2.3.2 Affective learning

Miller (2015) explains that the current overarching teaching style is one of transferring information from a book, to a teacher's head and then to a learner's head. Freire (1985)

called this process, 'banking education' as learners are seen as empty bank accounts into whom information can be deposited.

Proponents of affective education, on the other hand, state that learning is not knowledge transfer (Picard et al, 2004). Simonson and Maushak (2001), who are viewed by some as affective education specialists, argue that only a small part of the human brain, namely the frontal lobe, is rational, the rest of the brain consists of emotion-driven factors. If this is seen from the school setting point of view, especially in terms of how much information learners remember of their school work, we find that they mostly remember situations where they were emotionally involved in the learning of content or actively participating in a situation. Atherton (2004), agrees and postulates that most of the brain is powered by emotion. According to the Zembylas' (2007), affective learning model, humans learn when they wrap or tag the knowledge with its affective context, things that matter. Thus, humans like familiarity and do not always operate just on an emotional level. If content or an event is familiar to you, your sense of engagement becomes heightened. Rosiek (2003), found that as you grow up, your brain is constantly cataloguing the world around you, attaching significance to things depending on how important they are to you. Shulman (1986) mentions that, as humans, we have limited control over this categorisation. For example, if you witness a fight, you will remember the fight for a long time but not the details such as the colour T-shirts of the people involved. Affective learning is then based on the parts of a situation that are of significance to the person or an object expressed as emotions and over which you have limited control. Without effective context, knowledge does not stick (Shulman, 1986).

The "forgetting graph" (Ebbinghouse, 1985: pp. 62), depicted in Figure 2.4, suggests the process of any form of formal learning; the learner remembers the information when it is read out to them, but almost immediately forgets it as soon as they leave the class.
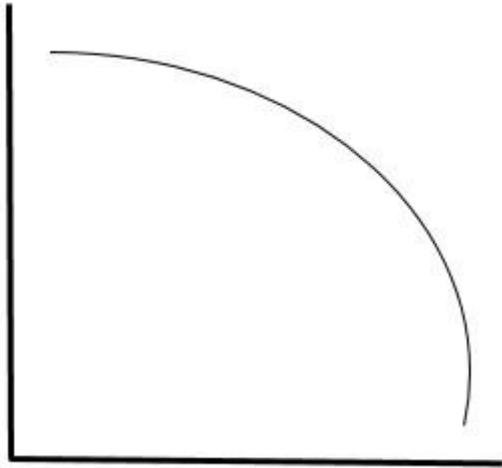
Figure 2.4: The forgetting graph (Ebbinghouse, 1985:pp. 62)

The next graph (Figure 2.5) is a depiction by Miller (2005) of informal learning. This graph suggests that a learner stores the information gathered and retrieves it when it is necessary, learners are able to apply what is learnt when a coherent situation emerges. This stored information enables learners to naturally or instinctively solve problems using prior knowledge.
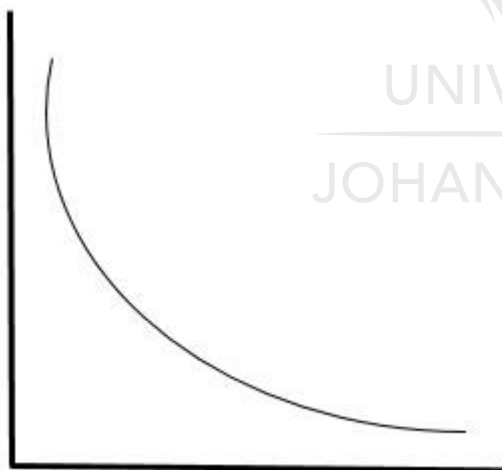
Figure 2.5: Depiction of informal learning Miller (2005)

Miller (2005) refers to these two types of learning, depicted in the graph, as "pull and push learning". Formal learning is push learning, where the learner is forced to remember information and is content driven. Informal learning is pull learning, where learning is driven by problem solving and real-life situational learning. Martin and

Briggs (1986), state that pull learning is driven by the affective contact, which reaches the emotional and belief system aspects of those who facilitate and participate in it. As an area of study, affective learning has been defined both by the types of educational objectives sought in planning educational experiences and through the conceptual models portraying the range of impact possible.

Both the embodied situated and distributed cognition learning and affective learning is visible in the programme developed in this study in an integrated curriculum.

2.4 Benefits of integrated Life Skills teaching

An integrated curriculum is described as a curriculum that connects different areas of schoolwork by amalgamating the content (Hill; Jones & Schilling, 2014). Curriculum integration focuses on making connections for learners, by allowing them to engage in relevant and meaningful activities that can be connected to real life. An optimal functioning integrated curriculum eradicates boundaries between subjects. This enables teachers to teach the curriculum as a holistic entity of content that can be used to function in real-life situations. However, because FP subject areas e.g. Mathematics, Literacy and Life Skills have been taught independently in South Africa, it is unrealistic to discard subject division. The first step in integrating the curriculum is to find the links and coherences within the content of the school curriculum.

Fraser (2000), states that curriculum integration is firstly guided by coherence, where learners benefit as they are offered a comprehensive education that creates links within and across subject areas (Ministry of Education, 2007). Drake (1998:pp. 2), supports this notion by saying that "the world we are living in is changing, and education must change with it." Children grow up in an interconnected and interdependent world, and schooling should emulate the same interconnected and interdependently education. Curriculum integration comprises a re-design of the curriculum to enhance the need for learners to be actively involved in their learning. Thus learners should be part of the decision-making process in activities presented in the classroom (Dowden, 2006; Fraser, 2000 & Drake, 1998).

Curriculum integration has a wide variety of benefits, however because of the numerous misconceptions around this concept, teachers often misunderstand its value. The next paragraph will attempt to clear up and redefine some of these misconceptions.

2.4.1 Curriculum integration

The first misconception that exists is that curriculum integration involves rearranging lesson plans so that the subject areas which relate to one another could be taught in the same lesson. Beane (2016), states that because teachers simplify the use of curriculum integration by merely aligning the themes in the curriculum, it is not implemented effectively and in turn does not provide the endless advantages that it should.

Beane (2016), suggests that one of the best ways to understand curriculum integration is to discuss what it is not. Curriculum integration is not an historical concept, the origins of curriculum integration date back to the progressive education movement of the early 1900s and can be seen in the work of the famous philosopher, psychologist, and educational reformer John Dewey (1859-1952). Dewey (1938:pp. 44), mentions that within the curriculum, "facts are torn away from their original place in experience and rearranged with reference to some general principle", therefore, content should not be taught in isolation.

Pring (2006:pp. 66), constructs a metaphor in order to define curriculum integration more clearly. He expresses this complex term as "the seamless coat of learning", here subject area are viewed as interconnected rather than isolated from one another. This notion is echoed by the Department of education (2011) as it states that "all learning should make use of the natural connections that exist between learning areas" (Department of education, 2011:pp. 5), as each subject area is "valuable for the pathways it opens to other learning". This concern highlights the need for education to be realistic and relevant to the learners' world, evoking their prior knowledge and experiences to broaden their understanding (Fraser, 2000). Curriculum integration answers to this specification because it customs the learners' prior knowledge and uses this as a preliminary driving force for the lesson (Beane, 2016; Dowden & Nolan,

2006). Thus this active process makes learning relevant to what the learners already know (Duchastel & Brown (2001)

Curriculum integration is not "centre of interest-based teaching," nor is it purely child centred teaching (Drake, 1998:pp. 98), which would do teachers a disservice. Teachers have significant curriculum knowledge and pedagogical skills that emulates a challenging and rewarding learning environment. In curriculum integration, teachers are involved in a leading role throughout the learning process, however learners take cumulative responsibility for how the curriculum is advanced. The teacher's role may fluctuate but the emphasis on negotiation between the teacher, learner and curriculum remains important.

Bolender, Ettarh, Jerrett, and Laherty (2013), add that curriculum integration is not selecting a central topic forms the themes in the subject areas. The term 'curriculum integration' has frequently been confused with 'multidisciplinary approaches'.

2.4.2 Difference between thematic units and curriculum integration

Curriculum integration involves learners negotiating the outcome of the subject areas in the curriculum with their teacher (Ingram, 2014). For example, learners take an active role in co-planning, exploring and evaluating a study. Ingram (2014) suggests that a virtuous way to start an integrated lesson is to propose a well formulate question or evoking statement that induces curiosity.

Curriculum integration draws upon learning areas that transmit to the central issues of the investigation (Bolender, Ettarh, Jerrett, & Laherty, 2013). The aim is not necessarily to cover all curriculum areas, instead, the learning areas addressed are equally relevant to the outcomes of the lesson and naturally ascend from the inquiry (Bolender et al., 2013). Therefore, the teacher cannot fully plan in advance, as curriculum integration requires an openness to what unfolds rather than advocating what will be covered.

Curriculum integration exploits learners as representatives in search of knowledge (Hinrichsen, & Coombs, 2014). The learners' voice is heard and, as a result, their

commitment is enriched because out of negotiation comes a sense of ownership in the learners. Learning, therefore, according to Hinrichsen, and Coombs (2014) is an active process, as teachers cannot do it on behalf of learners. "Information may be imposed but understanding cannot" (Hinrichsen, & Coombs, 2014:pp. 88). Hinrichsen and Coombs (2014), claim that learners learn best when they want to and in turn they want to learn, when they are doing it for themselves, as a result of their own needs.

The teaching-learning process involves the teachers scaffolding their knowledge rather than the teacher purely directing it (Beane, 2016). According to Lam, Alviar Martin, Adler and Sim (2013), scaffolding is the most refined artistry in teachers' work and it is much more complexed than mere regurgitation of facts. It requires that teachers know when to intervene and when to hold back and a distinctive intelligence of how to interpose. Teachers' pedagogical capabilities are crucial to the success of the approach. McPhail (2017), mentions that the investigative process negotiated between teachers and learners reflects how research occurs in the world at large. In many ways the curriculum integration process is equivalent to the one taken by postgraduate learners at university level. In negotiation with their supervisors, they identify an area of concern and raise some related questions; they investigate what is already known about the area and consider ways to examine the problems identified. Students may collect data in the field, interview people, make comparisons and trial interventions. They may then refine their interventions or create graphs of their results, make inferences, build analysis and identify themes, which they then discuss, drawing conclusions. Their conclusions are compared with what was previously known and implications for further study or learning are indicated. At every step they gain feedback and guidance from their supervisors on the skills required and the development of ideas, as well as the expression of those ideas.

This is similar to the process that learners in classrooms undertake, with their teachers as 'supervisors', providing the necessary teaching and guidance during curriculum integration. Although FP learners would not undertake a review of the literature, they would be part of a class discussion on what is already known about the topic and what they would like to know more about. In addition, the teacher will be assessing what skills the learners need in order to pursue the questions and concerns that are

generated. In the above explanation, curriculum integration actively involves learners, using relatable problems and issues of importance in order to develop a curriculum that goes beyond the confines of stand-alone subjects. Murdoch and Hornsby (1997), highlight that we need subjects to be taught co-dependently of one another.

One area where thematic units and curriculum integration give the impression to be similar is with the connections made between subject areas. The manner in which these connections are made are however different. In curriculum integration, issues form the learning areas are drawn upon when mandatory however, in thematic units, subjects are placed at the centre and the curriculum design 'forces a fit' across the curriculum. Planning curriculum connections involve learners in planning, decision making and assessment processes (Murdoch & Hornsby, 1997). In doing so, learners are responsible for their learning, which nurtures enthusiasm and enhances self-motivation (Jenkins, 2015). Drake (1998) claims that with curriculum negotiation of this kind, genuine connections are made between the learners' world, the classroom and the issues of importance to them. Others, such as Jenkins (2015), also assert curriculum negotiation as being useful in catering for diverse learners.

As with any approach to the curriculum, skill and attitude of the teachers remains a fundamental factor. Gibson (2014) argues that curriculum integration needs to replicate the real world and, therefore, be interactive. With curriculum integration, teachers need to keep in mind the constructivist theory of learning which focuses ultimately on the learner building knowledge and relating it to her existing understandings of prior knowledge. Nevertheless, teachers have a responsibility for fabricating learning experiences that are both intellectually and creatively demanding. The teacher is thus responsible for guiding the scaffolding processes of the learners.

The challenge curriculum integration faces is that it requires a shift in the traditional role of the teacher; as it is more dynamic, interactive and finely nuanced than just teaching the content of each subject. Curriculum integration is often difficult for teachers to incorporate because the outcomes are not fully pre planned. Drake (1998) comments on teachers' feelings of "exhaustion when developing curriculum integration as they are required to take on roles different from their usual ways of teaching and

planning lessons". Some teachers may feel threatened by this approach for a number of reasons, including predilection for having activities carefully planned ahead of time (Etim, 2005; Fraser & Charteris, 1998). A second concern amongst teachers is the lack of accurate knowledge about curriculum integration. When not done well, curriculum integration can become forced or unoriginal resulting in a lack of learner motivation and engagement (Beane, 2016). Another impairment for some teachers is the concern that they will not have enough time to reach all the outcomes set out by the Department of education (2011). Thus they will not have enough time for the holistic development of the learner e.g. to ensure the music programme is not overlooked just because music does not feature in an integrated unit. Teachers may feel that integrating curriculum undermines their work. Time is one of the biggest factors in the successful implementation of curriculum integration, and some believe that curriculum integration requires more time than is available in the classroom schedule (Zeng et al, 2016). Time, however, is a perennial challenge in any approach to teaching and it should not be used as an excuse not to innovate. Subjective evidence suggests that teachers save time in the long run because they are not caught up in the minutiae of narrow planning, teaching and assessing, but are instead liberated to facilitate learners' inquiry into deep and compelling issues. Instead of curriculum coverage, the emphasis is on the depth of learning.

2.4.3 Benefits of curriculum integration

Beane (2016) claims that when teachers employ curriculum integration, power dynamics are challenged and thus class relationships are reinforced. Collaborative skills are heightened through having a collective focus, which emboldens teachers and learners to work in conjunction with one another (Etim, 2005 & Drake, 1998). Studies by Fraser (2000) and Drake, (1998) claim that learner's level of engagement and persistence are enriched because curriculum integration involves the learners in their own learning experience.

Further benefits mentioned are fewer attendance concerns, less disruptive behaviour and fewer discipline problems (Drake, 1998). Reflective and critical thinking skills are developed as learners make connections between school activities and personal life experiences (Etim, 2005 & Drake, 1998).

Teachers who understand curriculum integration, challenge their existing practices and negotiate the curriculum have found the learning progress to be greater and more rewarding than teaching in the traditional conventional way (Brown & Knowles, 2014). Unpacking the process of curriculum integration enables teachers to understand the crucial details and the profundity of learning and teaching. These processes bring teachers closer to how learners learn and how much they can learn. Curriculum integration also enables teachers to understand what learners want to learn, and therefore what they need to learn to access the knowledge they desire. It seems clear that the benefits of curriculum integration and the learning experience it provides outweigh the challenges and concerns related to its implementation.

2.4.4 Motivation for the integrated curriculum of this study using STEAM education as the driving force

STEM education is an interdisciplinary approach to learning where rigorous academic concepts are coupled with real-world lessons as students apply science, technology, engineering, and mathematics in contexts that make connections between school, community, work, and the global enterprise enabling the development of STEM literacy and with it the ability to compete in the new economy. (Tsupros, 2009) The STEM to STEAM movement has been taking root over the past several years and is surging forward as a positive mode of action to truly meet the needs of a 21st century economy (Garlack, 2012). STEM alone misses several key components that many employers, educators, and parents have voiced as critical for our children to thrive in the present and rapidly approaching future.

STEAM is an educational approach to learning that uses Science, Technology, Engineering, the Arts and Mathematics as access points for guiding student inquiry, dialogue, and critical thinking (Deron, 2015). The end results are students who take thoughtful risks, engage in experiential learning, persist in problem-solving, embrace collaboration, and work through the creative process. These are the innovators, educators, leaders, and learners of the 21st century.

Integrating concepts, topics, standards and assessments is a powerful way to innovate education. It takes what we do when we open the doors to the real world and places those same practices in our cycles of teaching and learning (Cameron, 2015).

This same initiative is taken in this study and the art tool that is used to integrate the other strands of STEAM is drama in education.

2.5 Drama in education as an integrative tool for the Life Skills curriculum

Jean Jacques Rousseau (1722-1778), the French philosopher, introduced the supposedly "natural" impulse of learners into the world of education. Within the child is a reservoir of potential energy that they do not need immediately; the educator's task is to hold back the energy until it can be used effectively for learning purposes (Isyar & Akay, 2017); this approach was centred on the facilitator/teacher. In the 19th century Friedrich Fröbel (1782-1752), the German educational philosopher, introduced a more child-centred approach to education, which he proposed as a substitute for the teacher-centred and content-driven education system of the century.

In the early 20th century John Dewey and Boydston (1991:pp. 78), American philosophers, who had an influence on pedagogy, built on the concept of the arts as a learning experience. They also expanded on the concepts of child-centred education, experimental learning and communication-based learning. Finlay-Johnson (1920), also elaborated on the concept of child-centred education by introducing the idea that play-making processes should not be a skill that should be taught as a means of performance, but rather an exploration of feelings and thoughts outside the value judgement of what the curriculum demands. Finlay-Johnson (1920), found that playmaking was the act of transforming work through play. It was play with a purpose, more specifically referred to by Urian (2000) as 'deliberate play', it requires a desire for fun, great courage and respect for people. When the content of a subject is enjoyed, the learning process is effective.

Play as an activity encourages learners to engage with the content in a fun and exciting way. Cook (in Weltsek-Medina, 2008), introduced Johnson's ideas of the play-making

process into what he calls 'the play way'. Various other practitioners introduced the idea of role play and improvisation into their teaching modes. (Smith-Laing, 2018; Cook, 1919).

Slade (1955) introduced drama in education in Britain in 1932 and furthered the concept of drama as pedagogy. According to Bruner (1966), pedagogy in short is the science and art of education, with the aim of pedagogy ranging from the development of the human being to skills accomplishment. Slade (1955), used to watch learners playing on the streets and noticed their absorption in creative play; these observations became the foundation for his child drama philosophy. Slade (1955), then identified two forms of play in learners. The first he named 'personal play' (Slade, 1955), whereby the child is completely involved in what he is doing, mentally, physically and imaginatively. An example of this type of play is learners playing 'cowboys and Indians', children physically embody what they think a cowboy looks like as well as use the prior knowledge they have about cowboys and Indians together with past experiences to create a world that is real to them. Another form of play that Slade (1955: pp. 55) identified is what he calls "projected play", the child is physically still in this kind of play. He or she sits or lies down, and the play happens outside him or her, it is thus projected on objects. An example of this kind of play can be a girl playing with her doll in a doll house; the physical act is done by the doll through the girl, the girl is playing with the doll, however, the actions that are imagined are not acted out by the body of the girl but by the doll. The girl's imaginary world is created by the doll.

Elliott (2017), found that the child in 'the play way' practice has two types of experiences either he or she is 'trying out life' or 'playing out fear'. They are trying out life by pretending to do things in the fictional world that they can do later in the real world. The fictional world is a safe space for children to try out different things thus they play out their fear in order to also overcome it. In drama in education learners play in what is called the metaxis (Morgan & Saxton, 1987), which is the in-between state where one is both in the real and fictional world at the same time. Learners can step into the make-believe world to enable themselves to explore things that they can apply in the real world. Educating in this manner is both fun and productive, as learners learn while playing.

Way (1998), used a similar structure as Slade, the physical education model; however, he replaced the fantasy journey of the teacher's narration with short exercise in mimetic action of everyday life that was aimed at developing each child's intuition and concentration capacity. The shift in pedagogy was called creative drama, which was aimed at personal development. According to Way (1967) drama as pedagogy holistically develops the learner through improvisation, dramatic play and storytelling (O'Neill, 2018). Way raised the question whether a performance of a play should be included in the drama experience, which gave rise to what we call drama in education. He concluded that performance adds value to learning; however, the processes of making a performance for educational purposes is more important than the actual performance. Thus, there is no end performance included in drama in education.

In 1950 Dorothy Heathcote teaches using a similar process to that of Way (Wagner, 1976). However, her main aim was to incorporate the advancement of problem-solving skills in her teaching strategy. She referred to her way of teaching as "A man in a mess" (Heathcote, 1991). Educationalists and professors such as Betty Jane Wagner, Anne Thurman, Norah Morgan and Juliana Saxton gave full recognition to the innovative approach that challenged all previous traditions and later used Heathcote's work as a springboard to further develop the discipline. Heathcote together with Slade made use of large spaces (for example school halls) to teach the learners. To Heathcote drama is a collective enterprise linked to problem-based learning (Eriksson, 2014).

According to O'Neill (2014), Heathcote's passion for using drama to educate pupils has impacted the future of the use of drama in education. Her influence was not just on the learners, but also on the role of Drama in Education purposes, the role of the teacher in learning and understanding the content of the curriculum as well as other methodological processes and relationships (O'Toole, Stinson & Moore, 2009). Bolton expanded on and refined Heathcote's concept of drama in education (Bolton, 2018). Bolton (2018) describes drama in education as the way in which the learner makes sense of social, moral and ethical concepts through explorative improvisation conventions such as 'teacher in role' and the 'mantle of the expert'. These conventions

will be discussed further in Chapter 3, and Chapter 5 when the findings of the study in terms of drama in education conventions will be considered.

From the history of how drama in education came to be such a popular methodology of teaching, as we know it today, we can formulate a definition that is practical throughout the study.

2.5.1 Definition of drama in education

O'Neill (2014), defines drama in education as the use of drama techniques to support learning in the classroom. Heathcote (1991) wanted a teaching method that emphasised self-expression, training in spoken English and literature appreciation. The term drama in education is used interchangeably with development drama, educational drama, informal drama, process drama and framed expertise. According to Heathcote & Bolton (1994), drama in education is a specialisation that benefits make-believe play as a significant learning medium in the human lifespan. Drama in education is a methodology that some educators do not use because the medium, its techniques, its possibilities are unfamiliar or teachers do not understand how to apply the medium to the child's development (O'Neill, 2014). Many practitioners, such as Peter Slade, Gavin Bolton and Dorothy Heathcote, proclaim the value of dramatics in a child's growth to emphasise the need thereof in education.

The Greeks described drama as 'to live through', Heathcote according to O'Neill (2014) states that it is through this meaning that we should consider drama and a child's growth much like situated and embodied cognition discussed in Paragraph 2.3 of this chapter.

> "Good drama for me is made up of the thoughts, the words and the gestures that are wrung from human beings on their way to, or in or emerging from a state of desperation."
>
> (Heathcote in Davis, 2016: pp. 80)

She then defines a play as:

"[a]n ordered sequence of events that brings one or more of the people in it to a desperate condition which it must always explain and should if possible resolve".

(Heathcote in Davis, 2016: pp. 80)

Drama in education differs from theatre in that it is performed as a scripted dialogue on a set, in front of an audience. According to Bolton (2018), the most distinctive characteristic of creative dramatics is the lack of a script, as part of drama in education, the entire class often plays improvised roles within an imagined context. As a result, there is no sharp distinction between the actor and the audience, the learner is both participant and observer. Heathcote emphasises that drama in education seeks process over product (O'Neill, 2014). Bolton states (2018) that while in a stage theatre production the focus is more on rehearsal as a means to an end or the ultimate performance, in drama in education, the process is the end in itself. Learners learn as a result of the choices and decisions they make during the development or improvisation (O'Neill, 2014). The classroom teacher or facilitator facilitates the drama by building on the actions and reactions of learners and changing the imagined context so as to create an episodic sequence of dramatic action.

Drama in education can thus be described as the agreed process between the learner and the teacher to commit to a fictitious world via drama in education conventions where the knowledge gained by both parties in the process will be shared and critically examined to formulate new knowledge for both parties. It is an experimental learning experience where empathetic engagement is the key.

Not only is a definition needed to formulate a drama in education lesson plan but also tools that can assist the teacher/facilitator in the methodology needs to be provided. Drama in education conventions were set out by Heathcote as tools that could be used by the teacher/facilitator to add to the understanding and empathy of the teaching material to support the curriculum. These conventions will be discussed in detail in the next chapter of the study.

2.6 Conclusion

In this chapter a review of a selection of the literature pertaining to the importance of Life Skills, in order to develop a self-directed learning environment in the FP was discussed. Theories on learning processes, as well as the approaches in curriculum integration and the effects on the learning process was analysed. The definition of curriculum integration and its benefits was compared to thematic units; this will be used as reference point for the study. An argument that drama in education can be used as an integrating tool was proposed. Incorporating drama in education as an integrating tool will benefit the learners by developing the necessary skills to engage in self-directed learning. The next chapter describes the design for the study, focusing on the programme implemented.

Chapter 3 Design of the study

This chapter presents a detailed description of the design of the study, including the reasoning behind each entity used in the design, bearing in mind the main research question, "In what way can drama in education contribute to the integrated teaching of the grade 1 Life Skills by utilising science as integrating theme?

The main aim of the study was to design an integrated teaching programme for the grade 1 Life Skills curriculum, by utilising the science content components and to incorporate the proposed drama in education conventions as methods to facilitate the learning of the content. A collaborative adapted version of Miles and Huberman's (1994) (in Onwuegbuzie & Weinbaum, 2016) data management flow diagram and Wiens, Kyngäs and Pölkki (2014) definition of methodology was used as a guideline to explain the process followed in the design of the study used to determine the success of the aim. The hypotheses were that learners will be educationally and creatively engaged in the activities presented in the integrated programme and gain skills and knowledge so that they can be compatible and successful citizens of the 21st century.

Initial focus was on Cultural Historical Activity Theory as the analytical lens and how CHAT was used to interpret the data generated from the teacher's and learner's interviews. CHAT enabled an analysis and interpretation of the relationship between the learner's experience (their thoughts and feelings regarding the activity) and their engagement in the activities (the success of how the programme was executed). Core ideas of CHAT include (Igira & Gregory, 2009 & Engeström, 1987):
1)   Humans act collectively, they learn by doing, and communicate in and via their actions; 2) Humans make, employ, and adapt tools of all kinds to learn and communicate; and 3) Community is central to the process of making and interpreting meaning – and thus to all forms of learning, communicating and acting.

These core ideas of CHAT are aligned with the main perceived outcomes of the programme by presenting a detailed description of the programme. Each activity includes a comprehensive description of each drama in education convention used in

the activities. Before I discuss the study in terms of CHAT, I will first present the sampling used in the study.

To vindicate my hypothesis I utilised teachers and learners in this study to gain insight into whether the programme met the predicted outcomes set out by the curriculum. In the paragraphs that follow I will present profile of each teacher to give a clear background of where their perception and critique originated. I will then give a short description of the learners in the study as to relay the classroom context and highlight their diversity and variation in background knowledge. The I will show how I gathered the data. Following this, I will give an explanation of the data analyses method used in this study. To rationalise the trustworthiness and reliability of the data collected I will argue the measures which were put in place to ensure their rationales. Lastly I will briefly explain the ethics and validation of the study.

3.1 Cultural historical activity theory as analytical lens

Activity theory served as the lens through which I evaluated the research problem and research question in this study. The research question involves the teacher's perception of the programme and presents a challenge as the perceptions are difficult to quantify. Therefore, an analytical framework was incorporated that would authenticate the perception and structure the collected data in a reliable manner. I thus used CHAT an analytical framework to illustrate the findings of the practical application of the programme incorporated to integrate the Life Skills curriculum. The facets of CHAT were used as a guideline to explain the tensions between the different individualities of the study (Petersen, 2010), these tensions will be further discussed in Chapter 5 (see Paragraph 5.2).

Vygotsky (1978) founded the social historical approach to Social Psychology, based on the history of each individual's social and cultural experience; it was a response to behaviourism's explanation of consciousness. This response is known as first-generation activity theory; the generation of CHAT has been adapted and developed to formulate an analytical framework that considers all aspects of a study.

3.1.1 First-generation CHAT

Vygotsky (1978:pp. 21) detailed two of the fundamental standards that underpin activity theory: (1) Knowledge is mediated through tools and artefacts; and (2) The basic unit of analyses is an activity.

People engage with performing actions by operations with a shared objective and motive. For example, all humans gather food (action) to eat (objective) and gain energy (motive). First-generation CHAT is based on this view and includes the subject, object and tools (mediated artefacts) used in semiotic mediation of human activity. The subject is the actor from whose perspective we are looking (Leontiev, 1981). The subject in this study is the grade 1 Life Skills teachers. The object is the unit that one wants to research and can be seen as an outcome. The outcome of this study is to develop holistic learners that can function optimally in the 21st century. The tool or mediated artefacts refer to the tool that is used to reach the outcome. Tools in this study include the activities in the programme that were developed to integrate the third term Life Skills curriculum. Vygotsky's diagram, Figure 3.1, illustrates the triangulation of the first-generation CHAT.
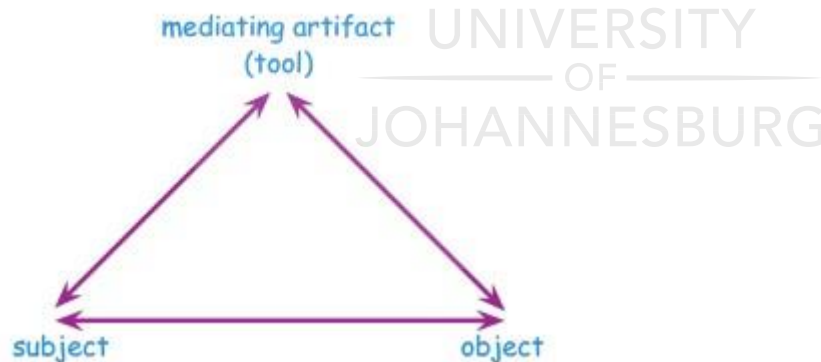
Figure 3.1: Vygotsky's first-generation activity theory (Engeström, 1987, in Beatty & Feldman, 2009)

Within social constructivism, human development is socially situated and knowledge is constructed through interaction with others (Powell & Kalina; 2009). Although Vygotsky's theory explains the relationship between the human mind and activity, it does not take into consideration outside influences. For example, the human can

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gather food with the aim of obtaining energy but what if there is a lack of finances to buy the food or if the stores are closed because it is a Sunday afternoon.

Leontiev (1984:pp. 47), extended the model of human activity by including a systemic approach. The activity is seen to be performed within a system that is influenced by: 1) the rules of the engagement; 2) the community and outside participants; and 3) the division of labour.

3.1.2 Second-generation CHAT

Leontiev (1984), developed Vygotsky's theory to include the influence of 'outsiders', and collective motivated activity towards an object which became known as the second-generation CHAT. The unit of analysis provides an understanding how collective action by special groups mediates activity (Kaptelinin, 2006). Community refers to the outside influences e.g. finances and closing time, that have an impact on the activity. Rules refer to the explicit and implicit rules that affect the activity. Explicit rules are direct and clear and made by a managing party, for example, the government increasing the prices of food because of an increase in petrol. Implicit rules are general rules that are negotiable, they are not directly stated but are rather necessary to effectuate the purpose, for example, shops are not always closed on Sunday's but always on a public holiday. Division of labour refers to the allocation of tasks in a system, for example, parents have to work to earn money in order to put food on the table. Second-generation theory is illustrated, in Figure 3.2, by Engeström as follows:
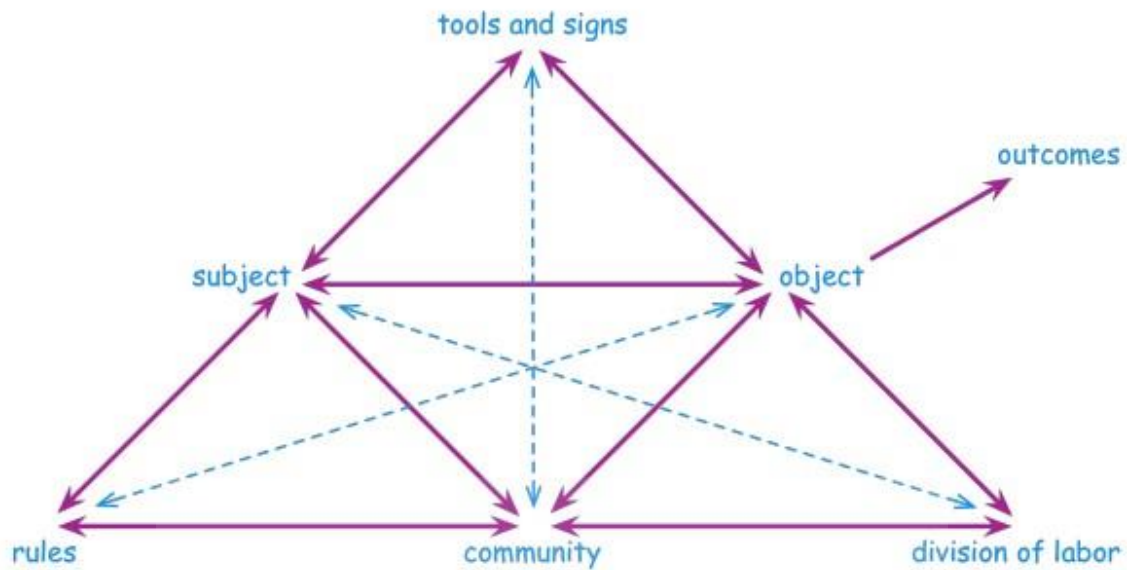
Figure 3.2: Relationships between elements of second-generation activity theory Engeström, 1987 (in Beatty & Feldman, 2009)

Second-generation activity theory is based on the notion that when an activity is undertaken there are a set of rules that go along with it and a community is involved in the way the activity is planned out.

Russel (1997) mentions that activity theory encompasses social constructivism, which associates cognition and conduct with social interaction, similar to active theory. Social interaction between different parties has a benefiting effect on all participants; people are constantly changing and shaping each other within activities sharing ideas, beliefs, experiences etc. This shared information scaffolds on top of the knowledge that the individual had before the interaction (activity) (Roth & Lee, 2007). The two-way arrows in Figure 3.2, illustrate this phenomenon. The tools that mediate the activity are placed at the top of the representation, with the base representing the individual action within the social realm. "The relationships, rules and division of labour impact on the actions of the subject" (Hardman, 2008:pp. 58).

Although Leontiev succeeded in developing a structure that considered both the individual and the outside influence another concern emerged during the 1970s. Questions around the diversity and dialogue between different traditions or

perspectives became increasingly serious challenges. Engeström (1999), proposed the need for third generation CHAT.

3.1.3 Third-generation CHAT

Engeström (1999), developed conceptual tools to understand dialogue, multiple perspectives and networks of interacting activity systems. Third generation CHAT is the implementation of activity system analyses. The researcher who implements third generation CHAT takes a participatory and interventionist role in the participants' activities and changes their experience.

In this study, activities were devised and tested on participants to change the perspective and the way Life Skills could be taught to grade 1 learners. The lived experiences of the teachers and learners in and around the activities were analysed. CHAT is appropriate for this study as it is applied to the teachers and learners holistically, considering their history and cultural background.

For the purpose of this study, the different units, seen in Figure 3.3, are defined as follows:

The *subject* is the grade 1 teacher, who facilitates the activities and is organised. Each activity in the programme requires a unique set of skills and control mechanisms adjacent to the drama in education convention. For example, the teacher in role will have to adjust the teaching method from 'instructional out of role' to 'spontaneous and negotiable in role'. The balance between allowing freedom to explore and instructional teaching is crucial to the success of each activity. In the explanation of the programme this balance is more clearly explained

The *object* of this study is to develop learners' who are proficient in all three subject areas of the grade 1 Life Skills curriculum. It is crucial for learners to master the skills and knowledge set out by the Life Skills curriculum as discussed in Chapter 1.

The *outcome* of this study is to develop holistic learners who can function independently in the 21st century.

Tools include the activities in the programme that were developed to integrate the Life Skills curriculum; including selected drama in education conventions that are driven by science content and aims to teach Life Skills as an integrated subject rather than individual components under an umbrella term.

Rules are divided into implicate and explicate rules; implicate rules include the guidelines of the curriculum document and all its given requirements for teaching the Life Skills curriculum as well as the rules and regulations set out by the teachers in the classroom and the school policy. Explicate rules include cultural and religious boundaries, genetic limitations and parental upbringing.

The *community* in this study is divided into the core-community which includes the classroom, teacher and learners, as well as the external community that consists of the school hierarchal system and the parents of the learners.

Division of labour refers to the teacher and learners; the DIE convention will determine the division of labour in each activity of the programme. For example, in 'the mantle of the expert' the learner is portrayed as the knowledgeable 'labourer' and determines the outcome of the lesson. In the 'teacher in role' convention the teacher is portrayed as a more authoritative figure and guides the learning process.

Figure 3.3 below is a diagrammatic representation of the activity systems that were incorporated in the study.
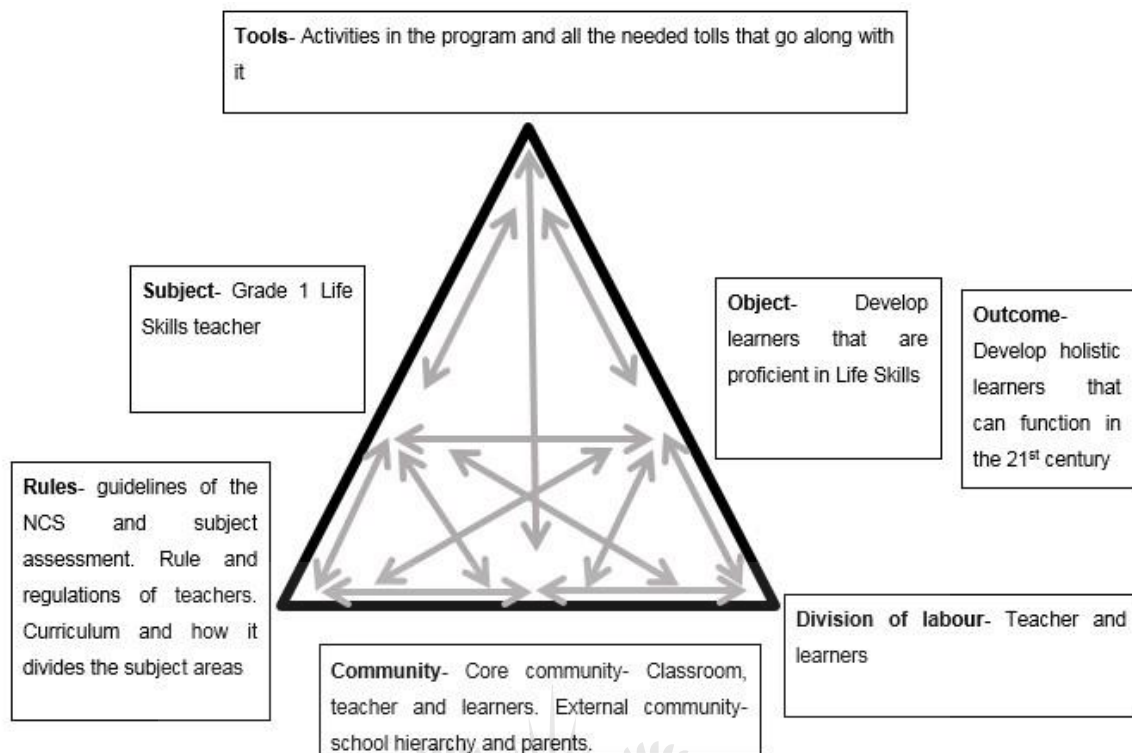
Figure 3.3: Adapted activity system as formulated by Engeström (1987)

Each entity within this structure influences the other, Igira & Gregory (2009), refers to this influence as tensions; according to Fetter and Walecka (1980) tension is a mental and/or emotional strain between two entities. The tensions within the study will be discussed in Chapter 5.

The programme used in this study was developed taking all of these above-mentioned entities into consideration. A detailed description of how the programme was developed as well as a representation of the programme itself will be detailed in the next paragraph.

3.2 Designing the Life Skills programme

The programme was designed by aligning the outcomes of the Life Skills curriculum for grade 1 in the third term with themes derived from general biology and science concepts. A suitable drama in education convention was then selected to integrate the science concept and the outcomes set out by the curriculum to formulate an activity.

Table 3.1: Demonstration of how the three aspects of the programme align with one another

Science Topic	Curriculum Topic Covered in Third Term	Drama in Education Convention
1. Insects	Topic 4: Plants and seeds	Role play – scientists
2. The bee	Topic 4: Plants and seeds	Teacher in Role – beekeeper
3. Marine animals	Topic 1: My community	Role play – Divers
4. Animal shelters	Topic 2: Pets and Topic 3: Manners responsibility	Rolling role – Builders
5. Reptiles	Topic 1: My community	Teacher in Role – Gator girl
6. Carnivore, Herbivore, Omnivore	Topic 5: Food	Mantle of the Expert – Door game
7. Farm animals	Topic 2: Pets	Teacher in Role and role play
8. Wild animals	Topic 5: Food	Teacher in Role and role play

The table shows how each topic aligns with the chosen science topic as well as with the drama in education convention. As the programme developed, some of the science topics were addressed in more than one curriculum theme; this was then also noted in the table.

3.2.1 Creation of the activities

Each activity consisted of the science topic, the curriculum topic, predicted outcomes, resources needed for the activity and a detailed explanation of each activity.

The activities were designed in a lesson plan format to make it accessible and easy to implement for teachers (see Appendix A). This format allowed the user to keep track

of which science outcome correlated with which curriculum outcome. The predicted outcomes served as a guideline for the programme, as it is predominantly child centred; meaning that the outcomes at the end of the lesson depended on the interaction of the learners. However, the teacher needed to facilitate the activity in such a way that the majority of the predicted outcomes were met as these outcomes align with the curriculum outcomes.

The drama in education convention I chose for each lesson was designed in such a way that it correlates with the curriculum and science topics and allowed the learners to be physically and cognitively involved in the lesson. A brief detailed discussion of each drama in education convention will follow and will serve as a definition throughout the activities for each convention.

3.3 Drama in education conventions

3.3.1 Role play

Role play is the changing of one's behaviour to assume a role, either unconsciously to fill a social role, or consciously to act out an adopted role (Jennings, 2017). Role play formulates the basis of all dramatic activity (Hornbrook, 2002) and the ability to play make-believe games comes naturally to learners. Suspending belief by stepping into another character's shoes is thus an innate characteristic of learners. Through the structure of the drama lesson this can be used to great effect (O'Neill; 2014) and this convention was used in the programme as it challenged the learners to develop a more sensitive understanding of a variety of viewpoints while sharpening their language and movement skills. By adopting a role, learners can step into the past or future and travel to any location, dealing with issues on moral and intellectual levels.

Thus, role play can be easily utilised to illuminate themes across the curriculum.

The teacher will need an effective pre-text to initiate the role play. O'Neill (2014), describes pre-text an initial stimulus that launches the dramatic world. Pre-text is not a term that Heathcote used, but she did discuss the importance of material for significance. The concept of pre-text was developed by O'Neill to further add to the

Heathcote style processes (O'Neill, 2014). Pre-text is a concept that has been widely embraced by drama education and applied by theatre practitioners. "In practical terms, pre-text is often regarded as a type of text or stimulus, but it really goes beyond that and is more of a framing and launching strategy" (O'Neill, 2014:pp.13). It is used to describe the various texts and strategies which can be used as springboards to initiate a drama and frame possibilities for dramatic action. Pre-texts are generally rich, but open text; they suggest possible roles, landscapes, relationships, attitudes and dilemmas. An effective pre-text is simple and functional and it sets in motion situations in which appearance and reality, truth and deception and role and identity may be contrasted and explored (O'Neill, 2014:pp. 20).

After the pre-text has been discussed the learners will step into their roles in a fictitious world, which starts when the teacher selects a suitable character (role) for herself as this will be the motivating force for the learners to choose their characters (roles). Knowing the predicted outcome of the lesson will help a teacher to develop an appropriate role. For example, if the topic is bees, the teacher can take on the role of a bee keeper or the bee itself. The teacher has to be comfortable in the role to ensure that it is executed convincingly. If the teacher's role is convincing the learners will be more effortlessly stimulated to engage in the imagined world. Being in role enables the learners to empathise with the character they portray and engage in the fictional situation. The experience and knowledge that they gain in the make-believe situation can optimally be used or adapted to function in a similar real-life situation. For example, if a learner embodies an ant to understand its different body parts, it can apply the location and function of the body parts to other insects. To end a session in a constructive manner the teacher implements de-rolling. Bolton (2018) mentions that de-role or stepping out of role happens when the teacher or learner step out of the fictional world created, which happens in the reflection phase. De-rolling helps the teacher and learners reflect as themselves on what has happened in the role play and enables them to empathise with the character that they have just portrayed and have a deeper understanding of the circumstances that character was in. According to Lavoie, Pepin and Boyer (2013) reflective debriefing is the process whereby clinical practice can be re-examined to foster the development of critical thinking and learning

for improved practice. Each debriefing session should be viewed as a developmental process that builds on findings in the activity as well as the programme as a whole. Reflection helps the learner recall the experiences when needed.

3.3.2 Mantle of the Expert

Mantle of the Expert is a drama in education convention developed by Dorothy Heathcote to explore and develop learners' prior knowledge, essentially this power of the knowledge is bequeathed upon the learner like a mantle (Johnson, Liu & Goble, 2015). The mantle can also be seen as a cloak of knowledge (Bolton, 2018); however, Heathcote does not see this mantle as something that can be given to someone else, but it is rather a quality that grows from within.

> "Mantle is not a cloak by which a person is recognized. This is no garment to cover. I use it as a quality: of leadership, carrying standards of behaviour, morality, responsibility, ethics and the spiritual basis of all action. The mantle is the standard I ascribe to. It grows by usage, not garment stitching".
>
> (Heathcote in O'Neill, 2014)

As Heathcote points out, the mantle of the expert places the learner at the centre of the learning process. The mantle is the knowledge that grows around the learner as the learner grows within it; this learning implies a progressive status which is responsive to the needs of the learner (Housum-Stevens, 1998). In other words, the learners have the opportunity to develop their knowledge which is the aim of education. The learner, being at the centre of the learning experience, begins at the planning stage of the process. The teacher investigates into the learner's interests and needs and adapts them to the aims and outcomes of the curriculum.

The learner is at the centre of the learning experience, but the process is not at all learner-led. The role that the teacher plays outside the drama is a critical part of the mantle of the expert. Johnson, Liu and Goble (2015) points out three teaching modalities that the mantle of the expert is based on; drama for learning which forms part of drama in education and is used for learning; expert framing where learners are

treated as experts; and inquiry learning. Ozdemir and Cakmak (2008) suggests that for the mantle of the expert to be successful, one must integrate all three modalities.
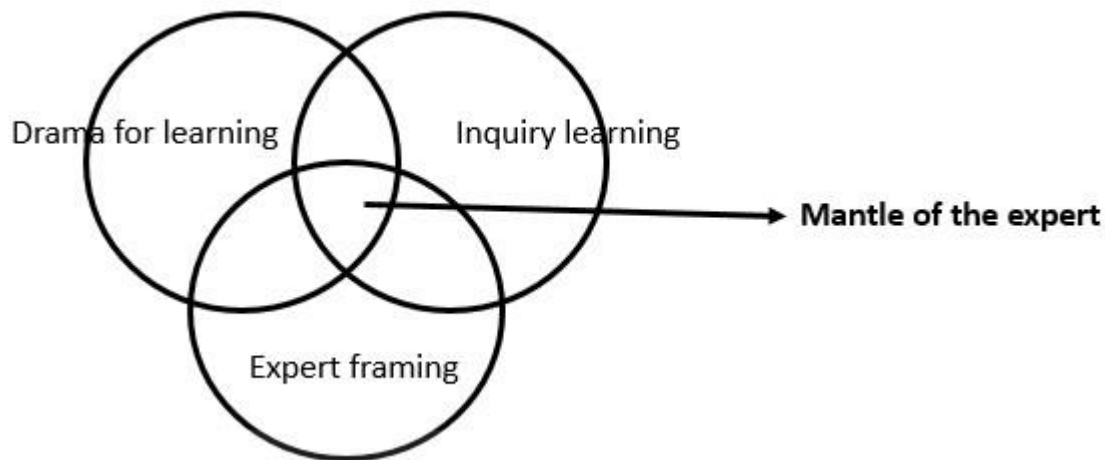
Figure 3.4: The Pedagogic structure of the mantle of the expert (Ozdemir & Cakmak, 2008: pp. 32)

Drama for learning refers to the process of using drama to educate learners in a certain field. The drama part of drama for learning does not refer to a play or a show that must be put on in order for learning to take place. The process that leads up to the play is what is seen as important in this modality. Being in the role and interacting with the knowledge that the learner must learn is a very important factor in drama for learning (Ozdemir & Cakmak, 2008: pp. 32).

Inquiry-based learning, according to Healey (2005), is a complex process where questions and investigations are formulated in order to find answers, build new understandings, meanings and knowledge and then communicate their learnings to others.

Expert framing, according to Ozdemir and Cakmak (2008), is the modality where the learner is treated as an adult and expert in a chosen field. The learner is thus given the opportunity to gather information on a topic and present it to the peers as if they are an expert in the field which has investigated. This enables the learner to feel included in the learning process by playing an important role in the knowledge that is being explored and shared.

In inquiry-based learning the learners, according to Heathcote, should be able to question and investigate every aspect of the content that they are learning when entering the mantle of the expert (O'Neill, 2014).

For the purposes of this study, mantle of the expert is defined as a convention that enables learners to gain knowledge from a peer; through the learner being an expert in a field related to the curriculum content, and having the opportunity to develop this knowledge through the drama in education process and share the knowledge gained by imagined past experiences as an expert in the fictional world.

3.3.3 Rolling role

The concept of the 'rolling role' was originally formulated as a model for secondary schools and developed from Heathcote's work with the mantle of the expert (Heathcote in O'Neill,2014). However, Heathcote later concluded that it can be adapted to suit primary school learners and their needs (Heathcote in O'Neill, 2014), following her collaboration with a range of teachers and learners, in order to find a way to make learning less disconnected (Heathcote in O'Neill, 2014). Rolling role was thus implemented to incorporate the art of drama into other subjects.

Rolling role generally involves a number of classes exploring different aspects of a community, which can be fictional or real (Heathcote in O'Neill, 2014). The teacher creates a common context and agrees to the key features, affairs and concerns of the community. The learners are then involved in building the community often creating artefacts and texts. That community then faces some kind of change and there should be a central tension that impacts on all the different contexts. The way the project "rolls" is; work is often left incomplete, but published and shared, so another group can take it forward and continue the drama (Heathcote in O'Neill, 2014).

From a range of unpublished documents, notes and the rolling role tapes held in the Heathcote Archives, further information and features of the work are revealed. In the first of the rolling role video tape series, Heathcote describes rolling role as:

"A system of teaching, in a school, whereby any number of members of staff can form teams of collaboration, while teaching their own timetable and curriculum area."

(Heathcote in O'Neill, 2014:pp. 89)

The programme involves the team in devising a common context from which all their curriculum teaching can spring; this context provides purpose and relevance for the curriculum work to be undertaken. The context is carefully structured to provide easy access to the Life Skills, Mathematics and language curriculum at all levels relevant to the age, abilities and skills of learners involved in the programme.

Heathcote suggests rolling role as an alternative way to create concern and interest in the learners (O'Neill, 2014), Heathcote acknowledge that while it might require a lot of work and initial planning on behalf of the teacher/s, once initiated, the learners become interested and committed to the ongoing work (O'Neill, 2014). A key point made about planning for a rolling role is the importance of finding or creating the main context (Davis, 2009). This must be sufficiently rich and complex enough to allow for a number of classes to work on it at the same time, with potential for them to be engaged in different subjects.

Once these initial frames are determined, they then become non-negotiable (O'Neill, 2014) as they help to situate the drama and create the logic for the unfolding action. Drama ideas usually begin with a general area of interest, thereafter, it is narrowed to a particular idea. If the experience is to be related to the person's own experience the idea is universalised to draw in the unique experience of the group at work on the idea. According to O'Neill (2014), the dropping of the particular into the universal is the digestion process of the arts, this creates the opportunity for reflection which is what education is all about. Heathcote, encouraged teachers to create dramatic materials and find dramatic forms that would focus and guide attention through providing useful parameters to isolate and particularise ideas (O'Neill, 2014). She also advised that the drama should have contemporary relevance for the participants. Davis and Simou (2014) summarised these framing considerations in three key features for planning rolling role which linked past, present and future as follows: (1) A community that exists

in the present; (2) An event in the past, with links to the present through the existence of, for example, a building, a ruin, a myth or a legend; and (3) A plan for the future of the community. This hinges on a "point of change" and is the immediate focus of the drama (Davis & Simou, 2014).

To situate the contexts, the teacher often engages in selecting and creating pre-texts as discussed in role play. Several rolling roll project descriptions found at the Heathcote Archives discuss the importance of creating artefacts to help situate the 'reality' of the fictional contexts and ground the actions for the drama. Artefacts found with rolling role examples include maps of villages, letters seeking assistance, archival documents, photographs of buildings (O'Neill, 2014; Davis & Simou, 2014). Heathcote found it was important to select and organise different signs and objects to create "arrangements of significance" (O'Neill, 2014), in order to introduce the initial contexts to provide the mediating links between the 'real world' and the world of drama and imagination.

According to above-mentioned information rolling role, can be used to teach content that needs ongoing discussions.

3.3.4 Teacher in role

Teacher in role, can be seen as one of the most influential conventions of drama teaching (Tarlington & Verriour, 1991). This convention enables teachers to step out of the status as the 'knowledge giver' and step into the role that enables them to be a part of the learning experience. Teacher in role enables the teacher to take on a role to engage the learners in a fictional world, this enables them to engage in the learning process on a metaphorical level. According to Bolton (2018), teacher in role is a method of teaching that utilises techniques of drama to facilitate education. Wan (2017), adds that it is a holistic teaching method designed to integrate critical thought, examination of emotion and moral values and factual data to broaden the learning experience and make it more relevant to everyday life situations.

Tarlington & Verriour (1991), states that the teacher can step out of role at any given time to assume the teacher's position when needed. The teacher should clearly

communicate when she is in or out of role otherwise it may compromise the learner's belief in the fictional world. Bolton (2018), states that a teacher should stay in role only as long as needed to get the process started and the learners interacting. Heathcote found it more beneficial that most information should be given nonverbally in the teacher in role convention (Bolton, 2018). Situated embodied cognition learning should rather be used as a way of communication and verbal communication will only be instructional.

A teacher must use their authority in their role to keep the class and learners together and keep the whole group functioning as a group (Bolton,2018); this is crucial at the beginning of the lesson. Learners can either work in groups or as a whole class; this study used more group work activities. Once the group has divided themselves in separate small groups the teacher in role can use this as an advantage.

3.4 Explanation of each activity

The programmes used to teach Life Skills as an integrated subject was formulated from drama in education conventions. Each activity incorporated a selected drama in education convention, a science topic and one or more curriculum topics. I will furthermore present the resources which were needed as well as the activities and reflections for each activity.
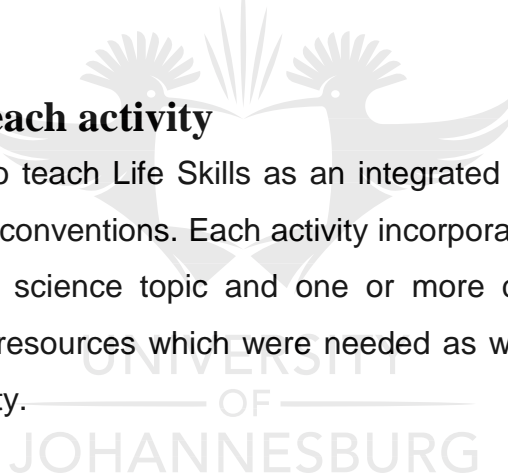
Activity 1: Insects and where they live

Table 3.2: Illustration of the components in Activity 1

Activity 1: Insects and where they live	
drama in education convention implemented	Role play
Science topic covered:	Insects
Curriculum topic covered in the third term:	Topic 4: Plants and seeds
Predicted outcomes	• Identify the structure of the insect. • Differentiate between insects and other animals. • Identify the food insects eat. • Discuss how insects can pollinate plants. • Explain the importance of insects for the environment. • Identify the structure of a plant. • Differentiate between different types of plants.
Resources needed to do the activity	• Flowers • Props – insect wings, antennae

The activity started off with a pre-text which served as a catalyst for the activity, this enables the learners to start engaging in the learning process as soon as they enter into the classroom. O'Neill (1995), refers to the pre-text as the stimulus that launches the dramatic world. Learners were given an imaginary lab coat as they came into class, which was a pre-text to help them take on the role of scientists. The teacher asked them to put on the lab coats and sit at their tables. The focus must be kept on the outcomes within the play structure of the conventions, in this activity the learners were structured through careful planning and preparation for the activity. The facilitator needs to be prepared and organised in order to find meaning in the chaos (Heathcote in O'Neill, 2014). Routine throughout the activities is crucial. In the programme, the

facilitator greeted the learners as scientists before the activity started, this routine and pre-text enabled them to get into the playful and active mode to start the activity. Although the teacher in role convention was not predominately used in this activity, the teacher had to always engage in the fictional world in order to make it 'real' for the learners. Bolton echoes this by saying that "the teacher is always in role".

In this activity, the teacher said: "Good morning scientists. The principal told me that he has sent me the smartest, best scientists in the whole world to tell me more about insects. Is that true, are you the smartest scientists in the whole world?" This immediately created a fictional world that enabled the learners to take on the role that had been assigned to them and use their prior knowledge to build the character that they want to take on. Inquiry-based learning strategies started with the facilitator asking the learners to explain what type of scientists they were and what they do when they research their specialisations (O'Neill, 2014). This process enabled the learners to gather and share knowledge on how to investigate and analyse a field of study. The facilitator used questions such as: How? Why? What? Where? When? to get learners thinking about the role that they had taken on and to create their characters.

After testing the learners' prior knowledge about investigation, the facilitator randomly divided the class into three or four small groups depending on the number of learners in the classroom, by giving each learner a coloured piece of paper, all the learners with the same colour were put into the same group. This process was used throughout the programme to create a routine. Each group was asked to choose an insect that they would like to investigate. Within the group, negotiation and interactions with peers help the learners to share knowledge about insects and discuss which insect they wanted to investigate. Kiraly (2014) found this group phenomenon helped learners to construct new understandings through social interaction. The groups shared their chosen insect with the rest of the class to ensure that everyone chose a different insect. The groups were then instructed to portray the insect using their bodies using drama in education conventions. The learners embodied the insect in order to understand their structure and how each part is connected to the other; then the learners presented their insect to the class. The facilitator asked the learners questions to test the level of understanding about the different body parts of the insects. The facilitator explained

how each group successfully displayed the different parts of an insect (head, thorax and abdomen).

The facilitator then took four different types of plants and presented it to the groups, who were asked to share a fact about their insect that would earn them a flower. Napier (1981) argues that competition strategies in the classroom can be efficient if the competition enforces learning. In this case the competition encouraged the learners to actively engage in the learning process by sharing facts on the insects they chose. This process also served as a recollection of knowledge gained in the questioning when the groups presented their insects. The flowers were then divided between the groups. The little scientists (groups) were asked to take apart the flowers and answer questions about them, this encouraged "real-life learning". Dissecting the flowers enabled the learners to gain first-hand experience with the real structure and elements of a flower. The facilitator asked questions like: Where do plants come from? What are seeds? How can insects help plants grow? Why are flowers colourful? to guide the discussions in the groups.

The structure of the plant was discussed within the dissection process and the learners had to differentiate between the leaves, stem, pollen and roots of each plant and share the information with the rest of the class.

Learners were asked to share their thoughts on the description of the insects and what other flowers they have in their gardens at home.

Activity 2: Bees making honey

Table 3.3: Illustration of the components in Activity 2

Activity 2: Bees making honey	
drama in education convention used	Teacher in Role and Role Play
Science topic covered:	The bee
Curriculum topic covered in the third term:	Topic 4: Plants and seeds
Predicted outcomes	☐ Identify the structure of the bee. ☐ Explain how bees produce honey.
Resources needed to do the activity	• Bottle caps (20) • 2 straws • Water • Plastic cup • Honey (optional) • Toothpick (optional)

Teacher in Role, and Role Play, were the two conventions predominantly implemented in this activity. The learners were greeted as little bees and the facilitator introduced herself as the beekeeper: "Good morning little bees. My name is Honey and I am the main Beekeeper at Honey Bee Farms. Today we are going to make some honey." Establishing the outcome of the activity allowed the learners to prepare themselves in the role assigned to them and to get them excited for the process. The learners were instructed to leave the classroom and go outside. The change of setting further excited learners as they were able to explore learning in an informal setting (Brantley, 2014). Brantley (2014) explained that learning in an informal setting, outside the classroom walls, evokes a sense of curiosity and creativity in learners, who start asking questions showing that the critical and analytical side of their brains are active, encouraging effective learning (Brantley, 2014).

The facilitator divided the class into two equal groups and instructed to line up in their assigned groups. The first four learners were taken out of the row and given the following instructions:

- Learners in the row received a bottle cap.
- Learner one was given a plastic cup with water in it and instructed to stand in front of the row.
- Learner two was given a straw and instructed to stand next to child one.
- Learner three was instructed to stand five big steps away from the row.
- Learner four was instructed to stand five big steps away from child three.

The structure of the learners is illustrated in Figure 3.5.

Figure 3.5: Representation of learners in the bee activity

Learner two was instructed to put the straw into the water and close the top of the straw using a finger, so that the water is held in the straw. The first learner in the row holds the bottle cap so that learner two can put some water into the bottle cap. The learner with the bottle cap was instructed to run to learner three and pass on the bottle cap. Learner three was instructed to run to learner four and pass on the bottle cap. Learner four was instructed to put the bottle cap in a formation on the floor and run to the back of the row. The cycle rotated and every learner had an opportunity to perform a different role.

The explanation of this activity could be challenging for the facilitator because there were numerous instructions. Careful planning and well-structured organisation of the activity was crucial to the success of the activity. Within the explanation of the activity the facilitator stepped out of the role of the beekeeper and into the role of facilitator. This enabled the learners to differentiate between the fictional and real-world setting. It also allowed the learners to know when they should take on the role of the bee and when they could be the learner. After the 'game' was explained, the facilitator took on

the role of the beekeeper again and motivated the bees to start buzzing for the race to start with the following words:

"Little bees are you ready to win some honey? Start buzzing and start your engines. The row of bees with the most bottle caps at the end of the race will be the winning team."

After the activity, the facilitator stepped out of role again and asked the learners to sit on the grass. The facilitator asked the learners what they thought the game represented and what part of the honey making process each part represented. The facilitator guided the answers to allow the learners to come to the following conclusions:

• The plastic cap represented the flowers in a garden.
• The water represented nectar in the flower.
• The straw represented the mouth of the bee that sucks up the nectar.
• The bottle caps represented the bee that carried the nectar from the flower to the other worker bee. As the bee flew in the air, the nectar in its tummy swilled around and thickened like syrup.
• Learner three took the bottle cap, like a worker bee would take the honey from another worker bee. Worker bee one, regurgitated the nectar into the mouth of worker bee two.
• Learner four represented the bees in the hive who built the honey comb.

After explaining the representation of the game, the learners were asked to explain the process of collecting nectar, reflecting on the knowledge that they had gained in the process, the importance of honey, and its edible value.

Activity 3: Marine animals

Table 3.4: Illustration of the components in Activity 3

Activity 3: Marine animals in their natural environment	
Drama in education convention used	Role play
Science topic covered:	Marine animals
Curriculum topic covered in the third term:	Topic 6: My community
Predicted outcomes	• Identify the importance of taking care of the environment. • Identify marine animals. • Differentiate between land and sea animals.
Resources needed to do the activity	▫ None

The facilitator addressed the class to gain clarity on the prior knowledge of the learners: "Good morning fellow explorers? Have you ever swum in the sea before? Can you tell me what you find in the sea? Would you like to see these fish up close?" The questioning evoked curiosity in the learners at the beginning of the activity and enabled the learners to share their experiences and knowledge about the ocean, in order to create a toolbox of information needed for the activity. Heathcote uses the term toolbox to describe the knowledge gained through shared prior knowledge (O'Neill, 2014).

Role Play was the main convention implemented in this activity. The learners took on the role of divers in the sea and were instructed to put on diving gear to go and swim in the sea. The ocean was the imaginary world (metaxis) that the learners explored to gain knowledge in the activity. Role play was guided by instructing the learners in the following manner: "First we will need to put on our goggles. Make your fists into two little circles (gestures the movement). Now put them on your eyes like this (gestures the action). Now let's put on our flippers so we can swim fast, because do you know that fish use their tails to swim very fast like a bullet (gestures putting on the flippers). And lastly, we should put on our breathing tool (gestures putting a snorkel in your

mouth). Did you know that fish can breathe under water? Do you know what they breathe with? They breathe with things called gills."

After the learners put on the ritualistic gear they were instructed on the activity. Learners were asked to freeze when the facilitator said freeze and swim out of the ocean. As soon as the learners got 'out of the ocean' they de-rolled to reflect on what they had seen in the ocean. The discussion was guided by questions from the facilitator such as: "Did you see the big shark? What was he eating? Did you see the whale? What did the whale have in its mouth? What animals did you see on the ocean floor?"

After the reflection, the learners were asked to 'jump back' in the ocean but they were instructed to look for specific elements and to report on them when they got out of the ocean. The third time the learners were instructed to jump back into the ocean, they had to ask some of the sea creatures questions and to tell the class what they had answered.

The facilitator played a role in the guiding process by guiding incorrect answers into more accurate knowledge. In this activity, questioning was used by encouraging the learners to correct their own findings and construct new knowledge.

Activity 4: Animal shelters

Table 3.5: Illustration of the components in Activity 4

Activity 4: Building animal shelters	
drama in education convention used	Rolling Role
Science topic covered:	Animals
Curriculum topic covered in the third term:	Topic: Pets
Predicted outcomes	• Identify domestic animals. • Explain the processes of taking care of an animal. • Demonstrate how to build a shelter for a pet.
Resources needed to do the activity	• Resources needed • 10 boxes • 2 Blankets • 4 bowls • Dog food • Any human food • Water • Chain

The facilitator greeted the class and addressed them as builders in this activity. The learners were divided into four groups using the colour card method. Prior to the start of the class, the facilitator put all the resources on a table, similar to a shop concept, with R10 price tags on each item. The visual representation of the table with the resources and price tags evoked the learner's sense of curiosity. Each group was instructed by the facilitator to build a doghouse for a new puppy. The learners were each given imitation R5 notes to buy the resources they needed to build the doghouse. The learners had to negotiate between an asset for the puppy and what was considered a luxury, drawing on a learner's problem solving and listening skills. The learners were only given limited funds, so they had to pair up and prioritise what resources were most needed. When the doghouses were completed, the learners were asked to explain how they had built the houses, which resources they had used,

and why. The learners from all the groups analysed each other's houses and gave critical feedback and methods to improve the house. After the feedback, the groups swopped and rebuilt each other's houses to make them more practical. When the houses were rebuilt, the groups had to present their changes and elaborate on the reason for the changes.

Activity 5: Reptiles

Table 3.6: Illustration of the components in Activity 5

Activity 5: Reptiles and their habitat	
drama in education convention used	Teacher in Role
Science topic covered:	Reptiles
Curriculum topic covered in the third term:	Topic: My community
Predicted outcomes	• Identify different environments in the community. • Identify different species in the environment. • Identify characteristics of reptiles. • Identify what reptiles eat.
Resources needed to do the activity	• Score board • Pencil • Cue cards

The facilitator took on the role of a game show host and addressed the classroom in the following manner: "Good morning girls and boys. I am Naynay and today we are going to play a little game." The class was then divided into three groups. The facilitator had prepared a scoreboard beforehand with a space left open for a team name. The groups were asked to give themselves each a team name relating to reptiles. The discussions on what the team name would be revealed prior knowledge in the groups and the construction of new and adapted individual knowledge. One learner in each group was asked to act out or mime a picture on a card using nonverbal cues. The following options were presented on the cards: baby crocodile, snake, lizard, tortoise, dam, river. As soon as a learner was able to guess the picture that learner took on the role of miming the next picture.

The next game in this activity was similar to the one played in the first activity, which made the explanation easier. The learners had to portray different reptiles using their bodies and discuss the function of each body part. The discussion was guided by the facilitator's questions during the representation of the reptiles.

Activity 6: Herbivores, carnivores, omnivores

Table 3.7: Illustration of the components in Activity 6

Activity 6: Herbivores, carnivores, omnivores	
drama in education convention used	Mantle of the Expert
Science topic covered:	Herbivores, carnivores, omnivores
Curriculum topic covered in the third term:	Topic: Food
Predicted outcomes	• Identify what food we eat. • Discuss where different food comes from. • Explain what healthy eating is. • Identify herbivores. • Identify carnivores. • Identify omnivores. • Discuss what different animals eat.
Resources needed to do the activity	• Cardboard • Colour pens • Pictures of animals

The facilitator addressed the class as knowledgeable farmers who had to assist her in feeding her farm animals. A poster-like structure was made with three doors that were able to open; on the first door there was a label 'Herbivore', on the second door the label read 'Carnivore' and the third door was labelled 'Omnivore' (see Figure 3.6)
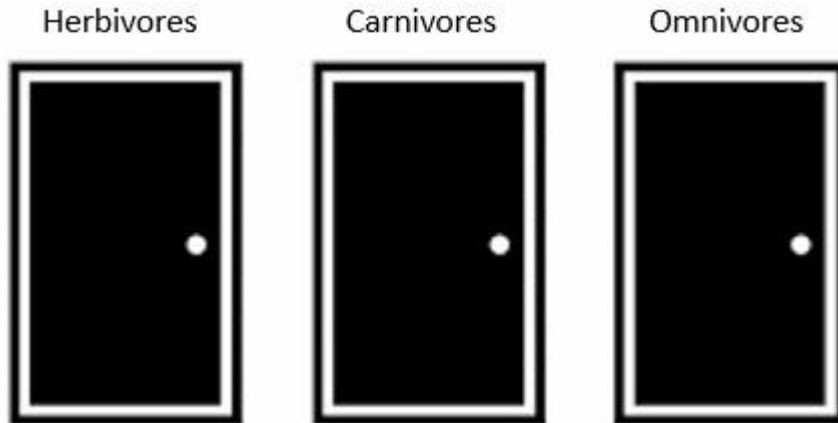
Figure 3.6: Representation of information on poster for herbivore carnivore and omnivore activity

Behind the 'Herbivore' door, there was a picture of fruit, grass and straw; behind the 'Carnivore' door there was a picture of meat; and behind the 'Omnivore' door, there was a picture of fruit, grass and meat. The facilitator gave each learner in the class a picture of an animal, asked them to open the doors one at a time, and put the picture behind the door that they thought the animals belonged to without explaining what criteria they had used. After all the animals were placed, the facilitator asked the learners why they had placed the animals behind that specific door and then the definitions of herbivores, carnivores and omnivores were discussed. Animals who had been placed behind the wrong door were also discussed. All the animals were divided among the learners again and this time they had to explain why they had chosen the specific door.

The methodology used to present the data collected from the feedback of the execution of the programme will now be discussed. No quantitative data was used, thus no pre- and post-tests, to show the success of the programme. The value and effectiveness of the programme was highlighted by analysing the feedback of the teacher's whose classes were taught with the programme.

3.5 Methodology

A qualitative research methodology was used in this study, according to Wiens, Kyngäs and Pölkki (2014), qualitative research is a type of scientific research that in general terms consists of an investigation that seeks answers to a question, and systematically uses a predefined set of procedures to answer the question, collect the evidence, produce findings that were not determined in advance and produce findings that are applicable beyond the immediate boundaries of the study.

A combination of the above definition and Taylor and Bonsall (2017) data management flow diagram was used as an instructional guide for the study's research path, refer to Figure 3.6.

Figure 3.7: Representation of the adapted flow diagram from Taylor and Bonsall (2017)

Wiens, Kyngäs and Pölkki (2014) found that qualitative research shares some of these characteristics, and seeks to understand a given research problem or topic from the perspectives of the local population it involves. In this study the focus is on the population of learners and teachers in a school setting. Qualitative research is especially effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of particular populations (Padgett, 2016). The strength of qualitative research is in its ability to provide complex textual descriptions of how people experience a given research issue. The teachers that were interviewed gave work experience and insight into the problems found in teaching the Life Skills curriculum. The school allowed for a convenient structural setting that served as a platform to implement the programme.

3.6 Sampling: Site selection

The study was conducted at an independent primary school in the northern suburbs of Johannesburg. There were 351 registered learners at the school in 2016, these learners are multicultural and multi-lingual, as classes are taught in both English and

Afrikaans. The available three grade 1 classes that were selected to participate in the programme; included two English classes and one Afrikaans class. The school was chosen because it was convenient, the researchers had established a good working relationship with the principal and staff at the school during previous research activities.

3.7 Sampling: Teachers' profiles

The three grade 1 teachers, whose classes were used for this study, were the sources of information throughout the study. I interviewed them prior to the implementation of the programme to gather insight into how the FP Life Skills curriculum can efficiently be taught. The teachers completed the generic observation sheets (refer to Appendix D) to reflect their views and observations of the activities and also participated in a reflective discussion after the programme to provide insight into their experiences of the programme as a whole. I drew up a profile reflecting the teachers work experience and background before the programme started, this information was gathered through email.

Teacher 1 comes from an Afrikaans background, attended an Afrikaans primary and high school and completed a teaching diploma at a teaching college in Johannesburg. This teacher has 30 years teaching experience and has taught in both English and Afrikaans as language of learning and teaching (LoLT) at private and public schools in South Africa. She is currently teaching an English home language class.

Teacher 2 comes from an English background, attended an English primary and high school and obtained a teaching degree from a university in Johannesburg. The teacher has 12 years teaching experience and has taught in both private and public schools in South Africa. She is currently teaching an English home language class.

Teacher 3 comes from an Afrikaans background; attended an Afrikaans primary and high school and obtained teaching and Honours degrees at a university in Pretoria. The teacher is currently busy with a Master's degree in Psychology which enabled a Psychology perspective to be provided when evaluating the programme. The teacher has 20 years teaching experience and has taught in both English and Afrikaans at

private and public schools in South Africa. She is currently teaching an Afrikaans home language class.

All three teachers gave rich experience-driven insights into the teaching and learning processes utilised during the study and how the programme addressed, or failed to address, the predetermined outcomes.

3.8 Sampling: Learners' profile

The learners in the school come from diverse cultural, economic and linguistic backgrounds. The programme was implemented in two English and one Afrikaans class, the learners were aged between six and seven years. The first English home language class consisted of 12 learners, the second English home language class consisted of 10 learners and the Afrikaans home language class consisted of 8 learners.

3.9 Methods of data collection

The data collection methods were based on observations, interviews and video recordings. Each individual teacher was interviewed before, during and after the implementation of the programme.

3.9.1 Description of the teachers' pre-interview questions

The pre-interview was conducted prior to the implementation of the integrated teaching programme. Each teacher was interviewed individually and asked a series of 13 questions (see Appendix B) directed at the teaching method and success of teaching the FP Life Skills curriculum. The interviews were recorded, transcribed and analysed using coding (Henning, 2004). The overarching attitude from the teachers was demotivation and frustration. The categories that emerged from the interviews are discussed in Chapter 4.

3.9.2 Teacher observations

The teachers were asked to complete an observation form while the activities took place. The form consisted of two sections: Section One, a reflection table which presented the following statements seen in Table 3.8.

Table 3.8: Reflection table

	Strongly agree	Agree	Do not know	Disagree	Strongly disagree
The learners enjoyed the activity.					
The activities reach the prescribed outcomes.					
The learners' prior knowledge was needed for this activity.					
drama in education convention is the best method to teach this content.					
I will definitely use drama in education conventions when teaching Life Skills.					

After the teachers had observed the activity, they completed the table by ticking the appropriate boxes. The teachers had six of these sheets to complete, one for each of the six activities. The information from the reflection table was captured and presented in Chapter 4.

Section Two of the observation sheet, consisted of five open-ended sentences that the teachers had to complete describing their opinions regarding the activities. The open-ended sentences were:

The children participated in the activity

I like this activity

I did not like this module

If I were to use this activity, I would

I think drama in education is

The teachers' responses to the open-ended sentences were coded and analysed (Strauss & Corbin, 1999).

3.9.3 Teachers' post-interview

The post-interviews were conducted as a semi-structured focus group interview with all three teachers in attendance. The post-interview was a discussion of what the teachers experienced throughout the programme, which was recorded and transcribed to be coded. The categories that emerged from the discussion are discussed in Chapter 4.

3.9.4 Pre-interviews with learners

The pre-interview was conducted prior to the implementation of the integrated teaching programme. Three learners from three classes were interviewed individually and asked a series of six questions (see Appendix B) based on school related activities, which were recorded and transcribed to be coded in Chapter 4. The categories that emerged from the interviews are discussed in Chapter 4.

3.9.5 Post-interviews with learners

The post-interviews consisted of a group discussion with all the learners from the three classes. The post-interview was a discussion of what the learners experienced throughout the programme, which was recorded and transcribed to be coded. The relevant categories that emerged from the discussion are discussed in Chapter 4. The data generated from these observations and interviews were analysed using open coding.

3.10 Data analyses

Open coding, according to Henning (2004), is the categorisation and naming of data that share the same phenomena. Data is separated into discrete parts using 'what, where, who, when and how' type questions. Open coding thus fractures data into codes and categories, with the aim at developing substantial codes classifying categories under related themes that could be used to sort findings (Strauss & Corbin, 1999). The themes generated from the data were deduced from the responses of the

participants during the interviews (Strauss & Corbin, 1999). The themes which precipitated from the coding will be discussed in Chapter 5. The following tables show the categories that emerged from the pre- and post-interviews as well as the observation protocols completed by the teachers.

Table 3.9: Categories that emerge from pre-interviews, post-interviews and observation protocols

Categories from the pre interviews	Categories from the post interviews	Categories from the observations
Systemic limitations of the grade 1 Life Skills curriculum.	Programme addresses multiple needs in teaching Life Skills	Teachers noticed the benefits when learners participate in the activities.
Teaching does not accommodate multiple learning styles.	Characteristics and skills needed to present the programme	Characteristics and skills needed to present the programme.
Teaching should emulate real life.	Willingness of the learner to participate in the activities	Alignment of programme resources to curriculum specifications is needed.

The observation protocol was analysed using a point system to display the data collected from the first part of the observation protocol. The table below shows how the point system worked.

Table 3.10: Table representing the point system used to display section one of the teacher's observations

Opinion	Points allocated
Strongly agree	5
Agree	4
Do not agree	3
Disagree	2
Strongly disagree	1

If a teacher checked the strongly agree box, 5 points were allocated and if the strongly disagree box was ticked 1 point was allocated. All the marks were calculated to allocate a total to each teacher. An average mark was then calculated and displayed in the bar graph that can be viewed in Chapter 4. The marks allocated to the teacher's choice does not contribute a more or less value to the answer, it was merely chosen to visually represent the data in a graph. The second section of the observation protocol was analysed through coding.

In order to authenticate all of the above information the trustworthiness, reliability and validity of the information was investigated before the analyse procedure started.

3.11 Trustworthiness, reliability and validity

According to Henning (2004), validity and reliability are key aspects of a study and attention to these aspects can assure that a research study is deemed reliable by fellow researchers. The validity and reliability of a study is vital in a qualitative study as the reader's opinion and own perspectives can cloud the interpretation of the study. Reliability aims to produce consistent results from the instrument, the reliability methods used in this study is both parallel forms and inter rater reliability (Lewis, 2015). Lewis (2015) describes parallel forms as measuring a hypothesis using two or more groups of people and inter rater reliability as method where different people rate the instrument (activity). In this study, the programme was implemented in three grade 1 classes and the three grade 1 teachers rated each activity using an observation sheet as discussed above, all three teachers' feedback was taken into consideration to obtain a consistent supposition. Even though the three teachers were present in the classroom they did not participate in the activities in any way. The study was tested in one school, but the three groups consisted of both Afrikaans and English learners and was presented in the respective languages.

Lewis (2015), states that the validity of a study is determined by the accuracy of the instrument used. The study implemented construct validity, explained by Lewis (2015), which defines how well a test or experiment measures up to its outcome, to ensure the validity. In the third generation CHAT the outcome of the study was mentioned, to

develop holistic learners who can function independently in the 21st century. Extensive research showed that drama in education conventions as well as the nature of science align with the predetermined outcomes of the study.

The results of this study can be deemed trustworthy as it complies with the selected theories on reliability and validity.

3.12 Ethical considerations

When conducting research in the Social Sciences one has to avoid causing inconvenience or harm to the participants, while still endeavouring to gain new knowledge. Therefore, measures should be taken to ensure ethical conduct. Ethics can be described as a principled sensitivity to the rights of the participants in a study (Cohen, 2017), which places a limit on the choices the researcher makes in the quest to find new truths. In this study informed consent was given from each participant in the programme, the fieldwork was planned to avoid harm to any participant and this stance was extended through the protection of confidentiality in the reports.

3.12.1 Informed consent

Consent forms were sent out prior to the implementation of the activities explaining the aims of the study as well as itemising all the technical aspects the learners would be exposed to. All participants' information has been kept anonymous. The comments made by the teachers and learners in the interviews were not personalised and treated with respect and justice (Taylor & Bonsall, 2017). The teachers teaching methods were not criticised but analysed to contribute to the focus of the study. Ethical clearance was obtained for this study (refer to Appendix G), teachers and learners voluntarily participated in the study. Teachers and learners were informed that they could withdraw from the research at any stage.

A broad but descriptive overview of the study was discussed with the learners, their parents and the teachers to inform them of what would be expected of the participants and to obtain mutual respect (Taylor & Bonsall, 2017). The procedures, benefits and risks, according to Taylor and Bonsall (2017) no coercion and non-manipulation, were

also explained and written consent was obtained to use the participant's answers in the study.

3.12.2 Freedom to withdraw

Prior to the completion of the questionnaires and participation in any interview, the participants were informed that they could withdraw from the study at any time they wished.

3.12.3 Confidentiality, anonymity and privacy

The researcher ensured the privacy and protection of the participants at all times. According to Johnson and Christensen (2008), privacy refers to the access other people have to information about a person. One needs to be sensitive to the information that the participants divulge in such a study. The anonymity of the participants has been protected by omitting any names and using pseudonyms when referring to any participant. All information provided was treated as confidential, only being shared with the supervisors of this study. After the recorded interviews were transcribed it was saved on a cloud server which is password protected, only myself and my supervisors have access to it. The transcribed documents and questionnaires are kept in a secure place until their destruction (Richards & Schwartz, 2002).

3.13 Conclusion to chapter

As a conclusion the flow diagram in Figure 3.8, shows the path the study followed.
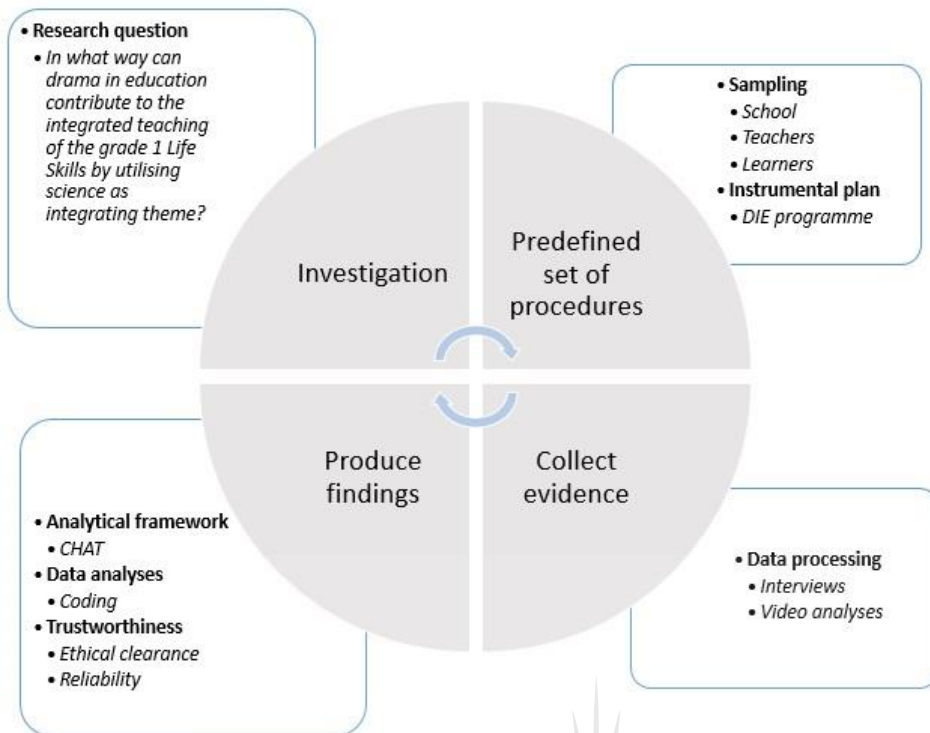
Figure 3.8: Representation of the adapted combined flow diagram from Wiens, Kyngäs and Pölkki (2014) and Taylor and Bonsall (2017)

In Figure 3.8 the grey blocks represent Wiens, Kyngäs and Pölkki's (2014) definition of qualitative research; the blue bold headings represent Taylor and Bonsall (2017) data management flow diagram that is used to map out the design of a quantitative study; and the italic writing is a representation of how the blue and yellow blocks apply to the study. Each entity will now be discussed individually.

Investigation that seeks answers to questions: The investigation of this study began with concerns regarding the FP Life Skills curriculum. It was decided to create a programme that will integrate the Life Skills curriculum. The formulated hypothesis was that exposure to the integrated programme will cause learners to be educationally and creatively engaged in the presented scientific activities to gain skills and knowledge to be effective citizens of the 21st century. The following research questions arose from this investigation: "In what way can drama in education conventions contribute to the integrated teaching of the grade 1 Life Skills curriculum?"

This study systematically uses a predefined set of procedures to answer the questions: A programme was designed using drama in education and science concepts as integrating tools to teach the Life Skills curriculum. The sampling used in the study is from both the teachers and the learners in order to gain insight into how the Life Skills curriculum is currently taught and the challenges that the subject holds for teachers.

Collects evidence: Pre- and post-interviews, as well as observation protocol was followed to collect evidence of the challenges in teaching the Life Skills curriculum, the perception of the success of each activity and feedback regarding the programme as a whole.

Produces findings that were not predetermined: The study made use of the predefined literature and information gathered from the interviews to design a programme aimed to address the issues identified in the previous steps. The outcomes of the programme's success and reliability were not predetermined. CHAT was used as an analytical framework to view the collected data from a social constructivist perspective and coding was implemented to analyse this perceived data.

Produces findings that are applicable beyond the immediate boundaries of the study. These results are discussed at length in the next chapter. Boundaries and limitations to the study emerged and will be discussed in Chapter 5 of the study and addressed in further studies.

Chapter 4 Results

This chapter presents results of the pre- and post-interviews, as well as the observation protocol. These results were formulated by extracting codes from the data and creating suitable categories to discuss the teacher's and learners' experience of the drama in education programme. This chapter discusses the data analysis process from 'raw' data to coherent themes and the patterns evident from the categories. In this chapter the data generated is presented from the analysis of the pre- and post-interviews and the observations as categories and then condensed into themes that will be discussed in Chapter 5. The interviewed teachers are referred to as Teacher 1, 2 and 3 to ensure their anonymity as discussed in the ethical clearance paragraph of this study (Chapter 3 Paragraph 3.12). In Chapter 3 Paragraph 3.7 the profile of the teachers is discussed to provide background to their responses. The accompanying diagram (Figure 4.1) displays the process used to analyse both interviews and observation protocol.
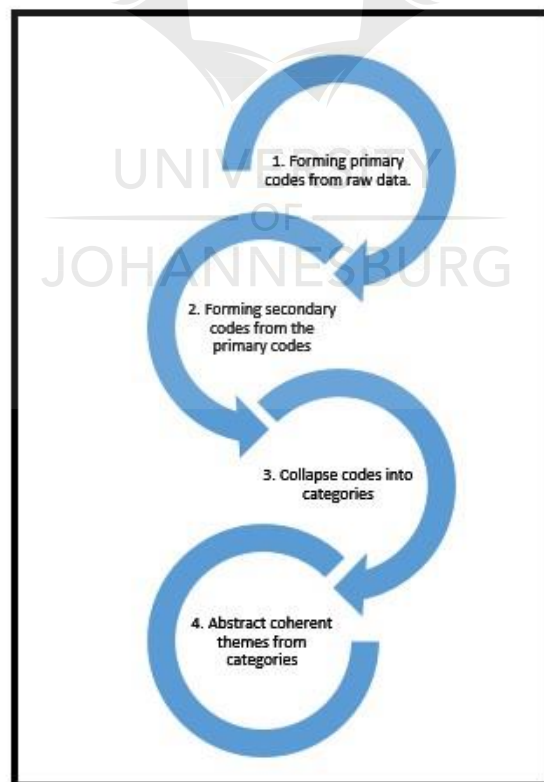
Figure 4.1: Illustrating the analysis process of the raw data retrieved from the interviews and observation protocol

An example of the process of the coded data for both interviews and observation protocol is shown in a flowchart from one theme 'backwards' (in reverse) to raw data. This strategy was used as one way of strengthening the reliability of the process of analysis.
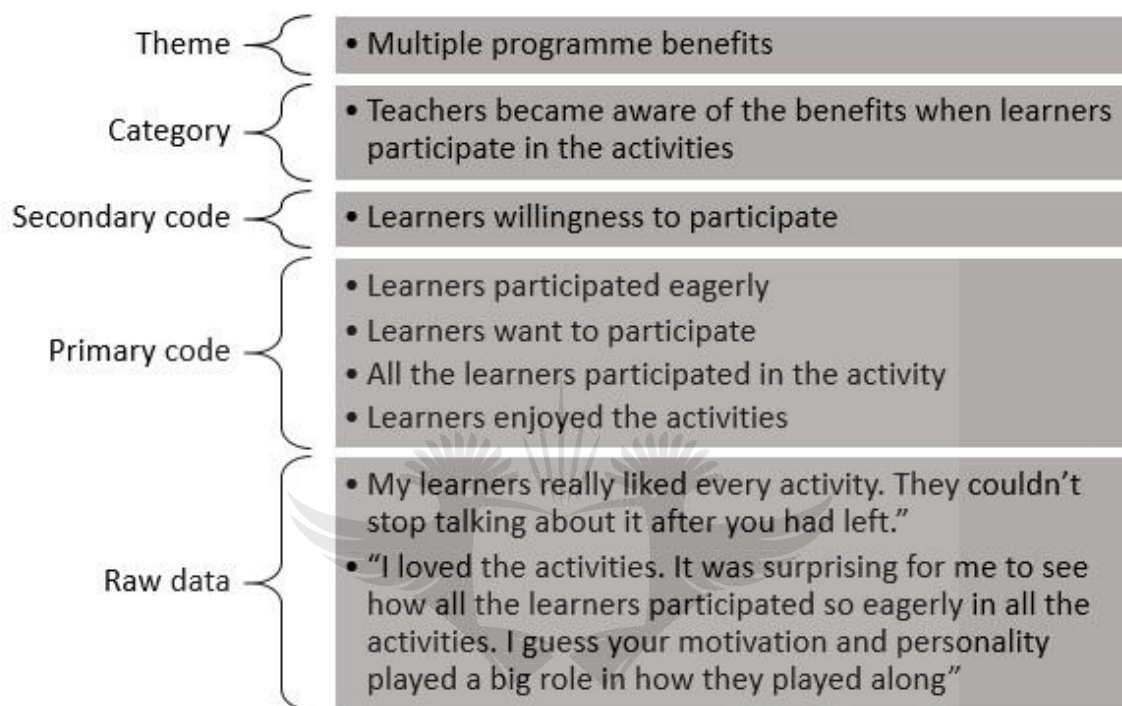
Figure 4.2: An example of how data was analysed and checked from the themes back to direct speech.

In Appendix C, an Excel spreadsheet of all the gathered data following the above example's, Figure 4.2, format is provided.

4.1 Categories from the pre-interviews

The pre-interviews (refer to Appendix B) with the teachers show how the teachers perceived the Life Skills learning area before the implementation of the programme and their beliefs and opinions on the teaching of Life Skills in grade 1.

Table 4.1: Categories, primary and secondary codes, and themes of the Preinterviews

Category	Secondary code	Primary code
Systemic limitations of the Grade one Life Sciences (LS) curriculum has limitations caused by the ridged architecture of the curriculum document guidelines.	The effect of teacher's tertiary education on their teaching of LS	Tertiary education does not prepare teachers for LS.
		Tertiary education does not prepare teachers for LS.
		Tertiary education does not prepare teachers for LS.
	Difference between Private and Public schools	Difference in Private and public schools.
		In government schools some learners lack behind and never have time to catch up.
	Not enough time to teach adequately	Move to fast in the FP.
		Lots of work in a short space of time.
		No focus because of time.
		Time constraint differ in Public and Private schools.
		It is difficult to learn real-life content because of time.
		Teachers use time allocated for LS to teach math.
		Time is managed according to the CAPS document.
		Specific times are allocated for specific subjects.
		More time is allocated for math and reading than LS.
		Time is managed according to the CAPS document.
		More time is needed to focus on LS.
		CAPS limits the amount of science thought in the FP.
	Importance of foundation phase for the learning of "basic" skills	Need to know the content before moving on.
		Basics need to be taught in the FP.
		If the basics in FP is not grasped the rest crumbles.
		Basic concepts are important in the FP.
		Basic content knowledge forms the foundation for FP.
		LS in Grade one is very basic.
		LS in Grade one is very basic.
		Basic knowledge prepares learners for IP.
		Basic knowledge prepares learners for IP.
	Challenges with the current teaching system	FP is an old system.
		New system is needed for today's kids.
		There is a big gap from gr 3 to 4
		Schools with smaller classes tend to have more time to focus on the individual learner.
		There is a big focus on Math's in the FP because the government says there is a problem with it.
		In-between everything drama and art is integrated.
		LS is very repetitive.
Teaching methods often do not accommodate multiple learning styles.	Not accommodating multiple learning styles	FP advantages curtain learners in the school.
		FP system is learners specific.
		FP does not cater for creative learners.
		Different learners experience LS differently.
	Learners' own background influence their learning	Background of the learners play a big role in how they learn.
		Language plays a role in the learning process.
		learners' upbringing effects their approach to LS.
		Learners with good general knowledge enjoy LS more.
	Grade one learners' profile	Learners in the FP are very spontaneous.
		FP learners are honest.
		FP learners are creative.
		FP learners are fun.
		Grade ones are enthusiastic about school.

			FP learners are very naïve and honest.
			FP learners are very eager to learn and participate in activities.
			Learners like to go home and tell parents about their lesson if it is interesting.
			PF learners like to learn creatively.
			LS helps learners think actively and creatively.
			Learners enjoy LS.
			Learners enjoy LS.
			Learners enjoy LS.
			Learners enjoy active learning.
		FP aims to generate holistic thinkers	Development of a holistic learner is important in FP.
			LS is important because it contains a vast variety of learning areas.
			Learners must be thought holistically.
		Importance of using real-life learning	Doing things physically helps develop creativity.
			Learners need to know what is right and wrong.
			FP learners need a lot of help with general LS.
			You need real-life situations in all subjects to know how to function in it.
			Bringing real life into every lesson takes a lot of time.
			Learners learn life etiquette in the classroom.
			LS is very important because it teaches about life.
			Life Skills is a subject that deals with real life.
			LS broadens the learners' knowledge of the life.
			LS give learners more knowledge about the world around them.
			LS teachers' learners to look after the world.
			LS are thought in LS.
		The effect of active learning methods on learners	Keep kids interested.
			LS help the learners to grow holistically.
			LS help learners to be more inquisitive.
		FP aims to generate holistic thinkers	Development of a holistic learner is important in FP.
			LS is important because it contains a vast variety of learning areas.
			Learners must be thought holistically.
		Importance of teaching the Life Skills content	LS is important because it is the beginning part of science, biology and history.
			some subject requires so much attention that others are left unattended.
			LS prepares learners for biology, science and history in the IP.
			The second term deals with science in the FP LS.
			The third term is science focused.
			Not much culture in LS.
		Exam setting is not preferred	Learners do not like the setting of a formal exam.

Category 1: Systemic limitations of the grade 1 Life Skills curriculum has limitations caused by the ridged architecture of the curriculum document guidelines

The participating teachers have more than 10 years teaching experience and highlighted their experience with differences between teaching at a private and public schools. Challenges in public schools are often due to the large numbers of learners per class, which results in teachers exhausting the majority of their time teaching the entire class, with insufficient time left for individual interaction.

Teacher 2 expressed:

> "It often depends on the school and where the learners come from. Often in a school like this because it is small classes and the learners that struggle have support form you know remedial teachers and there is enough time to help the specific learners. In a bigger maybe government school where the classes are bigger and the teachers are rushed and not all the learners speak the language that they are educated I they fall behind and they never quite catch up in the intermediate phase so ya I think it depends on the school. I previously taught at a government school and the majority of my school where second language speaking and their reading was automatically just behind from where it should have been. Then they sort of hit grade 4 and they had to do learning subjects like history and geography and their reading is not even up to par and to do a subject like that it needs to be."

It was evident that the neglected teaching of Life Skills has a prodigious effect on the future of a child's education. The challenge is the strict time distribution set out by the curriculum and there is seldom enough time to teach adequately.

As the teachers explained (Teacher 2):

> "I feel it's quite good but they want us to move a little fast. We sometimes feel there is a lot of work they want us to cover in a short space of time so we do try and slow down a little bit. The stuff that we are meant to assess at the end of

term you know it's a wide variety instead of focusing on one section and making sure that is covered we do a little bit in this term and they should be focused closer together so that if we do time then we focus on it for as long as it takes to properly learn it before we move on to the next section.."

This results in teachers not being able to focus on learners who fully comprehend the taught concepts, they choose to rather teach all of the content as prescribed by the curriculum on time. The interviewed teachers were adamant that the FP should focus mainly on the learning of 'basic' skills.

Teacher 2 explained that:

"Basics I would say are the most important, because if your foundation is not strong the rest will crumble."

The lack of teaching time in Life Skills is, however, not the only problem explicated by the teachers. Teachers explained that their tertiary education had a great effect on their teaching methods and the way in which they approach Life Skills in the FP. One of the teachers commented that

(Teacher 2)

"I actually can't remember having to do any Life Skills stuff."

The comments from the teachers gave the impression that there was minimal focus on the content of Life Skills in their tertiary education. The overall message that was attained from the pre-interview indicated that there are numerous challenges with the current teaching system, which has inadequately developed over the past 10 years.

(Teacher 1)

"I think currently the FP system is something like an old system and today's kids are not fitting into the box of the old system and we need to devise something similar just to keep them interested."

This study does not necessarily problematize the content and time allocations in the curriculum but rather the current architecture of the school system. The programme aimed to integrate the Life Skills third term curriculum to enable learners to direct their own learning while attaining the needed 21st century skills.

Category 2: Teaching methods often do not accommodate multiple learning preferences

The teachers frequently mentioned the fact that the school system is currently focused on auditory, linguistic and mathematical learning styles.

(Teacher 3)

> "I think the education system is set up in a way that advantages curtain learners in the school. For some learners the curriculum is very easy and they cope very well with all the knowledge. But other learners, like more creative learners are not always catered for. We try to accommodate those learners in our school because we have time. But in other schools' teachers don't have the time to focus on learners that learn in a different way."

(Teacher 3)

> "It often depends on the school and where the learners come from. Often in a school like this because it's small classes and the learners that struggle have support form you know remedial teachers and there is enough time to help the specific learners. In a bigger maybe government school where the classes are bigger and the teachers are rushed and not all the learners speak the language that they are educated I they fall behind and they never quite catch up in the intermediate phase so ya I think it depends on the school. I previously taught at a government school and the majority of my school where second language speaking and their reading was automatically just behind from where it should have been. Then they sort of hit grade 4 and they had to do learning subjects like history and geography and their reading is not even up to par and to do a subject like that it needs to be.".

South Africa is a multicultural country, reflected in the demography of learners in the participating school. The teachers advocated that there is diversity in each classroom, which require the teachers to design teaching events that cater for various learning backgrounds and abilities. It is apparent that if teachers do not accommodate a wide variety of ways of learning then they will not serve the needs of a multicultural South Africa.

Category 3: Lesson design should ideally emulate authentic learning styles It was evident from the interviews that there was an overarching focus on the use of real-life learning as a driving force for teaching, as explained by the teachers, it is the type of learning that prepares the learner to function independently in everyday life.

(Teacher 3)

"In most instances yes. They learn a lot of life etiquette in the classroom and we try to always relate what they learn to the real-life setting. But it is sometimes difficult because of time. We first try and teach them content before we can relate it back to the real world."

(Teacher 3)

"I think to prepare the learners for the learning subjects like biology, science and history in the intermediate phase as well as keep them active and thinking creatively"

Teachers explained that Life Skills is the best platform to incorporate active learning as the subject teaches learners about the world that they live in, highlighting the importance of the learning area.

There was an overarching focus on the profile of the grade 1 learners in the pre-interview. It was frequently mentioned that learners remember what they are taught when the lesson had an element of fun to it. The teachers agreed that the grade 1 learners in the school are positive and enthusiastic about learning and there is a mutual respect among the learners and teachers. Teacher 3 mentioned that the learners like to go home and tell their parents about their day and what they learnt in

the lesson that day. Teacher 2 advocated this by saying that parents regularly mention, on parents' evenings, how their learners tell them all the interesting things that happened during the day. There was a mutual understanding among the teachers that the FP should aim to develop holistic learners that can function in the 21st century.

4.2 Categories from the observations

The analysis of the data generated from the observations show the teacher's opinion of the programme and how they felt the activities enhanced the learning and teaching of the Life Skills concepts. As discussed in Chapter 3, a point system was used to analyse and display the data collected from Section 1 of the observation protocol. Graph 4.1 shows the average mark that was calculated to present the analysed data of the first section of the observation sheet.

Graph 4.1: Teachers results from the observation sheet Section 1
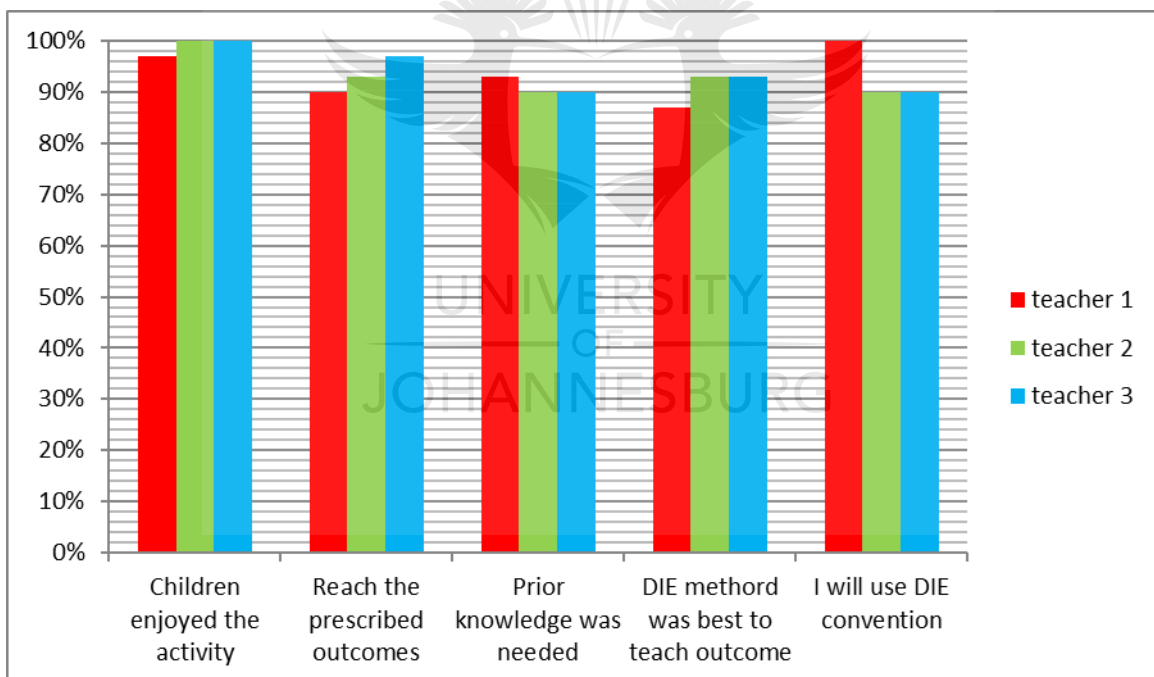
The results were analysed from Section 1 and Section 2 of the observation sheets in three categories shown in the Tables below.

Table 4.2: Categories, primary and secondary codes, and themes of the Post interviews

Category	Secondary code	Primary code
Teachers became aware of the benefits when learners participate in the activities of the programme	Learners' willingness to participate in activities	Learners participated eagerly
		Competition encourages learners to get involved
		Learners want to participate
		All the learners participated in the activities
		All of the learners could be involved
		All the learners took part in the activities
		learners were actively involved in the activities
		Learners could ask questions
	Learners have a positive attitude towards activities	Learners enjoyed the activities
		Learners are enthusiastic
		Learners enjoyed the activities
		All the learners enjoyed the activity
		Learners enjoyed the dramatization
		Activities got learners excited
	Learners' teaching style preference	Learners like to build stuff
	Skills used by the learners in the activities	Learners could use their imagination
		Problem-solving skills were needed
		liked the use of imagination
		Work together as a team
		Like the use of dramatization
		Learners own creative ideas were used
Teachers identified certain characteristics and skills needed to present the activities in the programme	Teaching skills needed to do activities	Encouragement and motivation are needed from the teacher
		Learners were all included
		Group activities were implemented
		Excellent control over the class
		Attention was kept throughout
		Activities are practical
		Instructions were clear
		Questioning technique was good
		Activities were structured
		good classroom management
	Importance of learners using their prior knowledge	Prior knowledge was used
		Learners had to use prior knowledge rather than be given knowledge
		Learners could share their knowledge
		Space available was used optimally
		Relied on learners' prior knowledge
	Optimal Learning environment for Gr ones	Liked to take the learners outside
		Nice to learn in a different environment

	Importance of using different teaching aids	Like the use of visual aid
	Optimal use of classroom space	Classroom was used to its full potential
	Recommendations to improve activities	More visual material could be implemented
		Worksheets was given in English to Afrikaans learners
		Keep activities the same
		Work on worksheet setup
Alignment of the resources used in	Successful reaching of aims in	Fully understand the concepts and grasp it quickly
The architecture should the aligned with the curriculum guidelines	the caps document	learnt new content
	Current way of teaching LS	Very basics was learnt in the past

Category 4: Teachers became aware of the benefits when learners participate in the activities of the programme

The teachers noted in their observations that the learners were eager to participate in all the prescribed activities of the drama in education programme and the learners had a positive attitude towards activities.

(Teacher 2)

> "I loved the activities. It was surprising for me to see how all the learners participated so eagerly in all the activities. I guess your motivation and personality played a big role in how they were motivated to play along. I have always enjoyed the theory of active learning but it was always difficult for me to find the time to incorporate it into my lesson. But I see now that if you plan and know what sort of activities to use it can definitely be a great way to teach learners."

Graph 4.1 shows that 97% of the answers given by Teacher 1 confirm that the learners enjoyed the activities and 100% of the answers given by Teacher 2 and 3 support this. The activity that was most frequently mentioned by the teachers in this regard was the bee activity (refer to Chapter 3 Paragraph 3.4). In this activity the learners had to play a game to see who can collect the most water (nectar). The process of a bee producing honey was symbolically represented and embodied by the learners. The teachers

agreed that this activity allowed the learners to learn and understand a complex process in a short period while having fun.

(Teacher 3)

"I have always found that this is a difficult concept for learners to understand so we just give a very basic 'bees make honey' lesson. This helped them fully understand the process and they all grasped it so quickly and accurately."

(Teacher 2)

"All the learners knew what was going on and could understand the relationship between the game and the process."

The learners were able to make the connection between the symbolism and analogies in the game and the honey production process. Every activity in the drama in education programme was designed to portray an authentic real-life setting. The aim was to create a learning environment that is both fun and educational.

(Teacher 2)

"When learning is fun learning is learning."

The teachers agreed that learning through play is more effective than just learning to remember. The teachers were impressed to see the skills used by the learners in the activities, including problem solving, analyses of their actions, use of imagination, utilisation of prior knowledge and creativity.

(Teacher1)

"They all used their imagination. They could do it, because they had preknowledge of these sea animals."

As seen in the Graph 4.1, 90% of Teacher 2 and 3's answers show that they agree that the use of prior knowledge is evident in the activities, 93% of Teacher 1's answers supports this. Each subsequent activity built on the knowledge gained in the previous activity much like a scaffolding structure, which is a result of integrating teaching

method used in the programme. The programme was set to interconnect content learnt rather than separate the knowledge gained.

(Teacher 3)

"They were required to use their own knowledge of different reptiles to both act out and guess what they were."

The reptile activity (refer to Chapter 3 Paragraph 3.4) involved learners explaining to their peers, what they saw on a picture using nonverbal cues. Learners had to embody the picture on the card and use the knowledge they had to convince their peers. The teachers advocated that prior knowledge is important to make connections with content. The teachers established that curiosity sparks a willingness to want to know more about the things that a learner already knows; thus, using prior knowledge as a tool to seek more information. Every activity in the programme relies on the knowledge and skills gained in the previous activity.

Category 5: Teachers identified certain characteristics and skills needed to present the activities in the programme

The teachers frequently commented on the skills needed to facilitate the programme.

(Teacher 1)

"[The instructor] had to encourage and motivate [the learners] to feel they could do it."

The teachers agreed that motivation and engagement is one of the key roles of the teachers in the activities. This programme is designed to help teachers who are motivated to incorporate 21st century learning. Learners are curious to learn new things says Teacher 1, Teacher 3 adds that this is because old things do not interest them. The teachers agreed that the use of drama in education conventions helped to guide teachers in the engagement process. Teacher 2 noted that because the learning environment is so enjoyable for the learners it is easy for them to forget that they must learn something. As seen in Graph4.1, 87% of Teacher 1's, 93% of Teacher 2 and

87% of Teacher 3's answers showed that they agree that drama in education is the best method to teach the content, it is clear that it is a preferred method of teaching. 100% of Teacher 1 and 3's observation agree that they will use drama in education in their own classroom and 90% agreed answer from Teacher 2 shows that teachers do feel like it can be utilised in reality.

The teachers echoed that the activities gave the learners the opportunity to utilise different learning environments, which include playing outside and exploring different parts of the classroom other than their desks or the carpet etc.

(Teacher 3)

"I also really liked that we took the learners out of the classroom. It's so nice for them to be learning in a different environment."

However, when the activities were done inside the classroom, there was optimal use of classroom space.

(Teacher 2)

"The whole space in the class was used as if the whole class became the ocean."

This enabled the teachers to see how a classroom can be used as a teaching tool/aid.

Category 6: Alignment of the resources used in the curriculum architecture should the aligned with the curriculum guidelines

As seen in Graph 4.1, 90% of Teacher 1, 93% of Teacher 2 and 97% of Teacher 3's answers showed that they agree that the activities fully achieved the outcomes set out by the curriculum. This programme was designed in accordance to the outcomes and objectives set out by the Life Skills curriculum, to ensure that the programme could work and be implemented in any government school. It was mentioned that the outcomes were often met in unconventional and creative ways.

(Teacher 1)

"The outcomes often emerged out of the activities without it being forced or sometimes even planned out."

(Teacher 2)

"Creativity challenges you as a teacher to think outside the box and think of new and innovative ways of doing things."

The teachers agreed that embodied learning is an effective way to learn in a physical manner.

(Teacher2)

"The programme helped them fully understand the process and they all grasped it so quickly.''

These comments from the teachers show that the outcomes were not forced into the lesson but rather left to be discovered by the learners. Although there were predetermined outcomes to the lesson the lesson was not designed around reaching the outcomes.

(Teacher 3)

"The outcomes were never met by instructional methods but rather exploratory and analytical methods done by the learners."

It was mentioned that, critical thinking and problem-solving skills are developed and utilised, which prepares the learner for life in the 21st century.

4.3 Categories from the post-interview

The post-interviews with the teachers show how the teachers viewed the integrated teaching of grade 1 Life Skills curriculum after the implementation of the programme and their beliefs and opinions.

Table 4.3: Categories, primary and secondary codes, and themes of the Observation protocol

Category	Secondary codes	Primary codes

		Liked every activity.
Programme addresses multiple skills in teaching LS	Preserved benefits that teachers identified	Putting the theory of active learning into practice.
		Planning of activities is of utmost importance.
		Method to the chaos.
		Bee activity was the favourite.
		involved the learners.
		Bee activity was the favourite.
		Bee activity was the favourite.
		want to utilise the programme.
		teachers want to utilise this means of teaching in all subjects.
		Utilise the teaching method in all subjects.
	Optimal Use of time	Optimal use of time in teach LS content.
		Optimal utilisation of time.
		Activities taught learners a lot in less time.
		Time was utilised optimally.
		Save time.
		Focus on more themes.
		Activities save time.
	Use of prior knowledge to reach objectives	Used knowledge gained in the activities I other subjects.
		Learners could build on prior knowledge.
		Interesting to see the use of prior knowledge.
	Programme reached all the objectives in LS CAPS document	Covering the whole term content in 9 1-hour lessons.
		More than the limited aims in CAPS were met.
		aims from previous and coming terms were met.
		All the aims set out by caps and more were met.
		Some lessons met outcomes in a hidden way.
		All the aims set out by the caps document were met.
		Questioning helped to see how the aims were met.
	Recommendations from teachers of how to improve programme	Work on the technical aspects of the activities.
		Incorporate more visual aid.
		Technical aspects of the worksheets.
Teachers identified certain characteristics and skills needed to present the programme	Role of the teacher in teaching activities	Motivational personality engaged learners.
		New vision and perspective are helpful.
		Like the theory of using active learning but do not know how to utilise it in reality.
		Share knowledge gained, with teachers.
Increased willingness of learner to participate in the activities	Programme is child centred learning	Child-centred learning was utilised.
	Teachers view of how learners preserved the activities	Continues engagement in what was learnt.
		Activities are enjoyable and fun.
		learner's egger participation in the activities.
		Learners enjoyed all the activities.
		Learners could do and understand the activities.
		Participated with enthusiasm.

		Learners utilised creativity and active learning to meet outcomes.

Category 7: Programme addresses multiple skills in teaching Life Skills The teachers spoke highly of the perceived benefits that they identified in the programme.

(Teacher 3)

"They couldn't stop talking about it after you left and they would keep asking when you are coming back."

The benefits ranged from the content being taught efficiently to the excitement and appreciation of the learners. There was a great appreciation for the use of prior knowledge to reach the objectives.

(Teacher1)

"In the classes after you left the learners even used what they learnt in the games to answer questions in other lessons."

Spontaneous connections were made between the different subjects using the skills learnt in the programme. The programme managed to reach all the objectives in Life Skills curriculum as evidence by the response of Teacher 1:

"I actually think that they learnt more than those limited aims."

The activities of the programme are designed to be learner centred; although the set outcomes are used as a guideline for the teacher the learners determine to what extent those outcomes are met. Teacher 3 mentioned that the learners are able to progress their own prior knowledge and in turn motivate each other to do so as well. The teachers agreed that they were surprised about how much information the learners learnt in such a short time span. Curriculum integration allows learners to explore more than one subject area at a time. The content is thus integrated which means more content is taught in a shorter space of time, because connections are made between the content that has already been learnt. The learners gained knowledge that was not

set out by the curriculum in Life Skills. However, it might be mentioned in another subject area.

Category 8: Teachers identified certain characteristics and skills needed to present the programme

The teachers emphasised that there are specific skills needed by the teacher to ensure that the programme runs smoothly.

(Teacher 2)

> "I guess your motivation and personality played a big role in how they were motivated to play along."

(Teacher 1)

> "There are definite qualities that a teacher needs to optimally utilise this programme."

It was clearly noted that planning and organisation skills are important when it comes to the success of the programme. Teacher 3 mentioned that it often happens that learners get distracted or bored with an hour-long lesson; however, if the teacher keeps the learners motivated and involved the programme shows great success in maintaining the attention of the learners. The teachers acknowledged that the teacher needs to be actively involved in the learning process.

Category 9: Increased willingness of learners to participate in the activities It was evident that the teachers noticed that the learners were actively involved in the programme.

(Teacher2)

> "In the activity learners could make up or rather explore what they already know and build on that.''

As mentioned in Chapter 3 Paragraph 3.1 the programme relies on scaffolding of knowledge, where each activity is built on the knowledge gained in the previous activity.

(Teacher 3)

> "Myself and my learners loved the activities. It was surprising for me to see how all the learners participated so eagerly in all the activities."

Teacher 3 expressed her wonder at the spontaneous participation of all learners. However, during the programme none of the learners completely withdrew from the activity. It often took a little motivation to get everyone involved but with a little inspiration or motivation, everyone participated.

(Teacher 2)

> "I agree the activities taught the learners so much in such a small space of time. My learners really liked all the activities."

The whole programme was enjoyable to both the learners and the teachers and time was utilised very effectively.

4.4 Categories from the pre-interview with learners

The pre-interviews with the learners show how they viewed Life Skills before the implementation of the programme and what their beliefs and opinions are about the school.

Table 4.4: Categories, primary and secondary codes, and themes of the Pre-interview

Category	Secondary Codes	Primary Code
Learners desire learning in an authentic context	Play is essential to learners	Work and play are fun
		Play is fun
		Work and play are fun
		play with friends
		Play with friends
		Like to play
		Playing outside
		Don't like playing outside

		Play at home
		Play at home
		Play at home
		Play at home
	Relation between Life Skills and life	Peoples life's
		Skills
		The body is learnt in LS
		How you act
		Learn about life
		LS teaches you to not kill yourself
	Different school experiences	School gives knowledge
		Do not like to just sit and listen
		like work that takes long
		Like doing work
		Like math
		School is fun
		Do not like it when teacher goes away
		Work is not fun
		Work makes you tired
		Work is not fun
		Learn at home
		Learn at home
		LS is language change
		Math is learnt in LS
		Math is learnt in LS
		LS teaches you to work

Category 10: Learners desire learning in an authentic context

The interviews indicated that play is an essential part of schooling for learners.

(Learner 2)

"My favourite part of school is playing outside with my friends."

All the interviewed learners have a similar response to the question: 'What is your favourite part of school?' Playing evokes a happy and exciting memory. Learners would recall what happened at break time in detail rather than what happened in class. The programme in this study is based on the values of drama in education, which allows the learners to have fun, something that seemed to be very important to them, and assisted in learning the content. During the post-interviews the majority of the

learners did not seem to make a connection between Life Skills and life. When asked what Life Skills were, they gave the following answers:

(Learner 1)

"Somme en baie goed". *Math and a lot of stuff.*

(Learner 2)

"Hoe n mens se liggaam werk." *How the human body worked.*

(Learner 3)

"Doing stuff like math."

(Learner 4)

"I don't know"

(Learner 5)

"To not kill yourself, because my friend's uncle got very sad and shot himself in the head."

(Learner 6)

"How to work."

From the responses above it is clear that some learners did not view the subject name as a definition of the subject. After interviewing Learner 2 who the teacher informed me was one of the lower performing learners in the class, but he knew more or less what Life Skills was compared to Learner 1 who is the highest performing learner in the class did not. The teacher did mention that Learner 2 is an artistic learner who thinks creatively and Learner 1 performs well academically.

4.5 Categories from the post-interview with learners

The post-interviews with the learners show how the they viewed Life Skills after the implementation of the programme and what their beliefs and opinions were regarding Life Skills.

Table 4.5: Categories, primary and secondary codes, and themes of the post-interview

Category	Secondary code	Primary code
Learners value the affective domain when learning	Importance of the element of fun	Excited to play
		Fun to learn about animals
		Element of fun
		It was Fun
	Excitement to learn about animals	Fun to learn about animals
		Fun to do the Animals activity
	Perception of the teacher	Fun and like the teacher
	Learners' Perception of playing games	Play games
	Perception of activities	Honey and dog activity
		Animal shelter activity
		Bee act
		Bee act
		Marine animal activity
		Animal shelter activity
	Perception of LS	LS is about animals
		LS is about animals
		LS is about animals
		LS is about life
		LS is about animals
		LS is about animals
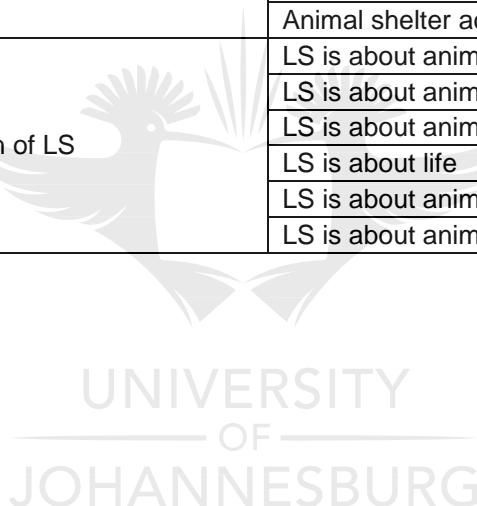
Category 11: Learners value the affective domain when learning

During the post-interviews there was a focus on the importance of the element of fun.

(Learner in class)

"Because it was fun and I like you."

The learners reflected on the process by using words such as "like" and "feel" and there was a clear affective attitude towards the programme. The learners seemed to attach emotion towards the presenter of the activities, and the knowledge gained.

The learners noted that they appreciated learning about animals and were excited to learn about the animals.

(Learner in class)
"Dit was lekker om te leer van diere." *It was nice to learn about animals."*

An interest in science at a young age predicts an increase in science practitioners and innovative thinkers. Science, more specifically biology, was used as a vehicle to teach the elements of Life Skills in the programme. Through this platform, learners were able to make a connection between Life Skills and the natural world around them.

(Learner 1)
"Wanneer jy leer oor diere." *When you learn about animals*

(Learner 2)
"Om te leer oor diere." *To learn about animals*

(Learner 3)
"It is learning about animals."

(Learner 4)
"Learning about life."

(Learner 5)
"Learning about animals."

(Learner 6)
"Learning about animals."

The learners were asked to describe Life Skills, as a subject; it is clear from the above comments that learners had a different perception of Life Skills. They made the connection between the content (science) used in the programme and the subject itself.
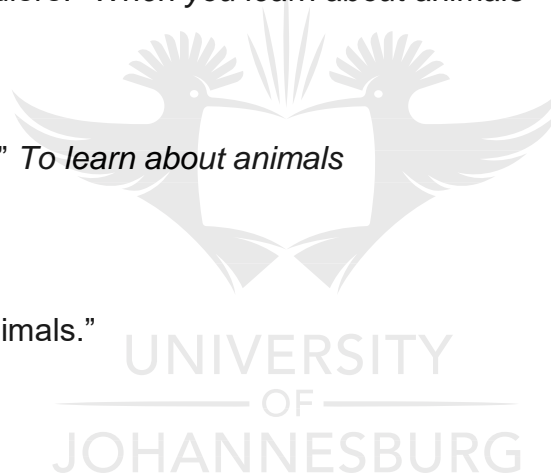
4.6 Conclusion

This chapter served to give some insight into the process and the product of the data analysis. The last part of the chapter provided examples from the 'raw' data – focusing on what was said and what happened. The representation of data analysis allows one to notice the gaps and identify the level of awareness teachers have. From the categories three main themes have been abstracted (see Table 4.6 to view the categories from which the themes were abstracted).

Table 4.6: Coherent themes abstracted from categories

Categories	Coherent themes

Category 1: Systemic limitations of the grade 1 Life Skills curriculum has limitations caused by the ridged architecture of the curriculum document guidelines Category 2: Teaching methods often do not accommodate multiple learning preferences Category 3: Lesson design should ideally emulate authentic learning styles Category 10: Learners desire learning in an authentic context	1. The existing South African curriculum architecture limits learning by overemphasising content while undervaluing the affective domain
Category 5: Teachers identified certain characteristics and skills needed to present the activities in the programme Category 6: Alignment of the resources used in the curriculum architecture should the aligned with the curriculum guidelines	2. The programme will require refinement and more skills development
Category 3: Lesson design should ideally emulate authentic learning styles Category 4: Teachers became aware of the benefits when learners participate in the activities of the programme Category 7: Programme addresses multiple skills in teaching Life Skills Category 9: Increased willingness of learners to participate in the activities Category 10: Learners desire learning in an authentic context Category 11: Learners value the affective domain when learning	3. The programme showed multiple benefits

The three main themes abstracted from the categories (below) will be further discussed in Chapter 5.

i) The usual curriculum architecture limits learning by overemphasising content while undervaluing the affective domain ii) The programme will require refinement and more skills development;   iii) The programme showed multiple benefits.

Chapter 5 Findings, recommendations and conclusion

5.1 Introduction

This study attempted to use drama in education as an integrating tool for the third term Life Skills curriculum and the science content served as a vehicle for the activities of the programme. Chapter 2 of this study discussed the use of social constructivism as it directly links to the aims and objectives of drama in education and curriculum integration. The programme that was created, addressed all the outcomes of the Life Skills curriculum for the third term over the course of three weeks, translating to six hours of teaching time to implement the entire programme. The programme saved time while effectively covering the content. Scientific literacy gave the study a working conceptual platform that enhanced the understanding and interest in science content for both the teachers and the learners.

Three grade 1 teachers provided their insight and experienced opinions on how FP Life Skills is currently taught. This allowed the researcher to access first-hand insight into the classroom dynamics relating to Life Skills. The teachers also shared their opinions and experience of the designed programme, which enabled the researcher to determine the success and effectiveness of the programme. The sample of six learners that were interviewed allowed insight into how they view Life Skills and the importance thereof before and after the programme was implemented.

CHAT served as the analytical lens for the study as it demonstrates the current tensions within the activity system. This chapter concludes the study by illustrating and discussing how the programme addressed and broke the tensions between the different entities in the activity system. Recommendations for improvement to the study as well as suggestions for further research is provided and the limitations to this study is discussed.

5.2 Dealing with the tensions between the entities in CHAT

The current tensions between the aspects, shown in the illustration below, as well as how and if they were overcome using the designed programme to teach Life Skills in grade 1 in the third term is investigated below. The tensions are discussed with regards to the three themes mentioned in Chapter 4: i) The existing South African curriculum architecture limits learning by overemphasising content while undervaluing the

affective domain ii) The programme will require refinement and more skills development iii) The programme showed multiple benefits
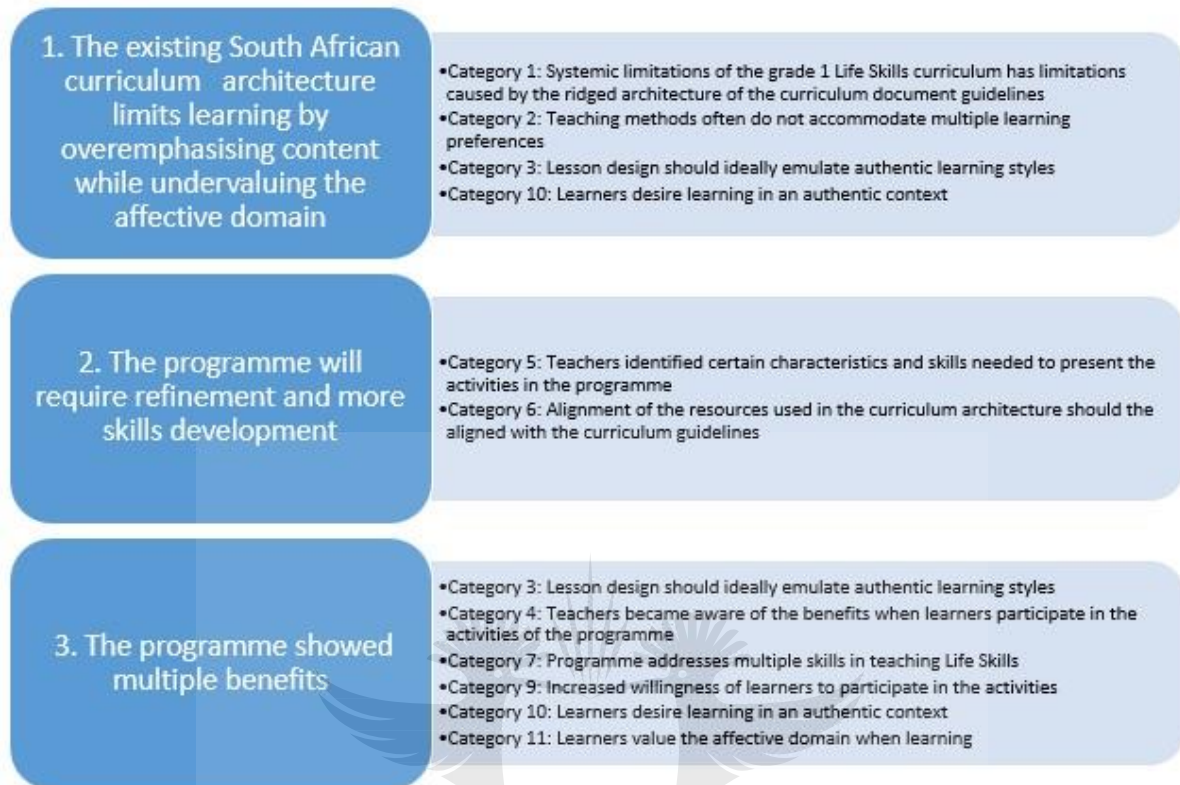

Figure 5.1: Demonstration of the themes and the related categories that support the findings

Figure 5.1 provides a summary of the themes and their related categories gathered from the primary and secondary codes discussed Chapter 4. The below diagram, Figure 5.2, gives a reminder of the activity system to demonstrate the analytical framework of the study.
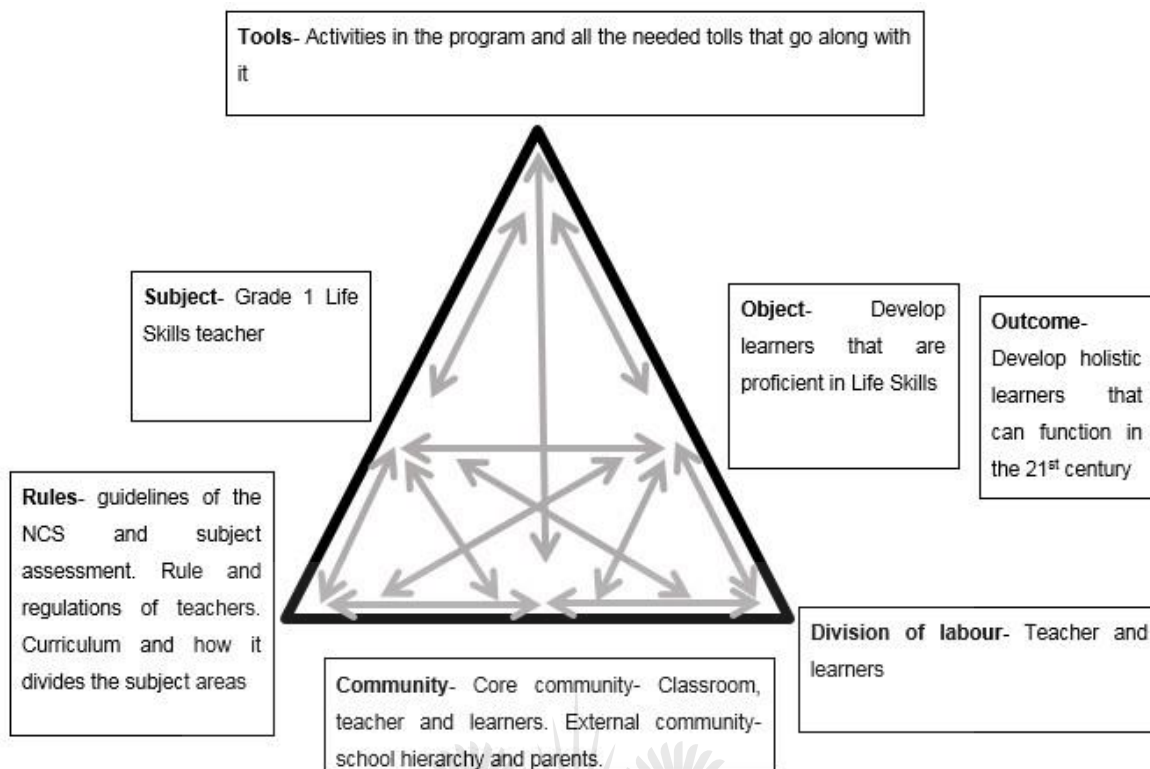
Figure 5.2: Adapted Activity system as formulated by Engeström

Theme 1: The existing South African curriculum architecture limits learning by overemphasising content while undervaluing the affective domain

Life Skills teachers and learners' perspectives and opinions regarding Life Skills and the successful implementation of the programme make up the subjects within the activity system. Their life experiences gave the study a starting point to create the programme and aim to address the challenges identified in the interviews. The study concluded that the teachers and the learners advocated that an optimal teaching style should emulate authentic learning.

Although the teachers accepted the implementation of the programme, their tertiary education enforced ideas around teaching. Teacher 2 advocated this by saying:

> "I actually can't remember having to do any Life Skills stuff. We focused more on teaching Math and English."

This might be a result of tertiary institutions trying to adhere to the characteristics of

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21st century learning and how that effects learning; and not focusing on the content of the different subjects. There is an over emphasis on how to teach selected subjects. Loveless (2007) explains that part of 'ways of thinking', which is a characteristic of 21st century leaning, is the focus on learning to learn; there is thus a clear shift from teaching content to teaching how to process new information. Lederman and Zeidler (1987) mentions that science content changes rapidly with new findings and discovery thus science education needs to be updated and adapted according to new discoveries.

The question is should learners studying at university focus on 'How to learn' and forget about 'What to learn'? This question debates whether tertiary education should focus more on the way in which the content is presented in class (teaching strategies) or in the content that needs to be taught (curriculum). Loveless (2007) states that there needs to be a balance between the two entities; content needs to be taught but skills on how to develop content needs to also be taught. Drama in education conventions actively involve the learners in the learning process (Heathcote,1991). The learners were excited to share their life experiences and opinions in the activities, which is the aim of drama in education; however, the teachers would quiet the learners because they viewed them as being disruptive. The teachers commented on this in the pre interview by saying that they want to implement active learning strategies in their classrooms but they feel it gets out of hand, they struggle to control the learners and get them to focus. Reviewing interviews with Heathcote made it clear that this was not an isolated problem in this school. Heathcote (1991) mentioned in one of her case studies that structure and planning helps keep the learners focused and ordered in the classroom; however, they need space and freedom to be able to confidently express themselves. Teachers also kept highlighting the lack of time to teach all the FP Life Skills content in the curriculum. As mentioned in Chapter 1 Paragraph 1.3 the curriculum allocates 10 hours per week to the teaching of the Home language and 7 hours is allocated per week to the teaching of Mathematics. The remaining 6 hours is allocated to all the remaining subject areas which are under the umbrella term of Life Skills. Life Skills has the least amount of time allocated to the subject in the FP, effecting the adequacy of teaching the subject. Careful planning and organisational methods such as the use of the colour cards to divide learners into groups was

implemented in each activity to address these issues echoed by the teachers. The use of routine and de-rolling also helped the learners understand when they need to concentrate and reflect on their findings and experiences during the activity and when they must play and express themselves. In both the observations and post-interview discussions the teachers commented on the way in which the learners were instructed and "controlled". The control in these comments referred to the classroom management method used in the activities. The strategies and control methods identified by Heathcote (1993) enabled the study to break the tensions between the tools (activities in the programme) and the rules (rules set up by the teachers). The facilitator instructed the learners to join in as soon as she started counting along with a simple clap routine and at the end of the counting the learners had to be quiet. This was a fun way to centre the focus as soon as the learners got too excited for the activity to proceed.

Another tension that was identified among the tools and rules, was the implementation of resources in the classroom. The teachers often commented on the limited funds assigned to a school for resources. It is thus difficult for them to buy extra teaching material or resources that will accommodate all the learners in a classroom. This tension was broken within the programme as the resources used in the activity were versatile and mostly consisted of recyclable material that the majority of people have access to. During the 'bee activity', bottle caps, straws and water was used to generate the whole game. Bottle caps can be collected over a period of time or recycled from the school tuckshop or local store. The straws are given out for free at any store and water is available at the school. In the 'Doghouse' activity all the resources can be replaced by alternative resources that the teachers have in their classrooms. None of the activities made use of expensive resources that could not be replaced by alternative accessible resources around the classroom.

The teachers often mentioned that teaching strategies in the classroom should cater for multiple learning styles; however, often visual and kinaesthetic learners are neglected. Campbell, Campbell, and Dickinson (1996), agrees by saying kinaesthetic, spatial and interpersonal learning styles are often neglected in the classroom. Schulz et al. (2010), 21st century learning under 'living in the world' mentions that learners

need to seek national and international citizenship as well as adhere to 'personal and social responsibility'. Schulz et al. (2010) argues that having national or international citizenship does not only mean applying to the rules and laws of the country or the world, it means respecting and accommodating different needs (social and cultural) in order to function harmoniously. Schulz et al. (2010: pp. 55) says that "a person without culture is no person at all". Cultural diversity needs to be embraced so that we can share our heritage with one another and learn to respect differences. Often different ways of learning are a result of cultural background or upbringing. For example, most Afrikaans learners will not raise their opinion in class because they come from a cultural background where it is disrespectful to disagree with someone older or more experienced than you. In contrast to this, English learners are taught that even as a child you have the right to your own opinion. Teachers from these two diverse backgrounds then often think and expect the same. However, by neglecting to address certain learning styles, for example inclusive education, the teacher is neglecting diversity in learning. The programmes use of drama in education conventions include the learners in ways that enhanced their strong points. Each convention seeks different skills from different learners. For example, with the activity where the learners had to build a doghouse; there was one learner who had to negotiate for items to build the house, a planner who planned out what they needed, builders that could build the house, a presenter who presented their final product and a critique for their final product.

Theme 2: The programme will require refinement and more skills development
The tensions identified between the subject (Life Skills teachers) and the object/outcome (develop learners that are proficient in Life Skills) was that the teachers often felt ill equipped to teach Life Skills as their tertiary education hardly focused on the subject. The teachers mentioned that they will need to gain some skills and guidance to ensure that their role play and instructions are as successful as the ones implemented in the programme.

The efficiency of the programme is dependent on the use of tools to enhance the learning experience. In this study, the success of the programme relied on the successful implementation of the tool, drama in education programme. The teachers

commented on the influence that the facilitators' attitude, motivation and personality had on the success of the activity. It was noted that these skills and attributes needed to be learnt before a teacher can optimally incorporate the programme into the curriculum.

Theme 3: The programme showed multiple benefits

The tension between the tools and rules in the activity system is also related to the structural guidelines of the curriculum. Teachers are required to meet all the given outcomes within a limited time span. The curriculum outcomes are clear and specific; however, the time allocated to meet these outcomes is not always realistic. As indicated in the introduction, six hours a week is allocated for Life Skills which composes of Beginning Knowledge (1 hour a week), creative arts (2 hours a week), physical education (2 hours a week) and personal and social wellbeing (2 hours a week). The programme integrated all the subject areas using science as a platform and drama in education as an integrating tool. Two activities a week, were implemented, that took up one hour each. Six activities covered the Life Skills content within three weeks (6 hours). This ensured that there is approximately 20 hours remaining per quarter for consultation, assessments and extra discussion if a concept is not grasped in an activity.

The community in this study consists of the people who influence the participants and programme in the study, including the parents, other teachers, learners and school community. The learners in the chosen classrooms come from different backgrounds and household dynamics. Some learners were shy and withdrawn, while others were expressive and open. Drama in education conventions can often make learners feel uncomfortable as they are put into a situation they might not be used to. However, the activities were structured in a manner that broke this tension as the conventions included a wide variety of engagement techniques that accommodated different types of learners. An example of this is the building of the Dog shelter. The learners who were more proficient in mathematics took on the role of buying and selling the goods needed to build the house, some leaders took control in structuring the house for the dogs and putting the structure together, the artistic learners decorated the house and the well-spoken learners presented the product to the class. This activity shows how each learner's strengths could be incorporated to reach the outcomes of the lesson. It

was often noted that because the learners were role-playing most of the time they could explore different characteristics because they did not portray themselves but a character in the situation. The fact that the learners were given the option to withdraw from the activity at any time made them feel less forced and that they could willingly engage in the learning experience.

The use of CHAT as a conceptual framework allowed the study to demonstrate how incorporating the integrated programme into the Life Skills third term curriculum could address and break the tensions between the different elements. It can be concluded that the tensions were overcome through the implementation of the programme and the tensions that were not broken could possibly be altered in a future study by adapting the programme accordingly.

5.3 Limitations for the study

Inevitably, as with all research, there is bound to be limitations to the applicability of the findings and conclusions of this study. After the implementation of this programme certain limitations were identified that could be addressed in future studies regarding the topic of this study. Readers of this study can transfer the findings to contexts that they know and for that the options remain open. The findings and conclusions drawn from the data is 'constrained' by the design of the programme, the inferences drawn from the data are only applicable to the parameters of the bounded system.

In Chapter 3 Paragraph 3.8 construct validity and contextual validity would be the focal points to determine the trustworthiness of the findings and conclusions. However, the construct that was studied within the context as described in Chapter 3 does not allow the findings and conclusions of this study to be generalised. The population from which the sample was drawn was too small to allow any extrapolation of findings and conclusions to other contexts. Three grade 1 teachers and nine grade 1 learners, from the same school, were interviewed in the pre- and post-interviews conducted in this study, used to observe the activities and give their insight in the success of each activity and the programme as a whole. Thus, generalised opinions and views on the topics discussed were captured. The problems and views of these teachers could have been seen in isolation. Literature and case studies were used in collaboration with the

interviews to conclude the findings in the study. This was, however, never the intention of the study as the aim was to gather rich data from the purposefully selected site. This does not preclude the applicability of the findings and conclusions on other similar contexts as this study could be replicated in schools with similar parameters as the one studied in this research and in so doing increase the reliability of this study.

One term of the grade 1 Life Skills curriculum was used to test the programme designed. The implementation of the programme on only one term can only provide isolated results; however, drama in education literature shows that it can be implemented in any subject in the curriculum. A PhD study will be conducted to address this limitation.

5.4 Recommendations for further research

5.4.1 A longitudinal study to compare the results

A longitudinal study to compare the results of the implementation of the programme into one school to another school can be implemented. The suggestion is for the schools used to portray the different cultural historical backgrounds of the learner's in South Africa. An example of the sampling can be to find schools in different areas in South Africa from rural to upmarket areas and to compare the results.

5.4.2 Implementation of assessment to gather qualitative research

A suggestion is that a form of assessment is implemented before the programme is designed to gather quantitative results on the learner's base level of knowledge. Then a post-test that provides quantitative results on the success of the programme can be conducted.

5.4.3 Implementation of drama in education conventions

The suggestion is that the programme must be further developed to cover all the content of the Life Skills curriculum for more accurate results of the programme.

5.5 Conclusion

The main aim was to design an integrated teaching programme for the grade 1 Life Skills curriculum, by utilising the science content components to incorporate the proposed drama in education conventions as methods to facilitate the learning of the content. This aim gave rise to the following research question: In what way can drama in education contribute to the integrated teaching of the grade 1 Life Skills by utilising science as integrating theme?

The aim of this question was to design an integrated teaching programme for the grade 1 term 3 Life Skills curriculum, by utilising the science content and conventions proposed by drama in education. The programme was designed and implemented at a private school. The results in the study show that teachers perceived the programme as an effective way of teaching FP Life Skills as the programme allows the outcomes of the CAPS curriculum to be achieved and to save time. Although teachers felt that in order to facilitate the programme teachers will need to go for training to optimally use the drama in education conventions they were enthusiastic to do so. The teachers agreed that the programme exceeded the outcomes of the CAPS document because science was used as a platform to integrate the subject.

A recommendation is that the FP teachers consider using science and drama in education conventions to integrate the teaching of the Life Skills content. The content taught in Life Skills is essential to the holistic development of learners. By using science content to integrate the teaching of Life Skills content teachers can evoke the learner's interest in subject matter that improves the skills needed for 21st century learning.

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Appendix A: Lesson Plan Format of Activities

Activity 1: Insects and where they live	
Drama in education convention implemented	Role play
Science topic covered:	Insects
CAPS topic covered in the third term:	Topic 4: Plants and seeds

Predicted outcomes	• Identify the structure of the insect.
	• Differentiate between insects and other animals.
	• Identify the food insects eat.
	• Discuss how insects can pollinate plants.
	• Explain the importance of insects for the environment.
	• Identify the structure of a plant.
	• Differentiate between different types of plants.
Resources needed to do the activity	• Lab coats
	• Flowers
	• Props – insect wings, antennae
Introduction to the activity	The activity started off with a prominent pre-text. The pre-text serves as a catalyst for the activity. It enables the learners to start engaging in the learning process as soon as they enter into the classroom. O'Neill (1995) refers to the pre-text as the stimulus that launches the dramatic world. Learners were given an imaginary lab coat as they came into class, this serves as a pretext that will help them take on the role of scientists. They were asked to put on the lab coats and sit at their tables. Structure and routine in drama in education is very important. The learners are so actively involved in the learning process that they might

	sometimes forget that they are not only playing but also learning. The focus must be kept on the outcomes within the play structure of the conventions.

| Body of the activity | In this activity the learners were structured through careful planning and preparation for the activity. The facilitator needs to be prepared and organised in order to find meaning in chaos (Heathcote; 1991). Routine throughout the activities is very important. In the programme the facilitator greeted the learners before the activity starts, this routine enables them to already get into the playful and active mode that they need to be in when the activity starts. This routine then also serves as the pre-text. In this activity the learners were greeted as scientists. Although the teacher in role convention was not predominately used in this activity, the teacher must always engage in the fictional world to make it "real" for the learners. Bolton echoes this by saying that "the teacher is always in role." In this activity the following was said: "Good morning scientists. The principle told me that he has sent me the smartest, best scientists in the whole world to tell me more about insects. Is that true, are you the smartest scientists in the whole world?" This immediately created a fictional world that enabled the learners to take on the role that have been assigned to them and use their prior knowledge to build the character that they want to take on. Inquiry-based learning strategies or as Heathcote (1991) refers to it as problem-based learning started with the facilitator asking the learners to explain what type of scientist they are and what they do when they research their specialisations. This process enabled the learners to gather and share knowledge on how to investigate and analyse a field of study. The facilitator used questions such as: How? Why? What? Where? When? To get them thinking about the role that they have taken on and create their characters. |
| | After testing the learners' prior knowledge about investigation, the facilitator divided the class into 3-4 groups depending on the |

	number of learners in the classroom. The learners in this programme were divided randomly by giving each learner a coloured piece of paper. All the learners with the same colour were put into the same group. This process was used throughout the programme to once again create a routine. Each group was asked to choose an insect that they would like to investigate.
	Within the group negotiation and interactions with one another's help, the learners share knowledge about insects and discuss which insect they want to investigate. Social constructivist learning was implemented here. Kiraly, D. (2014) explains this group phenomena by saying that learners construct new understandings through social interaction. The groups shared their chosen insect with the rest of the class to ensure that everyone choses a different insect. The groups were then instructed to portray the insect using their bodies. Embodies situated cognition theory was thus implemented. The learners embodied parts of the insect to understand the structure and how each part is connected to one another. The learners were asked to present their insect to the class. The facilitator once again asked questions to the learners to see how they understood the different body parts of the insects. The facilitator explains how each group successfully displayed the different parts of an insect (head, thorax and abdomen)
	The facilitator took four different types of plants and presented it to the groups. The groups were asked to share a fact about their insect that will earn them a flower. Napier (1981) argues that completion strategies in the classroom can be efficient if the competition enforces learning. In this case the competition encouraged the learners to actively engage in the learning process by sharing facts on the insects they chose. This process also served as a recollection of knowledge gained in the questioning when the groups presented their insects. The flowers were then divided between the groups. The little scientists

	(groups) were asked to take apart the flowers and answer questions about them. Taking the flowers apart enforced "real-life learning". "Real-life learning" was a term that was echoed by all the teachers in the pre-interviews. They explained that this type of learning enables learners to engage in situations that portray real-life settings. Dissecting the flowers enabled the learners to gain first-hand experience with the real structure and elements of a flower. The facilitator asked questions like: Where do plants come from? What are seeds? How can insect help plants grow? Why are flowers colourful? to guide the discussions in the groups. The structure of the plant was discussed within the dissection process and the learners had to differentiate between the Leaves, Stem, Pollen and Roots of each plant and share the information with the rest of the class.
Consolidation of the activity	Reflection is another routine element that is used throughout the activities. After each activity the learners are instructed to sit at their desks and reflect on what they have learnt. In this activity, the learners were asked to share their thoughts on the portrayal of the insects and which other flowers they have in their gardens at home.

Activity 2: Bees making honey

Table 3.3: Illustration of the components in Activity 2

Activity 2: Bees making honey	
Drama in education convention used	Teacher in Role and role play
Science topic covered:	The bee
CAPS topic covered in the third term:	Topic 4: Plants and seeds

Predicted outcomes	☐ Identify the structure of the bee. ☐ Explain how bees produce honey.
Resources needed to do the activity	• Bottle caps (20) • 2 straws • Water • Plastic cup • Honey (optional) • Toothpick (optional)
Introduction to the activity	Teacher in Role and role play were the two conventions predominantly implemented in this activity. Routinely the class was greeted by the facilitator. In this activity the class were greeted as little bees and the facilitator introduced herself as the beekeeper. "Good morning little bees. My name is Honey and I am the main bee keeper at Honey Bee farms. Today we are going to make some honey." Establishing the outcome of the activity allows the learners to prepare themselves in their role assigned to them and get them exited for the process. The learners were instructed to leave the classroom and go outside. The change of setting excites learners as they are able to explore learning in an informal setting (Wankat, & Oreovicz; 2001). Wankat and Oreovicz (2001) explain that learning in an informal setting (outside the classroom walls) evokes a sense of curiosity and creativity in learners. The learners immediately start asking questions which means their critical and analytical side of the brain is active which is great when engaging in learning (Wankat & Oreovicz; 2001).
Body of the activity	The facilitator divided the class into two equal groups. The learners were instructed to line up in their assigned groups. The first four learners were taken out of the row and given the following instructions: Learners in the row: Each received a bottle cap. Learner one: Is given a plastic cup with the water (Stand in front of the row)

Learner two: Is given a straw (stand next to child 1)

Learner three: Is instructed to stand 5 big steps away from the row

Learner four: Is instructed to stand 5 big steps away from child 3

The structure of the learners is illustrated below

Figure 3.2: Representation of learners in the bee activity

Learner two was instructed to put the straw into the water and close the top of the straw with his/her finger, so that water is soaked up by the straw. The first learner in the row holds the bottle cap so that learner two can put some water into the bottle cap. The learner with the bottle cap was instructed to run to learner three and pass on the bottle cap. Learner three was instructed to run to learner four and pass on the bottle cap. Learner four was instructed to stake the bottle cap in a formation on the floor and run to the back of the row. The cycle thus rotates and every learner gets an opportunity to fill a different role. The explanation of this activity is challenging for the facilitator. Careful planning and well-structured organisation of the activity is crucial to the success of the activity. Within the explanation of the activity the facilitator steps out of the role of the bee keeper and into the role of facilitator. This enables the learners to differentiate between the fictional and real-world setting, it also allows the learners to know when they should take on the role of the bee and the learner. After the "game" was explained, the facilitator took on the role of the beekeeper again and motivated the bees to start buzzing for the race to start. The following was said: "Little bees are you ready to win some honey? Start buzzing and start your engines. The row of bee with the most bottle caps in the end of the race will be the winning team." After the duration of the activity the facilitators stepped out of role again and asked the learners to sit on the grass. The facilitator asked the learners what they think the game represented and what part of the honey

	making process each part represents. The facilitator guides the answers to get to the following conclusion:
	• The plastic cup represented the flowers in a garden.
	• The water represented nectar in the flower.
	• The straw represented the mouth of the bee that sucks up the nectar.
	• The bottle caps represented the bee. That carried the nectar from the flower to the other worker bee. As the bee flies in the air, the nectar in its tummy swills around and thickens like syrup.
	• Learner 3 takes the bottle cap, like a worker bee will take the honey from another worker bee. Worker bee 1 regurgitates the nectar into the mouth of worker bee 2.
	• Learner 4 represents the bees in the hive that build the honey comb.
Consolidation of the activity	After explaining the representation of the game, the learners were asked to explain the process of collecting honey as a reflection on the knowledge that they gained in the process. The importance of honey and edible value thereof was discussed.

Activity 3: Marine animals

Table 3.4: Illustration of the components in Activity 3

Activity 3: Marine animals in their natural environment	
drama in education convention used	Role play
Science topic covered:	Marine animals
CAPS topic covered in the third term:	Topic 6: My community

Predicted outcomes	• Identify the importance of taking care of the environment. • Identify marine animals. • Differentiate between land and sea animals.
Resources needed to do the activity	⬜ None
Introduction to the activity	The facilitator addresses the class in the following manner to gain clarity on the prior knowledge of the learners. "Good morning fellow explorers? Have you ever swum in the sea before?" "Can you tell me what you find under the see?" "Would you like to see these fish up close?" The questioning immediately evokes critical thinking in the learners at the beginning of the activity. Enabling the learners to share their experiences and knowledge about the ocean enables them to create a toolbox of information needed for the activity. The term toolbox is used by Heathcote (1991) to describe the knowledge gained through shared prior knowledge.
Body of the activity	Role play was the main convention implemented in this activity. The learners took on the role of divers in the sea. Learners were instructed to put on diving gear to go and swim in the sea. The ocean was the imaginary world (metaxis) that the learners explored to gain knowledge in the activity. Role play was guided by instructing the learners in the following manner: "First we will need to put on our goggles. Make your fists into two little circles (gesture the movement). Now put them on your eyes like this (gesture action). Now let put on our flippers so we can swim fast, because do you know that fish use their bodies like a bullet to swim very fast. (gesture putting on the flippers). And lastly, we should put our breathing tool (gesture putting a snorkel in your mouth). Did you know that fish can breathe under water? Do you know what they breathe with? They breathe with things called gills."
Consolidation of the activity	After the ritualistic gear was put on the learners were instructed on the activity. Learners were asked to freeze when the facilitator

	says freeze and swim out of the ocean. As soon as the learners got out of the ocean they rerolled to reflect on what they have seen in the ocean. The discussion is guided by questions from the facilitator such as: "Did you see the big shark? What was he eating? Did you see the whale? What did the whale have in its mouth? What animals did you see on the floor of the ocean?" After the reflection the learners were once again asked to jump back in but this time they were instructed to look for specific elements and report on it when they get out of the sea. The third time the learners were instructed to ask some of the sea creatures questions and tell the class what they answered. The facilitator once again plays a big role in the guiding process. The facilitator has to guide incorrect answers into more accurate knowledge. In this activity, questioning was used to do this. Learners are thus encouraged to correct their own findings and as Vygotsky refers to it as construct new knowledge

Activity 4: Animal shelters

Table 3.5: Illustration of the components in Activity 4

Activity 4: building animal shelters	
drama in education convention used	Rolling role
Science topic covered:	Animals
CAPS topic covered in the third term:	Topic: Pets
Predicted outcomes	• Identify domestic animals. • Explain the processes of taking care of an animal. • Demonstrate how to build a shelter for a pet.

Resources needed to do the activity	• Resources needed • 10 boxes • 2 Blankets • 4 bowls • Dog food • Any human food • Water • Chain
Introduction to the activity	The facilitator routinely greeted the class and addressed them as builders in this activity. The learners are divided into four groups using the colour card method. The facilitator has to be well prepared in advance to ensure the success of this activity. The facilitator had to pre-set all the resources on a table (like a shop) with R10 price tags on them. The visual representation of the table with all the goods on it evokes a sense of curiosity from the learners.
Body of the activity	Each group was instructed by the facilitator to build a doghouse for a new puppy. The learners were each given fake R5 notes that they had to use to buy the resources they need to build the doghouse. The learners had to negotiate between an asset for the puppy and what was a luxury. This evokes problem solving and listening skills to function optimally in the group. The learners were only given limited funds so they had to pair up and prioritise what resources are most needed.
Consolidation of the activity	When the doghouses were done, the learners were asked to explain how they built the houses and which resources they used and why. The learners from all the groups analysed one another's houses and gave critical feedback and ways of improving the house. After the feedback, the groups swopped and rebuilt each other's houses to make it more practical. When the houses were rebuilt, the groups had to present their changes and elaborate on the reason for the changes.

Activity 5: Reptiles

Table 3.6: Illustration of the components in Activity 5

Activity 5: Reptiles and their habitat	
drama in education convention used	Teacher in Role
Science topic covered:	Reptiles
CAPS topic covered in the third term:	Topic: My community
Predicted outcomes	• Identify different environments in the community. • Identify different species in the environment. • Identify characteristics of reptiles. • Identify what reptiles eat.
Resources needed to do the activity	• Score board • Pencil • Cue cards
Introduction to the lesson	Facilitator took on the role as a game show host and addresses the classroom in the following manner. "Good morning girls and boys. I am Naynay and today we are going to play a little game."
Body of the activity	Facilitator took on the role as a game show host and addresses the classroom in the following manner. "Good morning girls and boys. I am Naynay and today we are going to play a little game." The classroom was divided into three groups. The facilitator prepared a score board beforehand with a space left open for a team name. The groups were asked to compile a team name relating to reptiles. The discussions on what the team name will be gave rise to prior knowledge in the groups and the construction of new and adapted individual knowledge. One learner in each group was asked to act out or mime a picture on a card only using his/her body. This part of the activity incorporated the main elements of situated embodied cognition. The following options were

	presented on the cards: Crocodile baby, Snake, Lizard, Tortoise, Dam, River. As soon as a learner was able to guess the portrayed animal that learner took on the role of explaining the next animal.
	The next game in this activity was similar to the one played in the first activity. This made the explanation easier. The learners had to portray different reptiles using their bodies and discuss the function of each body part.
Consolidation of the activity	The discussion is guided by the facilitator's questions during the construction of the reptiles.

Activity 6: Herbivores, carnivores, omnivores

Table 3.7: Illustration of the components in Activity 6

Activity 6: Herbivores, carnivores, omnivores	
drama in education convention used	Mantle of the Expert.
Science topic covered:	Herbivores, carnivores, omnivores.
CAPS topic covered in the third term:	Science Topic 6: Food.
Predicted outcomes	• Identify what food we eat. • Discuss where different food come from. • Explain what is healthy eating. • Identify herbivores. • Identify carnivores. • Identify omnivores. • Discuss what different animals eat.
Resources needed to do the activity	• Cardboard • Colour pens • Pictures of animals

Introduction of the activity	The facilitator addressed the class as knowledgeable farmers that had to assist her in feeding her farm animals. A poster like structure was made with three

	doors that are able to open. On the first door, there was a sign saying Herbivore, on the second door, the sign said Carnivore and the third door said Omnivore. Behind the Herbivore door, there was a picture of fruit, grass and straw, behind the Carnivore door there was a picture of meat, and behind the Omnivore door, there was a picture of fruit grass and meat. The facilitator gave each learner in the class a picture of an animal, asked them to one by one open the doors, and put the picture behind the door that they thought the animals belong to without explaining what criteria to use.
Body of the activity	After all the animals were placed, the facilitator asked the learners why they placed the animals under a specific door and the definition of Herbivores Carnivores and Omnivores were discussed. Animals that have been placed under the wrong door was discussed.
Consolidation of the activity	All the animals were divided among the learners again and this time they had to explain why they chose the specific door.

Appendix B: Transcribed Interviews

Teacher 1 pre-interview

1.   How do you feel about the current education system specifically related to the FP?

I think currently the FP system is something like an old system and today's kids are not fitting into the box of the old system and we need to devise something similar just to keep them interested.

2.   What do you think are the essential things learners need to learn in the FP?

The most important thing for me is to start learning to read and write if they can

do phonics well they will be able to read faster and write sooner and they would be more creative. Math is very important but the Life Skills are just as important because it is the beginning part of life science and biology and history for the higher grades.

3.   Do you think that the FP prepares learners to function in real-life settings? Please elaborate.

In our school I think they do because we have the time and setting. And we are not just preparing them for a specific direction but we are preparing them to be a holistic whole person. Not just in a religious way but also in a way that they know what is right and wrong. And they know to have Mersey and kindness to one another.

4.   Do you think that the FP prepares learners adequately for the intermediate phase? Why do you say so?

Yes, they do because when they started grade 1 we build up the next grade like grade 2 and grade 3. Many times, there might be a gape from grade three to grade 4 because the learners are a bit anguishes about the fact that they write exams though it is not much different than the assessments we do now. So, they are well prepared but I think it's the wording if we say exam.

5.   What do you enjoy most about teaching in the FP and why?

I like the spontaneity of the learners. They are very honest. They are very creative and they never lie to you. They love you to bits and if they don't they tell you and so they don't hide anything. It's nicer to work with smaller learners that are honest than bigger learners who lie.

6.   How much time do you spend teaching the different subject areas?

We work according to the time in the caps document

7.   What are your thoughts on the teaching of Life Skills in the FP?

Life Skills is important because the ones that we are doing in grade 1 we are doing all kinds of experiments on water, we doing different cultures, different food, different places in the world, carnivores omnivores and everything like that and in-between we integrate the music and the drama and art. 8. How comfortable are you teaching Life Skills?

I am very comfortable teaching Life Skills because it's not just a subject that happens it's something that happens rite through the day. Every moment can be a learning perimeter.

9.   What is the purpose of teaching Life Skills in the FP?

It's for the learners to become a holistic person and to learn more and be more inquisitive. To broaden their general knowledge about things and if they know more about things they go home and search for it. We were doing a lesson on the heart in the beginning of the year we did the brain skeleton and the muscles and the learners go home and they tell their parents this is what we have done can we go and have a look and research more for some information. And I think with my class I would teach them this is the aorta and this is the pulmonary artery and then they will make songs about it.

10.   How did your tertiary institution prepare you to teach Life Skills?

They didn't do it at all.

11.   What are the experiences of learners during Life Skills lessons?

I think different learners experience Life Skills differently. It depends on the way that they are growing up and the knowledge base which the parents have already put into their lives prior to them coming into school and also what the grade R teachers are doing with them. But mostly our Life Skills books are our blue books and when they see we take out the blue books they are most excited out of all the subjects because they know it's all the fun things.

12.   How often do you teach science lessons?

Normally in the second term we have a wide variety of science lessons. The first term is more the biological part with the body and the muscles and the skeleton and the brain and the tong. Second term we do water experiments gases and liquids and all kinds of different experiments with water.

13.   What do you think are the important things learners in the FP should learn about science?

I think because we are doing it holistically here there is not more they need to know

Teacher 2 pre-interview

1.   How do you feel about the current education system specifically related to the FP?

I feel it's quite good but they want us to move a little fast. We sometimes feel there is a lot of work they want us to cover in a short space of time so we do try and slow down a little bit. The stuff that we are meant to assess at the end of term you know it's a wide variety instead of focusing on one section and making sure that is covered we do a little bit in this term and they should be focused closer together so that if we do time then we focus on it for as long as it takes to properly learn it before we move on to the next section.

2.   What do you think are the essential things learners need to learn in the FP?

Basics I would say are the most important. Because if your foundation is not strong the rest will crumble

3.   Do you think that the FP prepares learners to function in real-life settings? Please elaborate.

Sort of ya because you need the basics for math and the basics for reading to function in life and we do sort of a section where we talk about life and safety and our natural environment and looking after our environment. And I suppose those things are reallife experiences.

4.   Do you think that the FP prepares learners adequately for the intermediate phase? Why do you say so?

It often depends on the school and where the learners come from. Often in a school like this because it's small classes and the learners that struggle have support form you know remedial teachers and there is enough time to help the specific learners. In a bigger maybe government school where the classes are bigger and the teachers are rushed and not all the learners speak the language that they are educated I they fall behind and they never quite catch up in the intermediate phase so ya I think it depends on the school.

I previously taught at a government school and the majority of my school where second language speaking and their reading was automatically just behind from where it should have been. Then they sort of hit grade 4 and they had to do learning subjects like history and geography and their reading is not even up to par and to do a subject like that it needs to be.

5.   What do you enjoy most about teaching in the FP and why?

It's just fun. Especially grade one because they are learning to read and all they want to do is read and they think it's so much fun. grade ones are still enthusiastic about school. They want to be here and they want to please their teacher so that is fun for me. They still like their teacher.

6.   How much time do you spend teaching the different subject areas?

Well we are given a specific time per week. I think it's an hour math an hour reading. But if there is a specific thing that they struggle with then we would spend a bit more time on that.

7.   What are your thoughts on the teaching of Life Skills in the FP?

The Life Skills in very repetitive. They do the same thing very single year and they just build on it a little bit. But when we are doing water the grade twos are doing water and the grade ones. It's just the complete basics of grasping concepts properly.

It's very difficult to find things that they haven't done before. Sometimes you do a worksheet and they say yes, they did that in grade R. So, for us it's still fine because they are in grade 1 but by the time they get to grade 3 everything has already been done. I think Life Skills sort of comes last because we have to focus so much on math and teaching them how to read. It would be great to bring it into the other subjects. FP is really just the basics and then they build on it from there but if you leave out the basics then that subject is lost I your whole school career

8.   How comfortable are you teaching Life Skills?

Well I teach grade ones so I am quite comfortable. It's very basic and I did do biology at school so I am quite comfortable with it.

9.   What is the purpose of teaching Life Skills in the FP?

I think just to give them more knowledge of the world around them. And ideas of responsibility and looking after the world around you and animals and people. With animals we look at how to look after your animals as well as just learning what different animals are. And then we also do different cultures, learning respect for one another.

10.   How did your tertiary institution prepare you to teach Life Skills?

I actually can't remember having to do any Life Skills stuff.

11.   What are the experiences of learners during Life Skills lessons?

They seem to enjoy it. They do actually enjoy learning about other things than just the boring math that we do every day. They do get excited about it especially the ones who have good general knowledge.

12.   How often do you teach science lessons?

It depends on what the themes are this term. This term is very science focused. We do water and planets and then we have 3 weeks of doing experiments. But with culture there is not much science.

13.   What do you think are the important things learners in the FP should learn about science?

I am not sure. In grade 1 they don't do much of the of the experiments themselves we do it for them.

Teacher 3 pre-interview

1.   How do you feel about the current education system specifically related to the FP?

I think the education system is set up in a way that advantages curtain learners in the school. For some learners the curriculum is very easy and they cope very well with all the knowledge. But other learners, like more creative learners are not always catered for. We try to accommodate those learners in our school because we have time. But in other schools, teachers don't have the time to focus on learners that learn in a different way.

2.   What do you think are the essential things learners need to learn in the FP? Learners need to complete the basics and understand it fully I the FP. If a learner does not master the basics, then the building blocks after that will fall.

3.   Do you think that the FP prepares learners to function in real-life settings? Please elaborate.

In most instances yes. They learn a lot of life etiquette in the classroom and we try to always relate what they learn to the real-life setting. But it is sometimes difficult because of time. We first try and teach them content before we can relate it back to the real world.

Do you think that the FP prepares learners adequately for the intermediate phase? Why do you say so?

In some ways and in some ways not. Some areas of learning are focused on so much that others are then left un attended. For example. There is a lot of focus on Mathematics in the class because the government says that there is a problem with it. So, we as teachers need to spend so much time to perfect the basics of math that we sometimes take time allocated for other areas to master it correctly. So, Mathematics in FP does prepare learners for intermediate phase.

But for example, Life Skills is not focused on so much because they do the same thing every year and it is not at a level that can prepare them for the level of knowledge they gain in the intermediate phase.

What do you enjoy most about teaching in the FP and why?

The honesty and nativity of the learners. They are still very eager to learn about stuff and they seldom have attitudes that disrupt a classroom.

4.   How much time do you spend teaching the different subject areas?

We try to stay with the times allocated by the caps document

5.   What are your thoughts on the teaching of Life Skills in the FP?

I think it is very important because it is the only subject that teaches you about life itself. And how to function within it. I wish we could have more time to focus on t a bit more because the learners also love it.

6.   How comfortable are you teaching Life Skills?

Very comfortable because it is very basic.

7.   What is the purpose of teaching Life Skills in the FP?

I think to prepare the learners for the learning subjects like biology, science and history in the intermediate phase as well as keep them active and thinking creatively

8.   How did your tertiary institution prepare you to teach Life Skills?

It didn't

9.   What are the experiences of learners during Life Skills lessons?

The love it. When we do experiments, they love seeing what happens because then they don't just have to sit and learn from a book. It is very practical and they like it.

10.   How often do you teach science lessons?

It depends on the content in the caps document.

11.   What do you think are the important things learners in the FP should learn about science?

I think the basic concepts that will prepare them for the knowledge they need to know in the intermediate phase

Gr 1 Learners Pre-interview

1.   Do you like school? Why?

Ja want dit is lekker. Ek hou van werk en speel.

2.   What is your favourite part of school? Why?

As ons kan buite gaan speel. Want dan hoef ons nie altyd te sit en luister wat die juffrou se in die werk nie

3.   What is your least favourite part of school and why?

Niks, want skool is lekker.

4.   Do you use the things that you learn at home? Give me an example.

Nee ek speel by die huis.

5.   What is Life Skills?

As jy soos van taal verander.

6.   What do you do in a Life Skills lesson?

Somme en baie goed.

Gr 1 Learners Pre-interview

1.   Do you like school? Why?

Speel, want dit is lekker

8.   What is your favourite

Werk want dit maak my slim maar ek hou nie altyd van werk nie, net as dit my lank

vat.

9.   What is your least favourite part of school and why?

As ons juffrou weg is en ons moet na n ander klas toe gaan want dank an ons nie vir

juffrou sien nie. Maar dit is ook lekker partykeer.

10.   Do you use the things that you learn at home? Give me an example.

Ek leer net by die skool. By die huis speel ek.

11.   What is Life Skills?

N mens se lewe. Hoe n mens moet water dink.

12.   What do you do in a Life Skills lesson?

Hoe n mens se liggaam werk.

Grade 1   **Pre-interview**

1.

part of school? Why?

Grade 1   **Pre-interview**

1.

part of school? Why?

Learners

Do you like school? Why?

Yes, because I do work and play

2.   What is your favourite

Doing work, because I don't know.

3.   What is your least favourite part of school and why?

Playing outside and I don't know why

4.   Do you use the things that you learn at home? Give me an example.

I learn at home, like I write a page about my hand writing.

5.   What is Life Skills?

They are skills that teach you stuff.

6.   What do you do in a Life Skills lesson?

Grade 1   **Pre-interview**

1.

                                        part of school? Why?
Doing stuff like math.

Grade 1   **Pre-interview**

1.

part of school? Why?

Learners

Do you like school? Why?

Yes, because you play with your friends.

2.   What is your favourite

Math because it makes your brain strong.

3.   What is your least favourite part of school and why?

Work because it is not fun.

4.   Do you use the things that you learn at home? Give me an example.

Yes, math. I did six times nine at my cousins' house.

5.   What is Life Skills?

I don't know.

6.   What do you do in a Life Skills lesson?

Grade 1   **Pre-interview**

1.

                              part of school? Why?
I don't know.

Grade 1　　　　　　**Pre-interview**

1.

Learners

Do you like school? Why?

Yes, I like school because it gives me knowledge.

2.　　　What is your favourite part of school? Why?

Usually break because then I get to play with my friends and run around.

3.　　　What is your least favourite part of school and why?

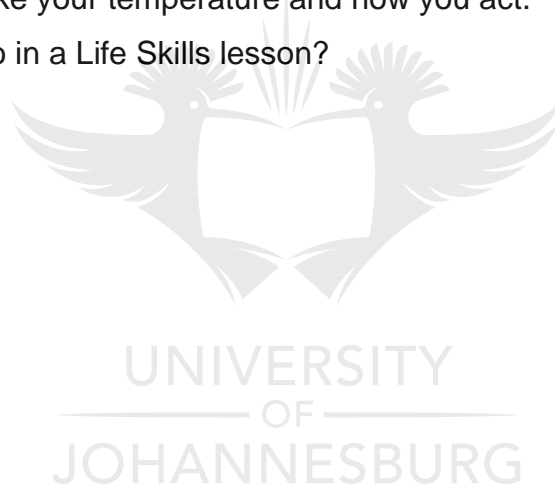Work, because it makes you sweat and it makes you tired.

4.　　　Do you use the things that you learn at home? Give me an example.

No, I go home and then I play.

5.　　　What is Life Skills?

I think Life Skills are like your temperature and how you act.

6.　　　What do you do in a Life Skills lesson?

To not kill yourself, because my friend's uncle got very sad and shot himself in the head.

Grade 1 Learners Pre-interview

1.   Do you like school? Why?

Yes, because I like to play with my friends.

2.   What is your favourite part of school? Why?

Playing outside because I can play marbles.

3.   What is your least favourite part of school and why?

Working because it is a lot of work.

4.   Do you use the things that you learn at home? Give me an example.

No, I go home and play.

5.   What is Life Skills?

When you learn about life.

6.   What do you do in a Life Skills lesson?

How to work.

Appendix C: Excel Coding Illustration

Appendix D: Teachers Observation Sheets

Appendix E: Learners Consent Forms

Appendix F: Ethical Clearance Form