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EARLY-GRADE TEACHERS' PEDAGOGICAL KNOWLEDGE IN THE IMPLEMENTATION OF THE STANDARD-BASED CURRICULUM IN ATWIMA-KWAWOMA DISTRICT

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DECLARATION

Student's Declaration

I, **Evelyn Kwarteng**, declare that this thesis, with the exception of quotation and references contained in published works which have all been identified and duly acknowledged, is entirely my original work, and it has not been submitted either in part or whole for another degree elsewhere.

Signature: …….

Date: …….

Supervisors Declaration

I hereby declare that the preparation and presentation of this work was supervised in accordance with the guidelines for supervision of thesis as laid down by the University of Education, Winneba.

Supervisor: Salome Praise Otami (Ph.D)

Signature……

Date…….

DEDICATION

I dedicate this work to my husband Paul Attakorah and my children Kwadwo Kyere Attakorah and Kofi Agyei Attakorah.

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ABSTRACT

The study aimed at examining early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in Atwima-Kwawoma district. The study seeks to identify pedagogical approaches early-grade teachers adopt to teach learners at early childhood centres using standard-based curriculum in the Atwima-Kwawoma District. The main research question guiding the study is the identify pedagogical approaches and skills early-grade teachers in the Atwima-Kwawoma District employ in teaching at early childhood centers using the standard-based curriculum? The study was guided by 4 major theories namely; constructivist learning theory, diffusion of innovations theory, top-down theory, and bottom-up theory. The study adopted positivist philosophical stand. Quantitative research approach and descriptive survey research design were adopted. The target population for the study were teachers in early-grade schools in the Atwima-Kwawoma District. Simple random sampling technique was used to select the 132 early-grade teachers. This was done using the rand function in Microsoft excel. The study used questionnaire as the main instrument for collecting data on the respondents. The study used descriptive Statistics, such as frequency tables, mean and standard deviations to analyze the obtained data from sampled respondents. The study found that a significant percentage of teachers expressed challenges in understanding the standard-base curriculum. There is variability in teachers' ability to explain the standard-base curriculum. The study found that play-based pedagogy is widely adopted by teachers in the district. Also, it was revealed that inquiry-based learning approach is also prevalent. Project-based learning and technology-based learning approaches exhibit more diverse adoption patterns. Again, theme-based and activity-based learning approaches are widely embraced by teachers. The study also revealed that differentiated instruction is less commonly adopted, with a majority of teachers remaining neutral about its use. In line with the third objective, the study found that while the majority of teachers have access to an official standard-based curriculum, a significant proportion does not. It was also revealed that a concerning number of teachers reported not having books for all their learners, indicating a serious lack of essential learning materials. In line with the fourth objective of the study, the results reveal several significant challenges that early-grade teachers in the Atwima-Kwawoma District face when implementing the Standard-Based Curriculum. These challenges include a lack of understanding of the curriculum, inadequate teaching materials, large class sizes, insufficient training, heavy workloads, student comprehension issues, limited parental involvement, and inadequacy of school facilities. The study recommends that the school authorities and Ministry of Education should increase funding for early-grade education to address resource constraints, particularly the availability of textbooks and teaching materials.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Education is the cornerstone of societal development, playing a pivotal role in shaping the future of individuals and communities (Rokicki et al., 2020; Schweinhart & Weikart, 2016; (Jacinta, & Rotich, 2015). In recent years, the global landscape of education has witnessed a paradigm shift with an increasing emphasis on standard-based curricula aimed at enhancing learning outcomes and ensuring educational equity. The implementation of standard-based curricula requires teachers to possess a profound understanding of pedagogical practices that align with the prescribed standards, particularly in the crucial early grades where foundational skills are laid (Badu, Agbevivi & Subbey, 2022).

Countries are increasingly poised to produce learners with knowledge that will put them at a competitive advantage over others in the job market. All over the world, educational systems have resorted to curricular changes to realize these educational aims. Countries such as Ghana, the United States of America, Kenya, Rwanda and others have all undertaken to reform their educational system to ensure the production of highly sophisticated individuals who possess the knowledge and skills necessary for the job market in the 21st Century (Waweru, 2018). It is to this end that the Ministry of Education through the National Council for Curriculum and Assessment (NaCCA) introduced the Standard-based Curriculum to replace the objective-based curriculum since the introduction of formal education. This reform did not exclude the early childhood curriculum.

The changes have led to new requirements for pedagogy and for sure enhance the need for the professional competence of teachers. Much often, early-grade teachers are underestimated compared to other teachers who teach at a formal level of education, although their role is just as important as other teachers in teaching and enhancing learner ability. This presumption is mostly based on the learning activity in early childhood which contains a lot of art and playing activity such as dancing to the rhythm, singing, clapping hands, and playing games based on theme or subject that makes learning activity seems unformal and playful (Moloney, 2010).

Early-grade teachers as key players in young children's education have a crucial role to play in early childhood curriculum implementation. The role of the Early-grade teachers is to make this curriculum work for the intended purpose to inculcate in learners the core competencies and values and to make learning happen; improve learning outcomes (NaCCA, 2019). Conferring to the National Council for Curriculum and Assessment [NaCCA] (2019), the Standard-Based Curriculum (SBC) stipulates that Early-grade teachers employ participatory, play-based and child-centered activities in the classroom to enable learners to reflect on their experiences, collaborate and interact with other peers and the teachers themselves. again, Early-grade teachers are to engage actively and connect what they are learning to their lives daily. Learning must be made functional, with the use of real-life experiences to help the child apply lessons learned to their daily lives. These pedagogical approaches are earmarked towards the attainment of six essential core competencies (Communication and collaboration; critical thinking and problem-solving; creativity and innovation; cultural identity and global citizenship; leadership and personal development and digital literacy) (NaCCA, 2019).

The standard-based curriculum in Ghana, as outlined by the GES, aims to cultivate critical thinking, problem-solving skills, and holistic development among students. However, the success of this ambitious agenda hinges on the effective translation of curriculum objectives into the pedagogical practices of early-grade teachers. Research by Alhassan and Abosi (2017) underscores the challenges faced by teachers in Ghana in adapting to the new curriculum, highlighting the need for targeted professional development initiatives.

In the context of Atwima-Kwawoma District, the challenges and opportunities in implementing the standard-based curriculum are further nuanced by the district's unique characteristics. These include the socio-economic diversity of learners, limited access to educational resources, and variations in teacher training and professional development opportunities. A study by Akyeampong, Pryor, and Westbrook (2018) underscores the importance of addressing these contextual factors in understanding the dynamics of education in Ghana. Crucially, the discourse on effective pedagogy remains central to educational research. Hattie's (2012) meta-analysis emphasizes the substantial impact of teacher effectiveness on student achievement. In this light, the focus on the pedagogical knowledge and practices of early-grade teachers in Atwima-Kwawoma District becomes imperative. Understanding how teachers navigate and apply pedagogical principles in the context of the standard-based curriculum is crucial for optimizing learning outcomes.

Pedagogical knowledge refers to teachers' ability to make a connection between theories and practice in the teaching and learning process (Figueiredo, Gomes & Rodrigues, 2018; Nganga, 2020; Buyong, Mohamed, Satari, et al., 2020). In the early-grade, it includes the provision of learning environments for play, exploration, and instructive learning (Siraj-Blatchford, Sylva, et al., 2002). In this study, it refers to the

interactive process between the early-grade teacher and learners and the learning environment provided by the teacher in order to enhance children's stimulation and learning.

Teachers with good pedagogical knowledge can carry out effective teaching and learning session in the classroom (Clements & Sarama, 2008; Oakley, 2020). They know how to integrate the pedagogy, content, and implementation strategies that will help children to gain a better understanding (Koehler, Mishra, Akcaoglu, & Rosenberg, 2013). They can also make the learning session fun and exciting. This approach has been proven to enhance children's engagement, attention, focus, and interest (Dewyer & Schachter, 2019; Nganga, 2020; Male & Resad, 2016). Besides, the fun and exciting session with playful activities can help nurture and foster the interest of children towards learning (Oakley, 2020).

The importance of displaying pedagogical knowledge and skills cannot be over-emphasised. According to Amosun and Kolawole (2015), pedagogical knowledge helps teachers to think about the best possible methods, strategies, materials, and resources to be utilised for the learning situation; helps teachers to know how to utilise various forms of play; different strategies for grouping learners; different types of media and materials. Pedagogical knowledge and skills turn teachers into facilitators, coaches, models, evaluators, managers, and advocates (Amosun & Kolawole, 2015). It helps teachers employ appropriate evaluation schemes. Effective pedagogy helps teachers display skills in creating curricula designed to build on learners' present knowledge and understanding and move those learners to more sophisticated and in-depth abilities, knowledge, concepts, and performances. Thus, effective teaching requires pedagogical skills so that the teaching is carried out smoothly and results in the maximum output in terms of the expected teaching

outcomes. However, Kpedator (2019) reported that teachers did receive enough training on curriculum implementation hence they have inadequate knowledge of the pedagogies for delivering the content of the curriculum. The most scathing criticism of the teachers related to the lack of learning materials to support the implementation of the curriculum as well as a limited congenial atmosphere that would enhance the successful implementation of the curriculum Kpedator (2019).

In light of the aforementioned considerations, this research in the Atwima-Kwawoma District becomes particularly relevant. The district's unique characteristics provide an opportunity to examine how local dynamics intersect with the broader educational landscape, influencing the pedagogical knowledge and practices of early-grade teachers. This study, therefore, aims at investigating Early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in the Atwima-Kwawoma District. By drawing on these global, national, and local contexts, this study aims to offer nuanced insights into the challenges and opportunities faced by early-grade teachers in implementing the standard-based curriculum in Atwima-Kwawoma District.

1.2 Statement of the Problem

To appropriately prepare teachers for the implementation of the Standard-Based Curriculum, the Ghana Education Service (GES) organised a five-day training program for primary school teachers across the country. Despite the fact that the workshops were largely effective, Kpedator (2019) claims that a number of bad situations marked the Ministry's failure to listen to the teachers' numerous concerns throughout the training. The most vehement complaint levelled were inadequate resources and inadequacy of time to understand the curriculum (Kpedator, 2019).

Now the question is, do early grade teachers in the district faces these challenges in the implementation of the Standard-Based Curriculum? In this light, the study seeks to examine the pedagogical knowledge and skills early grade teachers employ for successful implementation of the Standard-Based Curriculum and also examine the challenges early grade teachers in the district face in implementing the Standard-Based Curriculum. Therefore, teachers must think creatively, innovatively, strategically, and unrestrictedly and acquire the necessary knowledge in order to implement the reforms, through effective and quality teaching and learning.

In the context of Atwima-Kwawoma District, the effective implementation of the standard-based curriculum faces significant challenges, particularly in relation to the pedagogical knowledge of early-grade teachers. The seamless integration of the standard-based curriculum into classroom practices requires a deep understanding and adept application of pedagogical principles by teachers. However, based on my observation as early grade teacher and coordinator in the district, the early-grade teachers in Atwima-Kwawoma District encounter obstacles that hinder the optimal execution of the standard-based curriculum, impeding its potential to foster holistic student development. Observations made by the researcher suggest that early-grade learners in the Atwima Kwawoma District are not adequately prepared to develop the skills and core competencies which include critical thinking and problem-solving, creativity and innovation, communication and collaboration, cultural identity and global citizenship, personal development and leadership, and digital literacy outlined in the new standard-based curriculum. It seems these children are deficient in solving problems that require more than simple recall of facts or performance of rudimentary skills. It appears early-grade teachers are unable to provide opportunities for children to engage in activities that promote in-depth understanding, ethical thinking, creative

problem solving, and the ability to use knowledge in real-life settings as a result of the limited knowledge they may have on the new standard-based curriculum. One of the central issues revolves around the adequacy of early-grade teachers' pedagogical knowledge to align with the requirements of the standard-based curriculum. There is a growing concern that teachers may lack the necessary training, resources, or support to effectively translate the curriculum objectives into engaging and student-focused instructional strategies. The question of whether early-grade teachers at Atwima-Kwawoma District possess the requisite pedagogical tools to cater to the diverse needs of learners within the framework of the standard-based curriculum emerges as a critical challenge.

Furthermore, the problem extends to the practical implementation of pedagogical approaches in the classroom setting. Challenges such as limited access to teaching aids, variations in the socio-economic backgrounds of students, and disparities in professional development opportunities may hinder the seamless integration of pedagogical strategies tailored to the standard-based curriculum (Mochiah & Adibi, 2023). This discrepancy may lead to a misalignment between curriculum goals and instructional practices, potentially compromising the quality of education provided to early-grade learners (Sampson, Kumi & Maxwell, 2022). Additionally, the evaluation of student learning outcomes within the context of the standard-based curriculum raises concerns about the effectiveness of current pedagogical approaches employed by early-grade teachers (Mahama, 2023). The identification of gaps between intended curriculum outcomes and the actual achievements of students becomes crucial for understanding the impact of pedagogical practices on the successful implementation of the standard-based curriculum.

Thus, the overarching problem can be encapsulated in the following question: To what extent do challenges in early-grade teachers' pedagogical knowledge impede the successful implementation of the standard-based curriculum in Atwima-Kwawoma District, and how do these challenges manifest in classroom practices and student learning outcomes? Addressing this problem is imperative for enhancing the efficacy of educational interventions, professional development initiatives, and policy frameworks aimed at bolstering the implementation of the standard-based curriculum in early-grade classrooms within the district.

While the issue of early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum has garnered attention in existing literature, a critical examination reveals notable gaps and deficiencies. Previous studies have explored various facets of this complex interplay, shedding light on the challenges and opportunities faced by educators in different contexts. However, several key aspects remain underexplored or insufficiently addressed, creating a research gap that this current study seeks to bridge.

Existing literature has predominantly focused on the global and national perspectives, providing insights into overarching challenges faced by teachers in implementing standard-based curricula. Studies such as those by Knaack, Kreuz & Zawlocki (2012) and Akyeampong, Westbroo and Pryor (2020) have contributed valuable insights at the national level, offering a broad understanding of the issues. However, a gap exists in the specific examination of these challenges within the unique socio-cultural and infrastructural context of Atwima-Kwawoma District. The existing literature has not adequately addressed how the district's distinctive characteristics may amplify or mitigate the challenges faced by early-grade teachers in translating pedagogical knowledge into effective curriculum implementation (Aboagye & Yawson, 2020).

Moreover, while some studies (Nevenglosky, 2018; Pandey, 2018) have touched upon the barriers to effective curriculum implementation, few (Mahamud, 2021; Wambi, Buluma & Ludigo,2023) have delved into the nuances of the pedagogical knowledge possessed by early-grade teachers. The literature deficiencies a comprehensive exploration of the specific pedagogical strategies and approaches that teachers employ in aligning with the standard-based curriculum. Understanding the intricacies of teachers' pedagogical knowledge and practices is vital for tailoring interventions that address specific needs and challenges at the grassroots level. Additionally, the majority of existing studies have tended to emphasize challenges rather than focusing on the potential solutions or effective strategies that early-grade teachers may employ to overcome obstacles in implementing the standard-based curriculum. This leaves a gap in the practical guidance available to educators and policymakers seeking evidence-based approaches to enhance curriculum implementation.

The current study aims to fill these gaps by providing a localized examination of early-grade teachers' pedagogical knowledge within the Atwima-Kwawoma District. By doing so, it seeks to offer a nuanced understanding of the challenges unique to this context, identify specific gaps in pedagogical practices, and propose actionable recommendations for improving the alignment between teachers' pedagogical knowledge and the requirements of the standard-based curriculum. In essence, this study endeavors to contribute a missing piece to the existing literature, addressing the need for context-specific insights that can inform targeted interventions and strategies for enhancing the quality of early-grade education in Atwima-Kwawoma District.

1.3 Purpose of the Study

The study examined early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in Atwima-Kwawoma district.

1.4 Research Objectives

The study sought to:

1. Examine the early-grade teachers' understanding of standard-base curriculum in the Atwima-Kwawoma District.
2. Identify pedagogical approaches early-grade teachers adopt to teach learners at early childhood centres using standard-base curriculum in the Atwima-Kwawoma District.
3. Assess available resources that support early-grade teachers in the successful implementation of the standard-base curriculum in the Atwima-Kwawoma District.
4. Identify challenges early-grade teachers face in implementing the standard-base curriculum and how they address them in the Atwima-Kwawoma District.

1.5 Research Questions

The following research questions will be formulated to guide the study:

1. in what ways do early grade teachers in Atwima-Kwawoma District understand standard-base curriculum and its implementation strategies?
2. What pedagogical approaches do early-grade teachers in the Atwima-Kwawoma District employ when teaching learners at early childhood centers using the standard-base curriculum?

3. What is the assessment of the availability and adequacy of resources that support early-grade teachers in the Atwima-Kwawoma District in the successful implementation of the standard-base curriculum?
4. What challenges do early-grade teachers face in the Atwima-Kwawoma District when implementing the standard-base curriculum, and how do they address these challenges?

1.6 Significance of the Study

The study contributes to the theoretical understanding of pedagogy in early-grade education. By investigating the relationship between early-grade teachers' pedagogical knowledge and the implementation of the standard-based curriculum, the study enriches existing pedagogical theories. It provides insights into how theoretical frameworks can be applied in real-world educational settings, enhancing our understanding of effective teaching practices.

The practical significance of this study lies in its potential to inform and improve teaching practices. Findings from the study can offer practical insights into how early-grade teachers can better align their pedagogical approaches with the standard-based curriculum. This has direct implications for classroom instruction, potentially leading to more engaging, effective, and student-centered teaching practices.

The study holds significant implications for educational policies, particularly those related to curriculum development and teacher training. Insights into the challenges faced by early-grade teachers and the factors influencing the successful implementation of the standard-based curriculum can inform policy decisions. Policymakers can use this information to refine curriculum guidelines, design targeted professional development programs, and allocate resources effectively. Again, the

findings of the study will be resourceful to major stakeholders (GES, MOE, NaCCA, Schools) in identifying what bottlenecks exist regarding early-grade teachers' pedagogical knowledge in curriculum implementation and in turn, provide remedies for bettering the situation.

The study contributes to evidence-based decision-making in educational policy. Policymakers can use the research findings to make informed choices about curriculum design, resource allocation, and support systems for teachers. This aligns with the broader goal of enhancing the quality of education and ensuring that policies are grounded in empirical evidence. Understanding the challenges faced by early-grade teachers in implementing the standard-based curriculum allows policymakers to proactively address these challenges. Policy interventions can be designed to provide targeted support, resources, and professional development opportunities, fostering a more conducive environment for successful curriculum implementation.

1.7 Delimitations of the Study

The delimitations and scope of the study define the specific boundaries within which the research will be conducted. They help to clarify the extent, limitations, and contextual focus of the investigation. This study is confined to the Atwima-Kwawoma District in the Ashanti Region of Ghana, ensuring a localized focus on a specific educational setting. The study specifically targets early-grade teachers involved in the implementation of the standard-based curriculum. The focus is on teachers working with learners at the early childhood education level within the Atwima-Kwawoma District.

The study primarily examines the standard-based curriculum introduced in 2020 by the National Council for Curriculum and Assessment (NaCCA) in Ghana. It does not

encompass other curriculum models or historical curriculum structures that may have been in place prior to this recent reform. While the study explores pedagogical approaches, it does not comprehensively cover all possible teaching methodologies. The focus is on the specific strategies employed by early-grade teachers in the context of implementing the standard-based curriculum. The study primarily relies on the perspectives and experiences of early-grade teachers. While valuable, it does not extensively capture the viewpoints of other stakeholders such as students, parents, or school administrators.

By clearly delineating these delimitations and specifying the scope, the study maintains a focused and manageable framework. These boundaries enable the research to address its objectives effectively while acknowledging the constraints inherent in any empirical investigation.

1.8 Limitations of the Study

One major limitation of the study has to do with the difficulty in the data collection process. Due to the busy schedule on the part of the early childhood teachers, and not interrupting class hours, the researcher if difficulty in getting the teachers to respond to the questionnaire at a goal. This makes the data collection process prolonged. Also,

The study employed a cross-sectional design, which captures data at a single point in time. Longitudinal or repeated measures designs could provide insights into changes or trends in teachers' perceptions and experiences over time. The study focused specifically on the Atwima-Kwawoma District in Ghana. The findings may not be easily generalizable to other districts or regions within Ghana or to other countries with different educational contexts, policies, and challenges. Due to resource

limitations, the study did not involve external observations or in-depth analysis of documents and records, which could have enriched the data and provided a more holistic view of the context. Despite these limitations, this may not have any significant consequences on the research findings. To build on the findings of this study and address its limitations, the following suggestions for further research could be considered.

1.9 Operational Definition of Terms

Early-grade Teachers: In the context of this study, they are teachers who teach at the kindergarten level in Ghana

Pedagogical Knowledge: It is the specialised knowledge of early-grade teachers for creating effective teaching and learning environments for all learners

Standard-Based Curriculum: It is the new curriculum for Ghana's kindergarten schools, dubbed – curriculum for change and sustainable development

1.10 Organisation of the Study

The study is divided into five chapters. Chapter one dealt with the general introduction of the study, background to the study, the statement of the problem, purpose of the study, objectives of the study, and research questions, significance of the study, delimitations of the study, operational definition of terms, organisation of the Study. Chapter two will present on review of related literature. It will provide theoretical and empirical evidence on pedagogical knowledge of early-grade teachers. Chapter three will present the research methodology. It will describe the research design, population, sample and sampling technique, research instruments, pilot-testing, validity, reliability of the data collection instrument, data collection procedures, data analysis, and ethical consideration. Chapter four will focus on results

presentation and discussion of the data that was collected from the field. Lastly, chapter five of the study will present the summary of the research findings, conclusions based on the findings, recommendations, and make suggestions for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 Overview

This chapter reviews related literature as follows: Theoretical framework, conceptual framework and strand of the research questions.

Theoretical Framework

Constructivist Learning Theory (Jean Piaget and Lev Vygotsky, Jean Piaget 1896-1980) The Diffusion of Innovations Theory (Everett Rogers 1962)

The top-down theory (Richard Gregory in 1970)

The Bottom-Up Theory (James J. Gibson in 1966)

Early-grade teachers' knowledge of standard-based curriculum

Pedagogical approaches early-grade teachers adopt to teach learners using standard-based.

Available resources that support early-grade teachers in the successful implementation of the standard-based curriculum in the Atwima-Kwawoma District.

Challenges early-grade teachers face in implementing the standard-based curriculum and how they address them in the Atwima-Kwawoma District.

Conceptual Framework

2.1 Theoretical framework

The study was guided by constructivist learning theory, diffusion of innovations theory, top-down theory, and bottom-up theory.

2.1.1 Constructivist Learning Theory

The Constructivist Learning Theory, rooted in the works of theorists such as Jean Piaget and Lev Vygotsky, Jean Piaget (1896-1980) is considered the father of the constructivist view of learning (Waite-Stupiansky, 2022). The theory posits that learners actively construct knowledge through their experiences, interactions, and reflections on the world around them (Bada & Olusegun, 2015). In the context of education, particularly early-grade teaching, this theory holds that learning is most effective when students are engaged in activities that allow them to explore, question, and make connections based on their existing understanding (Suhendi, 2018).

This study aligns with the constructivist learning theory, which posit that learners actively construct knowledge through their experiences. And the standard based curriculum employed the play-based learning which exposes learners to variety of experiences. Teachers understanding of the constructivist learning theory will inform teachers with regards to the pedagogical skills and approaches to adopt to enhance learners' active participation and successful implementation of the standard-based curriculum.

The theory posits that learners actively construct knowledge through their experiences, interactions, and reflections on the world around them (Bada & Olusegun, 2015). In the context of education, particularly early-grade teaching, this theory holds that learning is most effective when students are engaged in activities that allow them to explore, question, and make connections based on their existing understanding (Suhendi, 2018).

The theory emphasizes the importance of active involvement in the learning process. Rather than passively receiving information, learners, in this case, early-grade

teachers, are encouraged to actively engage with the content, formulate hypotheses, and explore different teaching strategies (Chuang, 2021). Constructivism recognizes the significance of social interactions in learning. Collaborative activities, discussions, and shared experiences play a vital role in shaping an individual's understanding of a subject (Alzahrani & Woollard, 2013). In the context of the current study, exploring how early-grade teachers interact with their peers, share pedagogical practices, and collaborate on curriculum implementation aligns with the social nature of constructivist learning. Vygotsky's concept of scaffolding highlights the importance of providing support to learners based on their current level of understanding. For early-grade teachers, Atwima-Kwawoma District this may involve tailored professional development, mentorship, or collaborative planning sessions that gradually guide them toward effective implementation of the standard-based curriculum.

In the Atwima-Kwawoma District, understanding how early-grade teachers engage with the standard-based curriculum through a constructivist lens is crucial. The study can explore: How do early-grade teachers actively involve themselves in the curriculum, encouraging students to explore and discover knowledge rather than relying solely on traditional didactic methods? To what extent do teachers in the district engage in collaborative activities, sharing their experiences and learning from one another? How does this collaborative process contribute to the collective pedagogical knowledge of early-grade teachers? How can professional development initiatives be designed to align with the principles of constructivist learning? Are there opportunities for teachers to actively participate in their own learning process, reflecting on and refining their teaching practices? To what extent do early-grade teachers employ student-centered pedagogical approaches that align with the

principles of constructivism, allowing students to take an active role in their learning process?

By exploring these aspects within the framework of the Constructivist Learning Theory, the study would provide nuanced insights into how early-grade teachers in Atwima-Kwawoma District construct and apply their pedagogical knowledge in the implementation of the standard-based curriculum.

2.1.2 Diffusion of Innovations Theory

The Diffusion of Innovations Theory, developed by Everett Rogers in 1962, provides a framework for understanding how new ideas, practices, or innovations are adopted and spread within a social system (Dearing & Cox, 2018). The theory identifies five main groups of adopters: innovators, early adopters, early majority, late majority, and laggards. It describes the process of adoption as a journey through these stages by different segments of the population (Ma, Lee & Goh, 2014). The theory has been applied in various fields such as education. marketing, public health, agriculture, social work, communication, and criminal justice. It is used to understand how and why new ideas and technologies spread, and it helps in predicting the rate at which consumers will adopt a new product or service (Lovejoy, Demireva, Grayson & McNamara, 2009). In the context of education, particularly the implementation of the standard-based curriculum, this theory offers valuable insights into the process by which innovations are embraced by individuals, such as early-grade teachers, within a specific setting.

In the current study, the innovation is represented by the standard-based curriculum. This is considered a new and potentially improved way of delivering education, emphasizing uniform standards, learner-centered learning, and skills development.

Rogers categorizes individuals into adopter categories based on their readiness to embrace an innovation. The categories include innovators, early adopters, early majority, late majority, and laggards. Early-grade teachers in the Atwima-Kwawoma District may fall into different categories based on their willingness and speed of adoption of the standard-based curriculum.

The diffusion theory emphasizes the importance of communication channels in the diffusion process. These channels can be interpersonal (peer discussions, collaboration) or mass media (training programs, official guidelines). Understanding how information about the standard-based curriculum is communicated among early-grade teachers is crucial. The social system represents the broader context in which the innovation is introduced (Moulaert, MacCallum, Mehmood & Hamdouch, 2013). This includes the organizational structure, cultural norms, and existing practices within the Atwima-Kwawoma District's educational environment.

In relation to the current study, the study would explore the different adopter categories among early-grade teachers in the Atwima-Kwawoma District. Are there innovators who eagerly embrace the standard-based curriculum, or is there resistance among certain groups? Understanding these patterns can provide insights into the factors influencing the adoption process. How is information about the standard-based curriculum disseminated among early-grade teachers? Are there effective communication channels, such as professional development sessions, workshops, or collaborative platforms, that facilitate the exchange of information and ideas? How does the existing organizational culture within schools and the broader educational system influence the adoption of the standard-based curriculum? Are there institutional factors that act as barriers or facilitators to the diffusion process? Exploring the innovativeness of individual teachers can help identify those who are

more open to experimenting with new teaching methods aligned with the standard-based curriculum. This can inform targeted interventions for professional development.

By applying the Diffusion of Innovations Theory to the study, researchers would gain a comprehensive understanding of how the standard-based curriculum is accepted and integrated into the educational practices of early-grade teachers in the Atwima-Kwawoma District. This framework offers a lens to explore the dynamics of innovation adoption, providing valuable insights for educational policymakers and practitioners.

2.1.3 Top-Down Theory

The top-down theory was propounded by British psychologist Richard Gregory in 1970. The Top-Down Theory of curriculum implementation posits that educational policies, such as the standard-based curriculum, are formulated and mandated from higher authorities down to the classroom level (Sadras, 2005). In this framework, pedagogical strategies and instructional methods associated with the curriculum are prescribed at a broader policy level, shaping the teaching practices of early-grade teachers. The implementation process is expected to adhere to predetermined standards and guidelines, emphasizing a structured and uniform approach to pedagogy (Craddock, O'Halloran, Mcpherson, Hean & Hammick, 2013).

Examining the Top-Down approach within the Atwima-Kwawoma District involves investigating how the prescribed pedagogical elements of the standard-based curriculum are communicated and expected to be applied by early-grade teachers. The study explores how well teachers align their classroom practices with the prescribed pedagogical strategies outlined in the curriculum guidelines. Understanding the

interplay between top-down directives and the actual pedagogical approaches employed in the district provides insights into the effectiveness and challenges associated with the standard-based curriculum.

2.1.4 Bottom-Up Theory

The Bottom-Up Theory was introduced by James J. Gibson in 1966. The Bottom-Up Theory highlights the active role of early-grade teachers in shaping curriculum implementation, emphasizing their pedagogical expertise and insights (Setiawan, 2020). In this approach, teachers are seen as pivotal decision-makers who contribute to the design and adaptation of the curriculum based on their understanding of effective pedagogy (Bolghari & Hajimaghsoodi, 2017). The Bottom-Up perspective recognizes that successful implementation requires teachers to actively engage in pedagogical decision-making, adapting instructional strategies to the unique needs and context of their students. Investigating the Bottom-Up approach within the Atwima-Kwawoma District involves exploring how early-grade teachers leverage their pedagogical knowledge to interpret and adapt the standard-based curriculum. The study delves into the pedagogical strategies teachers employ, the instructional methods they find effective, and how they address challenges within the context of their classrooms. Understanding how teachers contribute to curriculum implementation through their pedagogical lens provides valuable insights into the dynamic and context-specific nature of education in the district.

By considering both the Top-Down and Bottom-Up theories, the study gains a comprehensive understanding of the dynamics of curriculum implementation in the Atwima-Kwawoma District. This dual perspective allows researchers to explore how policy decisions interact with the practical experiences, pedagogical decisions and

adaptations made by early-grade teachers, providing a nuanced view of the challenges and successes in implementing the standard-based curriculum.

2.2 Conceptual Review

The Conceptual review section serves as the conceptual underpinning that guides the exploration of early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in the Atwima-Kwawoma District. This framework provides a structured lens through which the study examines the interplay between theoretical constructs and the practical realities of curriculum implementation. By delineating key concepts, relationships, and variables, the Conceptual Framework illuminates the intricate dynamics that shape the pedagogical landscape in the context of the standard-based curriculum.

2.2.1 Early Childhood Standard-Based Curriculum

Bulger, Housner & Lee (2008) assert that developing a standards-based curriculum necessitates a close examination of the standards, considering the skills, knowledge, and dispositions that learners should demonstrate. This process involves not only selecting a curriculum model but also incorporating pedagogical strategies that align with the developmental stages of early childhood. Carr and Harris (2001) emphasize that the curriculum design should commence with a thorough understanding of the standards, and when unpacked, the pedagogical activities that facilitate reaching these standards should naturally emerge.

Ani-Boi (2009) accentuates the importance of curricular assessments within a standards-based curriculum, enabling learners to track their success and aiding teachers in evaluating the effectiveness of pedagogical methods. Understanding the reasons for learners falling short of standards requires a pedagogical lens, as it

prompts educators to consider alternative approaches to teaching and the inclusion of different activities in the program (Tafai, 2017).

However, challenges arise when some teachers object to a standards-based curriculum due to perceived infringements on their autonomy to choose what learners should learn (Petersen, Cruz, & Amundson, 2002). To address this, it becomes crucial to incorporate pedagogical principles that emphasize flexibility and adaptability. The pedagogical knowledge of teachers should be acknowledged and leveraged to strike a balance between adherence to standards and the recognition of diverse teaching styles and preferences.

In the Ghanaian context, the transition from an objective-based curriculum to a standard-based approach, as highlighted by the Ministry of Education (2019), underscores the significance of incorporating pedagogical insights (Apau, 2021). The move is driven by the recognition that the previous curriculum model, focused on examination preparation, lacked emphasis on essential skills for human capital development. The new standard-based curriculum, therefore, necessitates a pedagogical shift towards prioritizing skills acquisition over content overload, aligning with research-supported pedagogical approaches.

The Kindergarten Curriculum in Ghana, designed to provide a positive learning experience through play and creative learning, aligns with the pedagogical understanding that young learners best acquire skills through interactive and stimulating methods (NaCCA, MoE, 2019). The acknowledgment of the formative nature of the first eight years of a child's life underscores the importance of pedagogical approaches that foster curiosity, creativity, and critical thinking. The curriculum recognizes that young learners naturally learn through play, emphasizing

the need for pedagogical strategies that align with the natural tendencies and developmental stages of these learners (Apau, 2021). In summary, incorporating pedagogical knowledge into the development and implementation of the early childhood standard-based curriculum is imperative. It ensures that teaching strategies align with the developmental needs of young learners, promoting a positive and effective learning experience that goes beyond mere adherence to standards.

2.2.2 Implementation of the Standard-Based Curriculum

The implementation of a standard-based curriculum is a multifaceted process that necessitates a thorough review, particularly with a focus on pedagogy. Examining the integration of pedagogical knowledge into the implementation of the standard-based curriculum is crucial for understanding how teaching and learning practices align with educational objectives (Rusdiana & Nasihudin, 2018). An effective curriculum implementation should demonstrate a clear alignment with both broader educational goals and pedagogical principles. Pedagogical knowledge is a cornerstone of effective teaching. This includes understanding how well teachers grasp and apply pedagogical principles in their instructional practices. Assessment practices are integral to pedagogy. This includes formative assessments that inform teaching practices and summative assessments that measure student achievement based on pedagogically sound criteria.

Perspectives on the implementation of innovations can be arranged on a continuum, depending on the amount of teacher input and the complexity of the decisions teachers are required to make. As a result, since the mid-1970s, the design of traditional implementation strategies has been divided into three perspectives: (i) fidelity (ii) mutual adaptation and (iii) enactment and all these approaches are based on different assumptions about curriculum knowledge, curriculum change and the role

of the teacher (Cho, 1998). Teachers adopt a fidelity, mutual-adaptation or enactment approach when they implement curriculum. Those adopting the fidelity approach are curriculum–transmitters who just deliver curriculum materials; teachers following the adaptation approach are curriculum-developers who undertake curriculum adjustments; whereas those who enact curriculum act as curriculum-makers who achieve significant curriculum changes (Snyder, Bolin, & Zumwalt, 1992). Each approach involves different implications for learners, teachers, curriculum and school development. Again, the different curriculum approaches can turn the official curriculum into something different from the taught curriculum; and at the same time impact differently on teachers' professional development, since each approach entails different roles and opportunities. The fidelity and mutual adaptation are found to have dominated in contemporary curriculum textbooks (Posner, 1994; Marsh & Willis, 2007). All the approaches require teachers to use a simple pattern of decision-making focused only on effective implementation of the innovations provided by educational authorities, usually the Ministry and the school board (Pinar, 2000).

Most curriculum implementation has been studied from a fidelity perspective or approach. It is the first and major implementation model. The approach deals with how sincerely implementers operate a new programme in accordance with the guidelines laid down by the developers or sponsors of the programme. Those who believe in fidelity believe that good education occurs through homogenized and standardized implementation of the curriculum while disciples of adaptive implementation emphasizes a local-oriented change process (Berman & McLaughlin, 1975; Fullan & Pomfret, 1977). The fidelity approach suggests curriculum as "a course of study, a textbook series, a guide, a set of teacher plans" (Snyder et al., 1992), where experts define curriculum knowledge for teachers. In this case,

curriculum change occurs through a central model in systematic stages, which confines the teacher‟s role to delivering curriculum materials.

The key aspect of the fidelity is the degree of strictness to the specified guideline as a standard used for labeling high implementers. The concerns of researchers have been centred on measuring the degree and (also) identifying the factors, which facilitate or hinder implementation as planned. Minor changes might be accepted but the emphasis is clearly on ensuring that practice concurs with the intentions of the designer (Crandall, 1982). According to Shawer (2003), the fidelity approach leads teachers to become curriculum transmitters who use the learner‟s book as the only source of instructional content. They transmit textbook content as its structure dictates by means of linear unit-by-unit, lesson-by-lesson and page-by-page strategies. Neither do they use `adaptation` strategies to adjust curriculum to their context; nor do they employ `skipping` strategies to eliminate irrelevant studying units, lessons or tasks. Moreover, these teachers rarely supplement the missing elements and focus solely on covering content without responding to classroom dynamics.

The fidelity approach to curriculum implementation is highly optimistic about achieving pre-determined goals through the use of systematic, rational processes. Leithwood (1991) contends that developers tend to view the programme “as a relatively complete solution to a clearly defined problem in the school or school system”. As a result, implementers are urged to focus their attention on the new programme and its prescriptions and to trust that “faithful” implementation will solve the problem. Underlying this approach are certain assumptions about curriculum knowledge, change, and the role of the teacher. Here, curriculum knowledge is primarily created outside the classroom by the experts who design and develop the curriculum innovation. Thus, the curriculum is evaluated to determine whether the

planned outcomes have been achieved and this would imply that implementation is successful when teachers carry out the curriculum change as directed (Leithwood, 1991). It can therefore be reasoned out that implementation is a non-problematic phenomenon which occurs unhindered provided people understand the value of an innovation and readily follow its presented practices. It is worthy to be noted that curricula are not always faithfully implemented; adequate training prior to implementation and support and monitoring during implementation have become standard features of this approach. It is further assumed that curriculum change is a rational, systematic, linear process that can be better administered if much is known about the factors that either facilitate or hinder the smooth operation of the process (Leithwood, 1991). In the same way the teacher is regarded as a consumer who should follow the directions and implement the curriculum as the experts have designed it. As the one responsible for imparting curriculum to learners, the teacher‟s role becomes critical to the success of the curriculum. Thus, the curriculum in this perspective may be seen as a static thing (document) – a textbook or a syllabus. This view is supported by Snyder et al. (1992) when they state that “from a fidelity point of view a curriculum is something concrete; something that can be pointed to or something that can be evaluated to see if its goals have been accomplished”.

Based upon its roots in behaviorism and positivism, the fidelity perspective views the change process in a technological and linear manner. The idea of this perspective is to use the curriculum as its developers originally intended. Hence, it is firmly expected that a highly specified programme developed by experts will be actualized in practice as exactly as possible, without any modifications. For instance, where implementing a curriculum, once a final decision is made, “programmed implementation procedures (fidelity) are supposed to be followed by all levels of the organization involved"

(Berman, 1980, p. 208). Likewise, those concerned with curriculum change or improvement in this line of thought tend to believe that there is a significant relationship between the fidelity of use and the amount of planned change. The degree of implementation of an innovation is largely determined by the extent to which actual use of an innovation corresponds to planned use (Fullan & Pomfret, 1977; Loucks, 1983; Loucks & Pratt, 1979).

In order that the fidelity approach could be successfully used in implementing a curriculum, there are certain conditions which must be satisfied. Among the conditions include, clearly defining the innovation needs; developing implementation scale or checklist and redefining the role of the teacher (Snyder et al., 1992). In the first place, before any programme could be declared as being a failure because the desired outcomes were not achieved, it is necessary that one should first determine whether the programme was really implemented. In the second place, an implementation scale or checklist should be developed to match desired practices, such as use of materials and activities, new roles/behaviour, new understandings and attitudes (Fullan, 2001b). Hence, defining the actual innovation is often the first step in developing a scale or checklist which is faithful to the intentions of the developers or a panel of experts who are asked to judge the validity of the instrument being used to make sure that it matches the intentions of those who developed the curriculum innovation. Once the scale or checklist is developed and validated, it is used to assess the degree of implementation of a particular innovation of these methods.

Redefining the role of the teacher is the third and final condition to allow for the use of the fidelity approach. Gross, Giacquinta and Bernstein (1971) were asked to do a study in the late 1960s‟ following reports of failed programmes designed to provide equal educational opportunities for disadvantaged learners. Gross et al. (1971) felt

that the actual implementation of compensatory programmes had been inadequately measured and so it was pointed out that social scientists had been wrongly focusing on introduction of an innovation (adoption) as the fundamental problem of change. Later, Gross et al. (1971) assessed the degrees of implementation, which was labelled "Catalytic role model". This involved a change from teacher-directed to traditional instructional to child-centred instruction aimed at creating independent, responsible, thinking learners. The role of the teacher is to assist children to learn according to their interests. The teacher is also expected to emphasize the process, not the content of learning and to allow pupils maximum freedom in choosing their own activities.

The second approach to implementation of research, which grew out of the fidelity perspective, is mutual adaptation (McLaughlin, 2005). The "adaptation" approach is a "process whereby adjustments in a curriculum are made by curriculum developers and those who use it in the school" (Snyder et al., 1992, p.410). Researchers with this ambition are interested in studying how the innovation is adapted during the implementation process rather than in measuring the degree to which the innovation is implemented as planned. Models with a mutual adaptation perspective are characterized by an externally imposed middle-up dynamic (Cho, 1998). This perspective requires that the external authorities allow modifications to the innovation that has been designed by external experts for the classroom and also requires more complex decision-making by teachers as they reshape or adapt the innovation for their respective classrooms (Pinar, 2000). This perspective recognised the complexity of the classroom settings for which the curriculum was intended.

This involves conversations between teachers and external developers to adapt curriculum for local needs. This approach does not suggest curriculum knowledge different from the fidelity approach, since experts still define it, but curriculum

change has become more flexible through mutual adaptations. The teacher's role has also become more active through formulating teachers' curriculum adjustments. Shawer (2003) argues that though the adaptation and curriculum-development approaches involve adaptations into the official curriculum; the development approach does not involve communications between external developers and teachers regarding teachers' adaptations. Through curriculum adjustments, teachers become curriculum-developers who use various sources in addition to curriculum materials. They adapt existing materials and topics, add new topics, leave out irrelevant elements, use flexible lesson plans, respond to learner differences and use various teaching techniques. The development approach reflects Cohen and Ball"s (1999) notion of instructional capacity that results from the interactions among teachers and learners around curriculum materials, where teachers' knowledge, experience, and skills affect the interactions of learners and materials in ways that neither learners nor materials can. This way, Cohen and Ball echoed Doyle (1992) indicate that through this interaction, teachers can turn curriculum from the institutional into the pedagogical level (experienced/ enacted curriculum).

According to this approach, the implemented curriculum results from mutual adaptations emerging from the users, given their interests, needs and competences, and also emerging from the central agencies. Thus, the adjustments that occur in the curriculum are made not only by central agencies, but also by the schools and in the context of the classroom, and thus imply a certain amount of negotiation and flexibility on the part of both designers and practitioners (Snyder et al., 1992). Consistent with the notion of the adaptive perspective is the sensitivity of post positivism that emphasizes the complexity of the context in which a change takes place. In curriculum implementation, this is widely referred to as "mutual adaptation,"

a term coined by McLaughlin (2005). Accordingly, most educational concerns are to fit a proposed innovation to the institutional setting that encourages reducing the gap between an ideal implementation goal and given local contexts. In short, the success of a new curriculum results from the consequence of trade-offs within a local context in which multiple values are embedded. Yet, the authority of written programmes selected is still, to a large extent, respected by change facilitators and implementers (Hall & Hord, 1987; Leithwood & Montgomery, 1982; Lewis, 1988). This approach focuses only on studying how an innovation is adapted during the implementation process without measuring the degree to which the innovation is implemented as planned. This study seeks to fill that gap.

The third implementation approach is the enactment model. This perspective is driven by an internally imposed, bottom-up dynamic (Cho, 1998). In this approach, the emphasis shifts from studying the implementation and adaptation of proposed curriculum to studying curriculum enactment. Researchers within this orientation are interested in studying how curriculum is shaped through the evolving constructs of teachers and learners. Snyder et al. (1992) offered the enactment approach to help teachers and learners make meaning in the classroom. According to this approach, the curriculum is understood as the educational experiences jointly created by learners and teachers (Snyder et al., 1992). Thus, the teacher has the role of the curriculum maker who, together with his learners, is increasingly responsible for developing educational experiences. This is where teachers and learners create meaning in the classroom so that curriculum knowledge is no longer a product as in the fidelity and adaptation approaches, but ongoing constructions out of the enacted experiences that learners and teacher create.

External knowledge is viewed as a resource for teachers who create curriculum as they engage in the ongoing process of teaching and learning in the classroom. Moreover, it is teachers and their learners who create the enacted curriculum. In addition, curriculum change is neither about implementing nor even adapting curriculum, but "a process of growth for teachers and learners, a change in thinking and practice" (Snyder, et al., 1992 p. 429). The teacher's role ranges from using, adapting and supplementing external curriculum to curriculum-making (Clandinin & Connelly, 1988; Clandinin & Connelly, 1992; Craig, 2006). The teachers have become curriculum-makers who assess learners" needs to derive curriculum themes, use strategies of curriculum-planning, curriculum-design, material-writing and curriculum-free topics. In addition, they improvise and develop and use their pedagogic techniques. The curriculum-making approach (enactment) also represents another form of classroom-level curriculum development (Shawer, 2003).

Teacher decision-making is regarded as being complex, focused on what will or will not be implemented, and how innovation will be implemented in their classrooms. In the enactment perspective, implementation of innovations in most subject areas and grade levels became more complex. Unlike many models which focused on school systems or schools, models in the enactment perspective focuses on involving teachers in implementing innovations in their classrooms (Pinar, 2000). Argued by Snyder et al. (1992), the enactment perspective refers to intracontextuality in creating meaningful educational experiences "shaped by the evolving constructs of teachers and learners" (p. 404). What makes this an alternative perspective, compared to the previous two perspectives, is the way it defines the concept of curriculum. In this perspective, different priorities for "successful" implementation can be made while the teacher and learners enact the curriculum. The text describes three paradigms--

positivism, postpositivism, and constructivism--in order to compare and contrast the basic assumptions of each perspective. Since researchers within this orientation are interested in studying how curriculum is shaped through the evolving constructs of teachers and learners, this approach will also be a means to provide the needed motivation for other stakeholders (such as head teachers and parents) to work much harder to contribute their quota to ensure successful curriculum implementation.

The implementation of the Standard-Based Kindergarten curriculum can also be explained in terms of the context, inputs, process and outputs or product-CIPP Model (Amedahe, 2007; Stufflebeam & Shinkfield, 2007). The CIPP Model is a social systems model applied to programme evaluation. The approach was developed by Stufflebeam (1971) and provides a systematic way of looking at many different aspects of the curriculum development process. It is vital to identify ways in which various stakeholders can be meaningfully involved. The concept of quality implementation is often associated with effectiveness and degree to which objectives are met (Adams, 1993; Cobbe, 1990). A quality school has teachers and learners who are efficient, effective, of high quality and may be ready to produce good results.

Context indicators refer to characteristics of the society or community at large and structural characteristics of the national education system that may be of relevance. The specific indicators of context include demographics; basic financial and economic context; educational goals and standards; public community attitudes to education; role of the school in the community; and educational preparedness of the community (Amedahe, 2007; Stufflebeam & Shinkfield, 2007). These context indicators, among others, influence in different degrees the input, process and outcome.

The input indicators refer to material, financial and human resource invested in education. They include facilities and equipment; financing; teacher characteristics; classroom characteristics; teacher training and experience; and parent support (Amedahe, 2007). These input indicators are of great importance so far as quality of education at the kindergarten level is concerned. This is so because in their absence there cannot be effective performance in the end.

The process indicators are characteristics of the learning environment and the organization of schools. The specific indicators of process, among other things, include parental and community involvement; pupils' learning characteristics; high expectation of pupils' progress; degree of evaluation and monitoring of pupils' progress; reinforcement of learners' behaviour; educational leadership; quality of school curricular; discipline; as well as opportunity to learn (Amedahe, 2007; Stufflebeam & Shinkfield, 2007). The process indicators may individually or collectively influence the output because once the indicators are taken good care of within a good context; there is the possibility of the output becoming good.

The output/outcome indicators touch on access and participation, attainment and educational achievement. Such indicators include learner academic achievement in basic curricular domains; participation rates in the various education levels; progression through the education system; as well as post-schooling outcomes (Amedahe, 2007; Stufflebeam & Shinkfield, 2007). All the major components are needed to ensure quality education at the basic level. Kindergarten education and therefore education involves a broad range of various components each with its indicators. Measures of quality education are many and any specific measure used or adopted by a group or individuals depends on their characteristics. This means that quality implementation of the Standard-Based Kindergarten curriculum depends on

teachers' professional training, availability of teachers, school management, methodological materials, and learners' learning achievements (Amedahe, 2007). As a result, quality implementation of the Standard-Based Kindergarten curriculum may be determined by: the quality of particular components of the teaching process; the quality of the relations between particular components of the school system (head teachers-teachers; teachers-learners; learners-educational goals; teachers-teaching methods); and the quality of the relations between a school and its surroundings (Amedahe, 2007; Stufflebeam & Shinkfield, 2007). For complete and successful implementation of the Standard-Based Kindergarten curriculum all these indicators are to be considered.

Unfortunately, many a time people talk about effective curriculum implementation in terms of output or outcomes, usually in terms of learners' achievements. According to a World Bank Policy Study report of 1998, educational quality is seen to mean how well the school system prepares learners to become responsible citizens and instills attitudes and values relevant to modern society in them (World Bank, 1998). Educational quality is therefore concerned with how well learners acquire knowledge, skills, competences and relevant attitudes. Also, UNESCO (1990) describes good quality basic education as the provision of essential knowledge and skills for all young people to withstand the numerous demands of a modern society.

In conclusion, a holistic review of the implementation of the standard-based curriculum must intricately consider the integration of pedagogical knowledge. Examining how pedagogical principles are embedded in teaching practices ensures that the curriculum is not only aligned with educational objectives but also embodies sound instructional strategies that enhance the learning experience for students.

2.3 Early-Grade Teachers' Understanding of Standard-Based Curriculum.

Implementation of any new or revised curriculum comes with its challenges; however, the way teachers carryout the educational process has an impact on the learning outcomes of learners (Fullan & Langworthy, 2013; Amran & Rosli, 2017). Invariably, a systematic, joyful, and appropriate teaching and learning approach can motivate learners to participate actively in the learning process (Arthur & Obeng, 2023). In essence, if a teacher has mastery over the learning areas and content standards and understands the learning needs of learners, he or she can select appropriate teaching strategies to match the needs of learners (Dilkes, Cunningham & Gray, 2014). Masnan et al., (2021) espoused that it is not the quantum of instructional materials nor its quality that matter but how teachers understans and adequately utilise the resources to achieve the needed outcomes. According to a study by Muñoz, Prather & Stronge (2011), pupils whose classrooms are filled with teachers with insufficient knowledge on pedagogical practices do worse than those whose classrooms are filled with teachers with adequate knowledge.

Salehudin (2019) maintained that teaching strategy and approach play an important part in 21st-century drawing pupils' interest towards a subject and changing their perception about the subject regarding the subject difficulties. Invariably, pedagogies employed by teachers are essential in developing the lifelong learning that has been emphasised in the Standard-based Curriculum. Highlight from research by Haron, Zalli, Othman & Awang (2021) indicated that the fundamental pedagogy to quality teaching and learning carriedout by teachers comprises principles, techniques, and processes of teaching. The responsibility of fostering the 4Rs in the Standard-based Curriculum requires teachers to possess the ability to use a variety of techniques such as brainstorming, role-play, dramitisation, field trip, discussion, games and other

learner-centred learning activities that are in consonancewith contents and competencies to be inhibited by learners (Rusdin & Ali, 2018). In view of this, teachers' knowledge and perception of 21st-century creative pedagogy becomes an important skill that will empower them to develop the capability to develop and structure creative techniques as well as communicate new ideas in effective ways (Rusdin & Ali, 2018). The readiness of teachers in executing any given curriculum is essential in enhancing the learning outcomes of learners.

Kiamba and Mutua (2016) contend that the efficacy of a class teacher lies largely on his or her readiness to understand the ability and challenges of learners and employ differentiated pedagogies in teaching. The experiences of teachers are believed to have asignificant influence on lesson delivery and the overall performance of learners (Kiamba & Mutua, 2016). However, in Zimbabwe, the Department of Education, Eunitah (2017) identified that newly trained teachers offered new knowledge, skills and rejuvenating experience to the classroom compared to the more experienced teachers. Invariably, the long classroom experience does not entirely lead to changes in pedagogical knowledge and skill. Acquisition of knowledge by teachers regardless of years in service must be intentional and continuous. This makes in-service training of teachers crucial to the professional development of teachers and the quality of teaching and learning (Ashwin, 2022).

Chepkuto, Sang & Chumba (2018) argues that the dearth of professional development of teachers has contributed to teachers' poor preparation in content and pedagogy, resulting in the recycling of 'half-baked' teachers. It is therefore important that efficient opportunities for personal growth and professional development are provided for teachers through regular in-service training. The lack of opportunities for teachers to collaborate and share best practices as colleagues contribute to the challenges of

teachers, making them ill-ready to execute changes in the curriculum (Arthur & Obeng, 2023). Inference to this argument, Cunningham's (2018) research on curriculum reforms in Eastern and Southern Africa indicated that the curriculum reforms does not necessarily translate in changes in the classrooms. Therefore, teaching remains largely didactic and learners' acquisition of 21st-century knowledge through basic literacy and numeracy, on which future learning is built, is extremely low. There is a likelihood of teachers implementing any curricula in confidence when they feel well prepared. Their readiness has a link with the opportunity to participate in continuous professional development training that will enhance their knowledge in the content and pedagogy required for effective implementation (Cetin, 2016).

Studies on the perception of curriculum change includes studies dealing with the acceptance of new curriculum documents and the acceptance of the implementation process itself. Focusing on the evaluation of new curriculum documents, Roggenbrodt (2008) revealed positive attitudes towards innovated curriculum documents in Germany. A high extent of autonomy for schools and teachers was perceived as an important reason for curriculum change acceptance. Similarly, Janík et al. (2011) investigated the perception of a new Czech curriculum document and its implementation. Their results show that teachers valued a clear characterization of educational objectives along with the accurate specification of educational content and expected outcomes when accepting the new curriculum document. Familiarity with the principles of the curriculum change was another factor affecting curriculum change acceptance as teachers who were not yet familiar with the principles of the curriculum change tended to refuse it more vigorously (Beer, 2007; Karakhanyan, van Veen & Bergen, 2011; Reichmann & Artzi, 2012).

With deeper insight into the perceptions of curriculum implementation, Rekkor, Ümarik and Loogma (2013) dealt with Estonian teachers' perceptions and their involvement in the curriculum development and implementation process and analysed five types of teachers in terms of their willingness to implement the curriculum: enthusiastic innovators, constructive-critical innovators, normative adopters, norm ignorers, and bitterly disappointed (Datnow & Castellano, 2000; Dilkes, Cunningham & Gray, 2014). The teachers tended to attribute different meanings to the national curriculum ranging from seeing the curriculum as facilitating their work (enthusiastic innovators and constructive-critical innovators) to perceiving it as restricting and complicating it (norm ignorers and bitterly disappointed). Differences in the perceptions of the curriculum were identified among teachers from different vocational fields; the teachers in technical fields tended to be the most critical of the curriculum.

Straková (2007) found that Czech teachers who were previously satisfied with their work tended to accept curriculum change. However, only a minority of all teachers were willing to actively participate in the development of their school curriculum. Teachers with less teaching experience perceived responsibility for curriculum development more positively than other teachers. Demographic variables proved to be a significant factor influencing the perception of curriculum change in other studies as well. For instance, the length of professional experience played a significant role in a study by Tu˚mová (2012), who discovered that Czech teachers with more teaching experience tended to be more pessimistic about the benefits of change (Datnow & Castellano, 2000; Smit, 2005; Roggenbrodt, 2008; Dilkes, Cunningham & Gray, 2014). More concretely focused on the reasons for curriculum change acceptance, Erbas and Ulubay (2008) found that Turkish teachers with more teaching experience

(over 21 years) associated the implementation of the curriculum change predominately with innovations in the learning-teaching process and with improvements in the use of instructional materials. In contrast, teachers with less teaching experience (6 – 20 years) focused on improvements in evaluation techniques during the implementation of the change. According to findings by Janík et al. (2010), the respondents' position in the school proved to be a significant demographic variable, as members of the school management (head teachers and deputy head teachers) appreciated the Czech curriculum change more than regular teachers did (Roggenbrodt, 2008).

Concerning the organizational and management aspects of the implementation, Germeten (2011) aimed to answer the question of how principals of Norwegian schools value school reform, indicating some barriers that they had to face during the implementation, e.g. barriers to administration, leadership, and provision of learning opportunities for children, as well as insufficient support for principals at the local and regional levels. Organizational factors, such as timing and scale of implementation activities, planning, and distribution of workload, predicted Hong Kong teachers' behavioural intentions towards promoting the new curriculum. Lee (2000) found that in addition to the organizational factors, the perceived non-monetary cost-benefit of implementing the curriculum, perceived practicality, and perceived support coming from both school and other sources shape teachers' receptivity to the curriculum change. Teachers' low receptivity (their resistance) was not only considered a matter of insufficient school and outside assistance, but also of the excessive workload they had to manage.

2.4 Pedagogical Approaches Early Childhood Teachers Adopt to Teach Learners at Early Childhood Centres.

To ensure effective learning, teachers must adopt appropriate teaching techniques that cater to the unique needs of each child. Adopting appropriate teaching techniques can significantly enhance children's learning experience and promote their academic and personal growth. Some of the teaching techniques early childhood teachers adopt to teach learners in early childhood centres are discussed below:

Play-based Learning

Play-based learning is a teaching technique that is widely used in early childhood centres as it allows children to learn through play, exploration, and discovery. This approach encourages children to learn at their own pace while having fun, leading to higher levels of engagement, motivation, and retention. Research conducted by Ludlow (2010) found that play-based learning can lead to significant improvements in children's cognitive, social, and emotional development. Additionally, a study conducted by Gander (2013) found that children who participated in play-based learning demonstrated higher levels of creativity, critical thinking, and problem-solving skills than those who did not.

According to Altun (2018), her research findings suggested that fun is the most distinguished feature of play. The other attributes of play mentioned byparticipants were relaxation/energy release, freedom, cooperation and rules. Pre-service teachers have different perspectives on teachers' verbal and physical participation in ongoing play activity. Their thoughts led three different subcategories of teachers' participation in play which are partial-participation, non-participation, and full-

participation. And finally, the findings revealed four different teachers' roles as Planner/Organizer, Observer/Guider, Play Partner, and Non-involver.

Researchers have revealed that participants perceived their roles to include engagement with children (guiding behaviours, role model, demonstrating mutual respect, playmate/friend and as facilitator); as reflective pedagogues (playing the roles of an observer, planner and evaluator) and working in partnership withparents (as educators) (Chen, 2011). A number of studies have also focused onthe role of the teacher in facilitating children's learning through play and that theteacher's participation in classroom play activities encourage children'sinvolvement in such activities (Johnson, Christie & Yawkey, 1999; Anning & Edwards, 2006).

Adult-child interaction during play activities can help children develop and practise play abilities that they have yet to master or develop (Bondioli, 2001).Thus, teachers can provide developmentally appropriate resources, ideas, and practical achievements to children through play interactions, as well as help them in the development of their own thoughts and interests (Frost et al., 2005).According to Stirrup et al., (2017), children more or less happily play their lives away in the progressive play pedagogies of early years education, in the process learning their position in social and ability hierarchies that help define their future careers inside and outside schools.

According to other studies, teachers can function as links or connectors between children and their surroundings by engaging them in play. Teachers can confirm and challenge children's senses and thoughts through play interactions, allowing them to focus on awareness, interactions, and intentions (Samuelsson & Johansson, 2006). Indeed, play necessitates a variety of teacher interactions.

Inquiry-based Learning

Inquiry-based learning is another technique used by early childhood educators, where teachers facilitate learning by asking questions that encourage children to explore, investigate, and discover the answers. This approach promotes children's natural curiosity, allowing them to learn through hands-on experiences, experimentation, and reflection. According to Odom et al. (2010), inquiry-based learning can lead to higher levels of engagement and motivation in children, as well as the development of critical thinking skills. Moreover, research conducted by Krajcik et al. (2014) found that inquiry-based learning can lead to improved science and math skills in early childhood learners.

Project-based Learning

Project-based learning is a teaching technique that involves children working on long-term projects that focus on a particular topic or theme. This approach allows children to explore a subject in-depth, promoting higher levels of engagement, motivation, and interest. Furthermore, it enables children to develop a range of skills, including collaboration, communication, problem-solving, and critical thinking. Research conducted by Krajcik et al. (2014) found that project-based learning can lead to significant improvements in children's academic achievement and critical thinking skills.

Project-based learing encourages learners to be active through pursuing their interests, providing a real-world context to their learning, while also providing intrinsic motivation and increased engagement. An additional benefit of this type of learning is that it enables learners to further develop critical thinking and problem-solving skills which are more transferable to their future needs than traditional content focused

approaches (Bell, 2010). These identified advantages align closely with a play-based approach. The importance of developing the skills associated with project-based learning is also endorsed by Thomas and Brown (2012), who raise the idea that too much focus within classrooms is given to answers rather than developing questions. This premise suggests there should be a reversal, where questions are posed and the answers can help generate better questions for further learning.

By adopting this approach, learners are able to develop their imagination, creativity and critical thinking. This notion is supported by Claxton (2013, p. 155), who states "learners need to become good learners, not secure knowers". Holloway (2018) suggests that providing learners with more opportunities to interact with problems or questions kinesthetically can increase their ability to grasp more abstract concepts. Nevertheless, the success of these ideas rely heavily on the learners having previously developed a set of skills enabling them to successfully tackle the provocations and problems presented to them. Subsequently, it is essential for learners to be supported by their teachers to build curiosity, resilience and independence by designing an overarching culture within the classroom that fosters and cultivates these dispositions (Claxton, 2018).

Technology-based Learning

Technology-based learning involves the use of various technologies such as computers, tablets, and interactive whiteboards to facilitate learning. This approach allows children to access a wide range of resources, tools, and materials that can enhance their learning experience. Moreover, it can provide opportunities for children to develop digital literacy skills, such as coding, programming, and digital media production. According to Suggate (2016), technology-based learning can lead to

significant improvements in children's academic achievement, particularly in the areas of literacy and numeracy.

Technology-based learning can provide many benefits for young children, including improving their cognitive and social-emotional development. According to a study by Blumberg and Fisch (2013), technology-based learning can increase children's problem-solving and critical thinking skills. Additionally, technology-based learning can provide children with a more engaging learning experience, which can lead to increased motivation and interest in learning (Katz, 2016).

Another benefit of technology-based learning is that it can provide children with exposure to a wide range of content, including videos, games, and interactive activities. This exposure can help children develop a more diverse range of skills and knowledge (Hirsh-Pasek et al., 2015).

Theme-Based Approach

The Theme-Based Approach to curriculum implementation is an instructional strategy that organizes educational content around overarching themes or topics, fostering interdisciplinary learning and connections between different subject areas. Instead of teaching subjects in isolation, a theme-based curriculum integrates various disciplines such as language arts, mathematics, science, social studies, and the arts under a unifying theme. Thematic units also prove to be assisting to the teachers with the paving way to facilitate learning among learners. In nursery schools, learners usually have their own ways of learning things. Therefore, with the implementation of the theme-based approaches, the learning is facilitated among learners, when they have their own ways of learning the concepts. Thematic units are common in nursery schools. The reason being, since nursery school learners learn through interactive

hands-on activities. Thematic units are mainstream among learners as well as the educators in achieve the academic goals (Tussa'diah & Nurfadillah, 2018). It is vital for the educators to understand that utilization of thematic units and implementation of theme-based learning is regarded as systematic and methodical in educating and learning. The learners are able to relate to real-world experiences and augment their understanding in terms of the topic. Thematic units also prove to be assisting to the teachers in making learning pleasurable for the learners. One of the important aspects that needs to be taken into consideration is, learners in nursery schools need to take pleasure in learning. They need to arouse interest towards learning and teachers are required to put into operation the methods and approaches, which may lead to development of motivation and facilitate learner learning (Burel, Tessier & Langdon, 2021). A thematic way to deal with instructing includes incorporating every single branch of knowledge together under one subject. It enables the learners to acquire an understanding of the topic in various forms. This can be explained with the help of an example. For example, a topic of plants is selected, then all of the classroom tasks and activities will be focused upon the topic plants. These include, artworks, crafts, colours, pictures, and even music and singing will be based on plants. The teachers need to plan the time duration, i.e. for how long, they need to focus on one particular topic and then proceed towards the next. One topic usually takes place from couple of weeks to one month. When the learners have acquired efficient understanding of the topic, then the teachers would proceed towards the next. Therefore, it can be stated that themes help the teachers as well as the learners to form the design that brings in the structure to the whole of the approach (Tussa'diah & Nurfadillah, 2018).

Activity-Based Approach in Curriculum Implementation

The activity-based approach is the approach that is focused upon the initiation of activities that are put into practice by the teachers to encourage the participation of learners. The activities that are initiated in nursery schools are based on various subjects and concepts. These include, academic concepts of alphabets, numbers, environmental concepts, drawing, painting, dance, music, singing, role play, sports and physical activities. In recent years, this approach has gained popularity in early childhood education due to its effectiveness in engaging children and enhancing their learning outcomes.

According to Lin et al. (2020), activity-based learning promotes children's learning by providing opportunities for them to explore, discover, and manipulate objects in their environment. This approach helps children to develop their problem-solving skills and encourages them to become active learners. Moreover, activity-based learning provides a platform for children to collaborate with their peers, enhancing their social skills and promoting a sense of community. Therefore, it can be stated that activity-based learning approach is regarded as one of the crucial approaches in augmenting learner learning. When the activity-based approach is implemented, it needs to be ensured that they prove to be beneficial to the learners in performing one's tasks and activities in a well-organized manner. When the learners are participating in various activities. They are able to benefit in number of ways. These include, augmenting one's communication skills, acquiring an efficient understanding of the academic concepts, getting acquainted with the school environment, and developing self-assurance.

A study by Alli et al. (2020) supports the idea that activity-based learning is an effective teaching approach for early childhood education. The study found that children who participated in activity-based learning showed significant improvements in their cognitive, social, and emotional development. The study also highlighted the importance of providing a variety of activities to engage children with different learning styles and interests. Activity-based learning is required to encourage the participation of learners in activities by stimulating their senses, such as, sight, smell, vision, feeling and getting involved with the subject. In some activities, the learners are encouraged to work with real objects, whereas, in others, they are required to work with imaginary objects. When activities are organized, the teachers need to make provision of assistance and support to the learners, so they are able to overcome problems and challenges that are associated with activities. When the activities are to be initiated, there are various aspects that need to be identified. The first and foremost aspect is, they need to know what are the areas in terms of which learners are experiencing setbacks and activities need to be centered on alleviating setbacks. Second aspect is nature of the learners. For instance, when the learners are shy or introvert in nature, then activities will have to be initiated for them to develop communication skills and interactive abilities. Third is, activities need to be organized on the basis of lesson plans and extra-curricular and creative activities, so they are able to acquire an efficient understanding of the concepts. Therefore, it can be stated that when the teachers take into account these aspects, they are able to initiate activities in an appropriate manner.

Differentiated Instruction

Differentiated instruction is an approach to teaching that takes into account the diversity of learners in a classroom and adapts instruction to meet their individual needs. In early childhood classrooms, this can be particularly important, as young children may have varying levels of development, language proficiency, and prior knowledge. Differentiated instruction is a teaching technique that involves tailoring instruction to meet the unique needs of each child. This approach allows teachers to cater to the individual learning styles, abilities, and interests of children, promoting higher levels of engagement, motivation, and achievement. Moreover, it can provide opportunities for children to develop a sense of autonomy and self-direction in their learning. Research conducted by Tomlinson (2014) found that differentiated instruction can lead to significant improvements in children's academic achievement, particularly for those who are struggling or have special needs.

One study by Tomlinson and Imbeau (2010) examined the effectiveness of differentiated instruction in kindergarten classrooms. The researchers found that learners who received differentiated instruction had higher academic achievement than those who did not, particularly in the areas of literacy and math. Additionally, learners who received differentiated instruction were more engaged and motivated to learn.

Another study by Erdem and Demir (2014) examined the impact of differentiated instruction on the language development of preschool children. The researchers found that children who received differentiated instruction showed significant improvements in their language skills, particularly in vocabulary development and expressive language.

In terms of best practices for implementing differentiated instruction in early childhood classrooms, research suggests that teachers should use a variety of instructional strategies and materials to meet the diverse needs of their learners (Robinson and Knezek, 2014). This may include using manipulatives, visual aids, and technology to supplement traditional instruction. Additionally, teachers should regularly assess their learners' progress and adjust instruction accordingly (Thousand, Villa, and Nevin, 2007).

However, it is important to note that implementing differentiated instruction in early childhood classrooms can be challenging, particularly for new teachers or those who are not familiar with the approach (Chen, 2013). Therefore, professional development and ongoing support for teachers may be necessary to ensure successful implementation.

2.5 Available Resources that Support Teachers in The Successful Implementation of the Standard-Based Curriculum.

Curriculum implementation is a complex process that involves multiple factors, including teacher preparedness, instructional resources, and school and district support. There are many resources available to support teachers in curriculum implementation, including textbooks, curriculum guides, professional development programs, and technology-based tools.

One of the most important resources for teachers in curriculum implementation is the curriculum itself. Textbooks and curriculum guides provide teachers with detailed information about the content they are expected to teach, as well as guidance on how to deliver instruction effectively. In a study by Loveless and Ellis (2019), teachers reported that they relied heavily on curriculum materials, including textbooks and

curriculum guides, when implementing new curricula. The authors note that while these resources can be helpful, they may also limit teacher creativity and flexibility in instructional design.

Another important resource for teachers in curriculum implementation is professional development. Professional development programs can provide teachers with the knowledge and skills they need to implement new curricula effectively. In a study by Desimone et al. (2012), teachers who received professional development on a new science curriculum reported feeling more prepared to teach the new curriculum and had better learner outcomes than teachers who did not receive professional development. Professional development can also be delivered in a variety of formats, including workshops, online courses, and coaching.

Technology-based tools are also increasingly being used to support teachers in curriculum implementation. For example, learning management systems (LMS) can provide teachers with access to digital resources, such as online textbooks and multimedia content, and can also facilitate communication and collaboration among teachers and learners. In a study by McVey et al. (2020), teachers reported that using an LMS improved their ability to monitor learner progress and provide personalized feedback.

Another resources that support curriculum implementation is teaching and learning materials. Teaching and learning materials refer to any resources that teachers and learners use to facilitate the teaching and learning process. Several studies have examined the role of teaching and learning materials in curriculum implementation. For instance, a study by Omotayo and Adeyemo (2020) found that the availability of teaching and learning materials has a significant impact on the implementation of the

primary school curriculum in Nigeria. The study identified a lack of adequate teaching and learning materials as a significant barrier to effective curriculum implementation.

Similarly, another study by Toh (2019) examined the impact of teaching and learning materials on the implementation of the primary school mathematics curriculum in Singapore. The study found that the use of teaching and learning materials, such as manipulatives and visual aids, improved learners' understanding and engagement in mathematics. Furthermore, research has shown that teaching and learning materials can support curriculum implementation by promoting active learning. Active learning refers to a learning process that involves learners' participation in the learning process, such as through discussions, group work, and problem-solving activities. According to Kolb's experiential learning theory, active learning promotes learners' engagement, and it helps them to apply what they have learned to real-life situations (Kolb, 1984). Therefore, teaching and learning materials that promote active learning can support effective curriculum implementation.

2.6 Challenges that Mitigate Against Early Grade Teachers Implementation of the Standard-Based Curriculum.

Lack of resources

Educational resources can be defined as required assets or tools that have a huge impact on teaching and learning outcomes. These tools include textbooks, science laboratories, school furniture, technological equipment, and computer labs. Implementation of a new curriculum places great demands and expectations on teachers, while the support and resources available are inadequate for their everyday needs in the school (Flores, 2005; Fullan, 2007). Fullan (2007) argues that lack of

resources limits teachers' ability to implement a new curriculum effectively. Implementation of a new curriculum places additional demands on educators in schools, and there is a huge need for resources and support for educators. Lack of resources has been identified in the literature as an obstacle in the implementation of curriculum change. In rural schools, teachers need professional development in subject knowledge and pedagogical skills (Hongbiao, 2013).

According to MacPhail (2007), in Scotland the revised physical education curriculum failed because of lack of the required resources, such as textbooks. Teachers struggled to prepare for lessons with no textbooks and the needed resources (MacPhail, 2007). As reported by Penny et al. (2008), a new curriculum in Uganda called the Education Strategic Investment Plan (ESIP) failed because they did not have enough teaching and learning materials, they had no budget to pay for them, and training of teachers was insufficient. Thai scholars Prapaisit de Segovia and Hardison (2009) and Vietnamese scholars Canh and Barnard (2009) found that insufficient resources were an obstacle to implementation of a new English curriculum. A review of the national curriculum reform in China (2001–2011) shows that implementing changes in the curriculum was a slow process in rural schools, due to the lack of competence of the teachers in the absence of the support they needed.

In South Africa, Sayed et al. (2017) believed that former Model C schools are historically invested with high-quality facilities, equipment, and resources, which are crucial for their success, unlike disadvantaged schools in the rural areas and townships. This suggests that resources play a vital role in the current education system, as they assist in accelerating learning in the classroom, because when resources are limited, schools do not have the kind of support needed to help learners learn. Fullan (2007) is of the opinion that contextual as well as cultural factors should

be taken into consideration when planning and implementing a new curriculum. Adaptations, or modifications, made to the curriculum calls for additional new resources, which may not be available in some schools (Flores, 2005; Fullan, 2007). According to Fullan (2007), a lack of resources needed for teaching and learning reduces the capacity of teachers to teach a new curriculum.

Sedibe (2011) believed that equal distribution of resources in South Africa would reflect unity and a fair post-apartheid society, where teachers and learners are able to achieve positive teaching and learning outcomes with the needed resources. However, in South African schools' equal distribution of resources is still not possible, especially in rural schools (Christie, Butler & Potterton, 2007). Christie et al. (2007) explains that even if resources are lacking, it is always good for the educators and the principal to start planning at the beginning of the year how they are going to achieve their goals. This assists educators to always remember the school's vision and mission, and to not make lack of resources an excuse for not accomplishing their education goals (Mestry & Singh, 2007). This means that as much as resources are crucial for the teaching and learning process, this does not mean that teachers do not have ability. As reported by Christie et al. (2007), when educators are focused on getting good results, the school is not constrained by a lack of resources.

Inadequate training of educators

Most teacher training institutions provide short-term programmes for not many hours or days, with very few follow-up activities, which do not adequately cover the skills needed to implement changes in the curriculum (Park & Sung, 2013). Penuel, Gallagher and Moorthy (2011) states that the site where the training takes place must be equipped with all the necessary material through implementation of the curriculum

changes, especially in the initial phase. Kırkgöz (2008) agrees with Penuel et al. (2011) and stresses the need for ongoing training for educators in the initial stage of the change. Lombard, Meyer, Warnich and Wolhuter (2010) argue that one of the challenges is that teachers are not competent in the new curriculum because they have not been adequately trained. They complain about the way workshops are conducted. Workshops are inadequate, and they do not prepare educators to implement the new curriculum effectively (Maphalala, 2006; Matshidiso, 2007). There is no chance of implementing curriculum reform successfully if teachers are not in line with the reform or they do not have the necessary equipment (Ngibe,2013). Therefore, ensuring teacher development is the only way to make the new curriculum succeed (Lieberman & Pointer Mace, 2008).

Inadequate training of teachers to be able to implement changes in the curriculum amidst other unfavourable conditions, characterised by lack of resources and large classes, makes curriculum implementation a daunting task (Johnson, Monk & Swain, 2000; Nishino, 2008). The University of Nigeria in Nsukka has the largest education faculty in sub-Saharan Africa, yet it does not offer any basic course in special education, which is needed for all educators to be able to implement the curriculum. This means that teachers remain unskilled and unprepared to face the challenges of curriculum implementation. Lack of training creates fear in teachers and reluctance to implement changes, some of which relate to inclusive education. Park and Sung (2013) argue that there is an urgent need for continuous professional development of teachers, to empower them to cope with curriculum changes and implement the process successfully.

The task team for the review of implementation of the NCS once recommended thorough training of principals, deputy principals and HoDs on the roles of curriculum

content, for them to be able to support teachers effectively (Department of Education, 2009). Onwu and Mogari (2004) believe that for teachers to boost their self-esteem and develop a positive attitude regarding curriculum change, they must be empowered through appropriate professional development programmes. These programmes are planned to bring about change in teachers' beliefs, attitude and perceptions regarding curriculum change, and the way they will behave in the classroom when delivering the change. Penuel, Fishman, Yamaguchi, and Gallagher (2007) argue that these programmes are very short, with no follow-up activities. The process of implementation of curriculum reform requires continuous professional development of educators (Halbert & MacPhail, 2010).

Teachers' workload

Curriculum reforms can result in an increase in the workload of teachers, because in addition to the routine preparation for teaching, the teacher must incorporate new elements in their work (Day, 2002). Cheung and Wong (2012) assert that in-service training and the repeated meetings, although necessary in light of changes in the curriculum, can also increase the workload of educators. Park and Sung (2013) and Cheung and Wong (2012) state that teachers' inadequate understanding of the reforms, and lack of support to teachers in implementing curriculum changes, can increase the workload of teachers, as they struggle to learn new skills required to implement the curriculum. The increase in workload may limit the extent to which teachers adapt to implementing changes in the curriculum (Zimmerman, 2006).

Teachers are very important during the implementation period. Therefore, their opinions should matter when implementation of curriculum change occurs, and their contribution should not be ignored (Vähäsantanen, 2014). When curriculum change is

introduced, teachers are given the responsibility to unpack these changes, and also to present them in the classroom (Troudi & Alwan, 2010). These changes make them work under a lot of pressure, and they have to make sure that they maintain their daily classroom activities smoothly (Kelchtermans, 2009). As a result of curriculum change, the workload increases, and this erodes teachers' independence and challenges their professional identity (Day & Smethem, 2009). The increased workload is a significant challenge, especially in rural schools (under-resourced schools), because of budgetconstraints, where the schools are given a very low post establishment due to low enrolment. Under such conditions, teachers are given many subjects to teach, which puts considerable strain on them.

Due to the shortage of teachers, in most rural schools they recruit non-professional, unqualified teachers to assist in the school. This is the strategy they use to address the shortage of teachers and to reduce the workload on teachers (Chikoko, 2006; Reddy, 2003). However, use of these non-professional teachers produces poor-quality education and is associated with poor performance in terms of learner outcomes. It is expected that use of non-professional teachers could produce poorly educated learners. Mukeredzi (2016) agrees, namely that learners taught by qualified educators perform much better than learners taught by unqualified educators. In rural schools in South Africa the learners receive a poor education, because there are many unqualified teachers (Mitchell, De Lange, Balfour & Islam, 2011).

Curriculum change demands a radical change in the role of teachers, and it depends on teachers' willingness to implement it, because it is a lot of work to do. Educators' ability to perform well in reform requires significant changes in their knowledge, their beliefs and their instructional practices (Putnam & Borko 1997). These changes may cause most teachers to resist curriculum change (Zimmerman, 2006).

Support in the implementation of curriculum change

Van der Merwe (2002) posits that there is a need for more support to be given to teachers to enable them to implement the modified curriculum. This suggests that teachers must be adequately supported and motivated to deal with the difficulties inherent in implementing curriculum change. Marton (2006) asserts that teachers receive very little support to handle the mandated changes in the textbooks used and the curriculum. Selesho (2012) agree with Marton (2006) and add that the workshops provided in an attempt to address the curriculum implementation problems still fall short of taking into consideration the reality of the classroom situation that educators face when implementing curriculum change in schools. The Vietnamese physical education (PE) curriculum at Queensland University failed because it was hindered by a lack of professional development and insufficient support for existing PE instructors.

It is important to support teachers during the implementation of curriculum change because it promotes teachers' self-efficacy (Govender, 2018). Govender (2018) argues that teachers play an integral part in education reform, and that they therefore need support within the school and outside the school. The leadership skills of the principal can support the teaching culture and the organisation techniques, where teachers can talk about anything, including teaching and learning about the curriculum, and where they can teach each other what they have learnt about their craft (Everard, Morris & Wilson, 2004; Okumbe, 2007).

Education methods and activities can only be implemented fruitfully when teachers have knowledge about the new curriculum. This means that teachers are expected to be up to date on curriculum-related developments. They should have appropriate

knowledge, skills, beliefs and attitudes, so that they can be positive agents of change, or the envisaged change is likely to fail (Ramroop, 2004). Guskey (1986) agrees and emphasizes the need to encourage teachers and to support them in the process of implementing a new curriculum, because lack of support and guidance to teachers is the reason most curriculum changes fail.

Learners with barriers

Learners with barriers are unable to engage fully in the learning process. It is believed that learners with barriers are at risk in formal education. It is unfortunate that learners with barriers are expected to enter mainstream education and perform like other learners. Learners with barriers may not have the chance to develop the values, skills and attitudes expected of learners in the first grades. Donald, Lazarus and Lolwana (2002) agree that learners with barriers are at risk, especially in Grade 1. This is because it is not easy for learners with barriers, especially ones from disadvantaged backgrounds, to get the attention they need or deserve to cope in the classroom. An earlier study by Weikart (1989) found that learners with barriers usually drop out of school, or are placed in special schools, or are detained, or lose confidence in their academic ability. Donald et al. (2002) concurs with Weikart when they posit that learners from disadvantaged backgrounds with malnutrition, poverty or diseases, such as Aids, are more likely to experience barriers in learning than learners from developed countries.

Fuchs and Fuchs (2002) suggest that interventions need to be done for learners with barriers to improve their learning abilities, because most of the time these learners are excluded from formal education. Learners with barriers need help, especially those in mainstream education. There is a mandate encouraging equal education for all

learners irrespective of barriers, and this mandate is rendered in many countries. The importance of early childhood development is stressed in the White Paper on Education and Training (Alfonso & DuPaul, 2020). The South African Schools Act and the White Paper 6 on Special Needs Education mandate education for all learners with barriers in South African schools. Johnstone and Chapman (2009) highlight the following challenges that educators encounter when teaching learners with intellectual disabilities in the classroom: pressure, the behaviour of these learners, their capabilities, and lack of teacher–parent contact. An investigation found that teachers trained to teach inclusive education have positive attitudes when dealing with learners with barriers in their classroom (Stella, Forlin & Mei Lan, 2007).

2.7 Conceptual Framework

Conceptual Framework

The conceptual framework for this study investigates the intricate relationships between independent variables—early-grade teachers' knowledge of the standard-based curriculum, pedagogical approaches adopted, available resources, and challenges faced—and the dependent variable, which is the Implementation of the Standard-Based Curriculum. Each independent variable plays a unique role in shaping how early-grade teachers navigate the implementation of the standard-based curriculum in the Atwima-Kwawoma District.

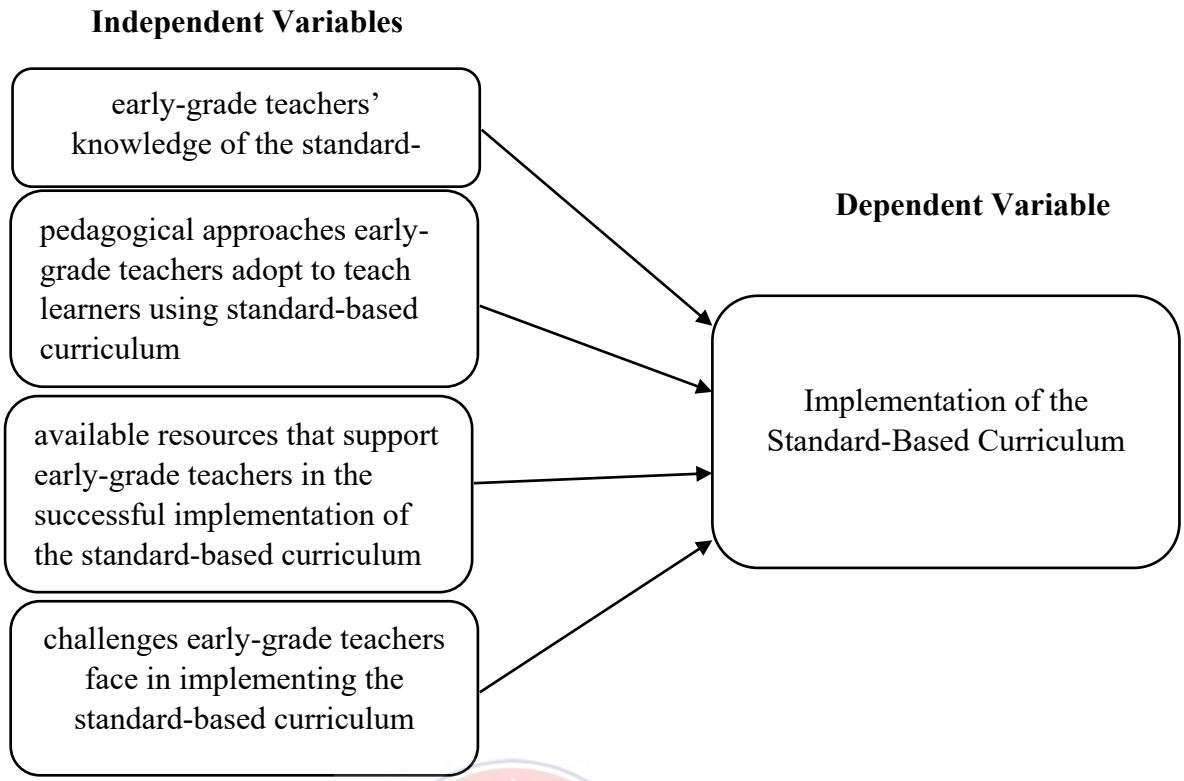

Figure 2.1: Conceptual Framework

Source: Author's Construct

Independent Variables

1. Early-Grade Teachers' Knowledge of the Standard-Based Curriculum:

A solid understanding of the standard-based curriculum forms the foundation for successful implementation. Teachers who possess in-depth knowledge of the curriculum are better equipped to align their teaching practices with its objectives, ensuring that the content is effectively delivered to students.

2. Pedagogical Approaches Adopted by Early-Grade Teachers:

The pedagogical approaches chosen by teachers significantly impact how they translate curriculum content into meaningful learning experiences. Effective pedagogical strategies enhance student engagement, comprehension, and retention, thereby facilitating the successful implementation of the standard-based curriculum.

3. Available Resources Supporting Early-Grade Teachers

The adequacy and accessibility of resources, including teaching materials, technology, and support systems, directly influence teachers' ability to implement the standard-based curriculum. Well-equipped classrooms and sufficient resources contribute to more effective and engaging instruction.

4. Challenges Faced by Early-Grade Teachers

Challenges, whether related to curriculum content, classroom dynamics, or external factors, can impact the implementation process. Teachers' ability to navigate and address these challenges is crucial for the successful execution of the standard-based curriculum.

Dependent Variable: Implementation of the Standard-Based Curriculum

The successful implementation of the standard-based curriculum is the overarching outcome influenced by the interplay of early-grade teachers' knowledge, pedagogical approaches, resource availability, and challenges faced. It reflects how well teachers can translate their understanding and instructional strategies into effective practice.

In summary, the conceptual framework outlines the interconnected relationships between early-grade teachers' knowledge, pedagogical approaches, resource availability, challenges faced, and the ultimate outcome of successful Implementation of the Standard-Based Curriculum. Mediating factors and contextual elements add depth to the framework, recognizing the dynamic and evolving nature of curriculum implementation in the educational context of the Atwima-Kwawoma District.

2.8 Chapter Summary

Chapter 2 begins by outlining the areas covered in the literature review, which include the Theoretical Framework, Conceptual Framework, and specific strands related to research questions. The theoretical framework delves into the Constructivist Learning Theory, emphasizing the works of Piaget and Vygotsky. The theory posits that learners actively construct knowledge through experiences, interactions, and reflections. The study also reviewed the diffusion of innovation theory by Rogers in 1970, providing a framework for understanding the adoption and spread of new ideas. The Top-Down Theory, proposed by Richard Gregory, suggests that educational policies are formulated at higher authorities and trickle down to classrooms. Introduced by James J. Gibson, the Bottom-Up Theory highlights the active role of teachers in shaping curriculum implementation. It emphasizes teachers as decision-makers who contribute to the design and adaptation of the curriculum based on their expertise. Chapter 2 continues with a focus on the Conceptual Framework, emphasizing two critical components: the Early Childhood Standard-Based Curriculum and the Implementation of the Standard-Based Curriculum. By delving into both the theoretical underpinnings and practical aspects, the chapter sets the stage for an in-depth examination of how these conceptual elements influence the teaching and learning experiences in early-grade education within the Atwima-Kwawoma District. The Conceptual Framework serves as a crucial bridge between theoretical foundations and the on-the-ground realities of curriculum application and teacher practices.

The chapter also reviewed literature on the strands of the research question which included (1) early-grade teachers' understanding of standard-based curriculum (The chapter highlights the critical impact of teachers' understanding on learner outcomes

in curriculum implementation), (2) pedagogical approaches early grade teachers adopt (Various approaches like play-based learning, inquiry-based learning, and differentiated instruction enhance children's academic and personal growth), (3) available resources for successful implementation (Curriculum implementation complexity involves teacher preparedness, instructional resources, and support. Resources include textbooks, curriculum guides, professional development programs, and technology-based tools), (4) challenges in early-grade teachers' implementation (Identifies challenges such as lack of resources, inadequate training, teacher workload, and learners with barriers). The chapter again, introduces a conceptual framework exploring relationships between independent variables (knowledge, pedagogical approaches, resources, challenges) and the dependent variable (Implementation of the Standard-Based Curriculum).

CHAPTER THREE

METHODOLOGY

3.0 Overview

The methodology employed to conduct the study has been covered in this chapter. Sub-topics include research methodology, research philosophy, research approach, design, population, sample, sampling technique, data collection tool, source of data, data gathering procedure, method of data analysis, and ethical considerations.

3.1 Philosophical Underpinning

The positivist perspective was adopted for the study. The positivists believe that reality is out there and can be observed. The philosophy operates under the assumption that the object under study is observed "from a distance". Thus, attempts are made to avoid human perceptions or manipulations. The result from the use of this philosophy is said to be objective and based on strict rules and procedures (Sarantakos, 2005). On the opposite side are the interpretivists who believe that reality is in the minds of the people and it is internally experienced. And that the meanings and interpretations people give to phenomenon are more important (Creswell, 2009).

Related to the positivist's philosophy is the use of the quantitative method of inquiry which was adopted for the study. With this method data is numerically described and represented. Survey method of inquiry was used for this study based on the research design which is descriptive. According to Creswell (2009), the survey method allows for the opinions or perceptions of a population, based on a sample to be collected through questionnaire. This buttresses Zikmund's (2003) assertion that surveys are

usually used to collect quantifiable data which are examined, analyzed and findings reported. Therefore, the use of quantitative method for this study is plausible.

3.2 Research Approach

The research approach adopted for this study was the quantitative research which defined as a systematic investigation of phenomena by gathering quantifiable data and performing statistical, mathematical, or computational techniques (Mohajan, 2020). Quantitative research collects information from existing and potential customers using sampling methods and sending out online surveys, online polls, and questionnaires. The researcher used quantitative approach to produce objective data that can be clearly communicated through statistics and numbers.

3.3 Research Design

Descriptive survey research design was adopted for this study. Research design is seen as the blue print, which specifies how data relating to a given problem should be collected and analysed. It provides the procedural outcome for the conduct of any investigation. Gay (2002) stated that research design entails the structure of a study, the nature of the hypotheses and the variables involved in the study. The study adopted descriptive survey research design. The choice of research design for a particular study is based on the purpose of the study according to the views of Cohen, Manion and Morrison (2007) and Creswell (2013). Since this study aimed at examining early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in Atwima-Kwawoma district, descriptive survey was considered the most appropriate design for the study. Survey techniques was used to collect data, answer research questions and test hypotheses to enable the researcher

ascertain respondents' perceptions on the current practices for easy description of the situation and to make intelligent recommendations to improve the situation.

Cohen, Manion and Morrison (2007) assert that, surveys are appropriate for this type of research because they allow the collection of data which may be used to assess current practices and conditions and to make intelligent plans to improve them. Brewer (2009) also state that obtaining answers from a large group of people to a set of carefully designed and administered questions, lies in the heart of survey research.

Again, the descriptive sample research was deemed appropriate as attempts were made by the researcher to describe some aspects of the population by selecting unbiased sample of individuals who were asked to complete questionnaires. The descriptive sample research design was also chosen because in considering the purpose of the study, the research questions and the magnitude of the target population, it was the most appropriate design which could lead the researcher to achieve the purpose and to draw meaningful conclusions from the study.

3.4 Population

The target population for the study was 205 teachers in early grade public schools in the Atwima-Kwawoma District. The accessible population comprised 132 early-grade teachers within the Atwima- Kwawoma District. The researcher determined the sample size using Krejchie and Morgan (1970) table of determining sample size.

3.5 Sample and Sampling Technique

Simple random sampling technique was used to select the 132 early-grade teachers. This was done using the rand function in Microsoft excel. The excel rand function returns unique random numbers between 0 and 1 to each individual within the sampling frame. With this, the names of the teachers were arranged in a single column in a systematic order. Each teacher were assigned a random number using the rand function (Bhushan, Kumar, Pandey & Singh, 2021). The function is volatile, meaning the assigned values changes anytime a cell is edited. To stop the random numbers from being updated, the researcher copied and pasted the values (Bhushan, Kumar, Pandey & Singh, 2021). The researcher proceeded by sorting the random numbers, the first 132 early-grade teachers were selected for the study.

3.6 Data Collection Instrument

3.6.1 Structured Questionnaire

A structured questionnaire was used to gather data on early-grade teachers' perception of the implementation of the standard-based curriculum in the Atwima-Kwawoma District, pedagogical approaches early-grade teachers adopt to teach learners at early childhood centres in the Atwima-Kwawoma District, available resources that support early-grade teachers in the successful implementation of the standard-based curriculum in the Atwima-Kwawoma District, challenges early-grade teachers face in implementing the standard-based curriculum in the Atwima-Kwawoma District.

A structured questionnaire is an instrument for research, which consists of a list of questions, along with the choice of answers, printed or typed in a sequence on a form used for acquiring specific information from the respondents (Aryal, 2020). Questionnaires are doubtless one of the primary sources of obtaining data in any

research endeavour. However, the critical point is that when designing a questionnaire, the researcher should ensure that it is "valid, reliable and unambiguous" (Zohrabi, 2013).

The structured questionnaire used was a Likert scale questionnaire with choices presented in a five-point scale ranging from: Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA). Each of the options was valued as follows: SA (4), A (3), D (2), and SD (1). It was a self-constructed questionnaire with 2 parts, namely; 'I' and 'II'. Part 'I' focused on the demographic data of the respondents. Section, 'II', focused on themes derived from the research objectives.

The structured questionnaire was selected because it is used for collecting statistically quantifiable data, allowing straightforward statistical analysis of the responses. Also, it is proven to be excellent statistical data to obtain quantitative data about people's attitudes, values, experiences, and past behaviour (Bell, 2008). Again, when similar questions are administered simultaneously to a large number of people, the acquired data are more identical, correct, and standard (Zohrabi, 2013). A structured questionnaire is as well an efficient means of collecting data on a large-scale basis. Nonetheless, a structured questionnaire lacks detail. Because the responses are fixed, there is less scope for respondents to supply answers which reflect their true feelings on a topic. It can also lead to dishonest responses. Though the use of a structured questionnaire has some weaknesses, its strengths outweigh the when weaknesses when used to collect quantitative data; hence the use of a questionnaire for quantitative data collection in this study.

3.6.2 Validity of the Questionnaire

Validity of the instrument refers to the correctness of results and soundness of conclusions reached in the study (Kothari & Chand-Mall, 2014). The development of the questionnaire was done by examining the research objectives and related literature and consulting research experts from the department of at University of Education, Winneba. The questionnaire was also examined carefully by research supervisors to ensure coverage of all the objectives in the questionnaire. Modifications were done for questions that were wrongly framed before reliability testing.

3.6.3 Reliability of the Questionnaire

Reliability refers to the consistency of results generated by a research instrument. Reliability is used to indicate the extent to which the different items, measures, or assessments are consistent with one another and the extent to which each measure is free from measurement error (Leech, Barrett & Morgan, 2015). Reliability of the questionnaire was checked by using Cronbach alpha. Cronbach alpha reliability coefficient was selected because it is a much more reliable way of checking the internal consistency of the instrument (Creswell, 2013). The questionnaire was pre-tested among 25 early childhood teachers in the Bosomtwe District. This is because they had similar characteristics with the ones used for actual study. A reliability coefficient of 0.70 and above was considered acceptable for the research instruments as recommended by Wallen and Fraenkel (2013). When the research instruments were tested, the study obtained the values of 0.82 for questionnaires administered to teachers.

3.7 Data collection Procedure

The data collection procedure started with securely an introductory letter from the Department of Early Childhood Education at the University of Education, Winneba (UEW). The introductory letter was then sent to the authorities at the educational directorate of Atwima-Kwawoma District in the Ashanti Region for their permission to contact the schools in the District. Prior to data collection, participants were informed about the study's purpose and their rights. They were required to provide their consent before participating in the study. The researcher engaged the services of two research assistants to help in the data collection procedure due to the large sample size involved.

The questionnaires were distributed to the respondents with the assistance of the two research assistants. Closed-ended questions with a rating scale were included in the survey. The questionnaires were returned to the respondents with enough time for them to answer. 132 questionnaires total were filled out and returned. This resulted in a 100% survey response rate.

3.8 Data Presentation and Analysis

With the use of the Statistical Product for Service Solution (SPSS) software, the researcher input the data to perform, Descriptive Statistics, such as frequency tables, mean and standard deviations to analyse the obtained data from sampled respondents.

3.9 Ethical Consideration

Research ethics refers to the correct rules of conduct necessary to adhere to carrying out a research. Researchers have moral responsibility to protect participants from harm (Mcleod & O'Connor 2020). The researcher addressed all ethical concerns which include informed consent, anonymity and confidentiality. The researcher

obtained informed verbal consent from respondents before commencement of the data collection. The respondents were made aware that their participation is voluntary, and that they are free to decline or accept or decline to engage in the research. Anonymity of participants was also highly taken into consideration in this study. Research indicates that anonymity is a vital issue in research ethics because it gives the participants the opportunity to have their identity concealed (Bulmer, 2001).

In this research, pseudonym was used to identify participants which cannot be traced to the participants. Codes were also adopted where necessary to ensure anonymity. In order not to unnecessarily invade the privacy of participants, the researcher made prior visits to schools before the data collection commenced. Neither names nor any identifiable information from respondents were taken as a way of ensuring the anonymity of participants. On the issue of confidentiality, efforts were made to maintain confidentiality of the responses of the participants. Participants were told that their responses would be kept confidentially and that no one known to them would have access to the information provided and none of the respondents' names would be recorded in the study.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Overview

This chapter presents the results of the analysis of the questionnaire data based on the purpose of the study. The purpose of the study was to examine early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in Atwima-Kwawoma District. The analysis and interpretation of data were carried out based on the results of the four (4) research questions formulated for the study. The analysis was based on the 100% return rate data obtained from 132 teachers for the study. The quantitative data were analysed using means, standard deviations, frequencies, and percentages. The first part of this chapter describes the background information of the respondents. The obtained data on the demographics were analysed using frequencies, and percentages. In the second part, the research findings are presented based on the research questions formulated for the study.

4.1 Background Information of Respondents

This section is concerned with the examination of significant topics pertaining to the demographic characteristics of the respondents. These include distribution of respondents by gender, age distribution, area of specialisation, rank in GES, number of years serving as a Kindergarten teacher.

Table 4.1: Background Profile of Respondents

		Frequency	Percent
Gender	Male	16	12.1
	Female	116	87.9
Total		**132**	**100**
Age Range	20 years and below	2	1.5
	21 - 30 years	25	18.9
	31 - 40 years	79	59.8
	41 - 50 years	16	12.1
	51 - 60 years	10	7.6
Total		**132**	**100.0**
Area of Specialization	Early Childhood Education	39	29.5
	Basic education	80	60.6
	Special education	6	4.5
	Other	7	5.3
Total		**132**	**100.0**
Professional Qualification	Diploma	29	22.0
	First degree	58	43.9
	PGDE	34	25.8
	Master's degree	11	8.3
Total		**132**	**100.0**
Rank	Superintendent I	9	6.8
	Senior Superintendent II	21	15.9
	Senior Superintendent I	17	12.9
	Principal Superintendent	68	51.5
	Assistant Director II	12	9.1
	Assistant Director I	5	3.8
Total		**132**	**100.0**
Years at Present School	0 – 5 years	32	24.2
	6 – 10 years	48	36.4
	11 – 15 years	36	27.3
	16 – 20 years	9	6.8
	21 years and above	7	5.3
Total		**132**	**100.0**

Source: Field Survey, 2023

Table 4.1 shows the percentage of responses by gender, age, area of specialisation, Professional qualification, GES rank, and number of years at current school. In the gender category, the results showed that male teachers made up 12.1% of the respondents, which meant that female teachers made up 87.9% of the respondents. This implies that females made up the overwhelming majority of the population. By

extrapolating these statistics, it may be concluded that the survey's conclusions were impacted by the perspectives of more female than male kindergarten teachers. Because no comparisons were done between male and female teachers, the result had no bearing on the research because the questionnaire was not gender specific.

In terms of age, the findings indicated that 1.5 % were under the age of 20; the majority of the respondents (59.8 %) were between the ages of 21 and 30. 18.9% of them were between 31 to 40 years; 12.1% were within the ages of 41 to 50 years, and a relative number of respondents (7.6%) were within the age group of 51 to 60 years. By implication, the findings indicate that the majority of teachers were members of the active working group. Although, since no comparison was done on the age distribution of the respondents, the substantial number of teachers between the ages of 21 and 30 did not alter the findings.

Also, the result showed that 29.5% respondents were specialized in early childhood education. 60.6% were specialized in basic education. 4.5% of the respondents were specialized in basic education while 5.3% were in other specialization. It could further be observed that 22.0% of the respondents possess diploma; 43.9% of them had bachelor's degree; 7.6% of them had a post diploma degree in education; and finally, the rest 8.3% of them had master's degree. Furthermore, in relation to the rank in GES, the result showed that 6.8 of the respondents are ranked superintendent I; majority of the respondents (15.9%) of the respondents belonged to the senior superintendent II rank; 12.9% of them were senior superintendent I; 51.5% of them were principal superintendent; 9.1% of them belonged to assistant director I and finally, 3.8% of them were assistant director I.

In addition, result based on the number of years spent at present school showed that 24.2% of the respondents had served between 0 to 5 years at the present school; 36.4% of them served as kindergarten teachers for about 6 to 10 years at the present school; 27.3% of them served between 11 to 15 years at the present school; 6.8% of them served between 16 to 20 years and the present school and finally, the rest 5.3% of them served as kindergarten teachers for about 21 years and above at the present school. The results imply that most of the teachers had been in the service for a quite number of years and could provide the needed information for the study. Nevertheless, the large size of the teachers had taught for 6-10 years but did not affect the results there was no comparison on years in service. **Research Question 1**

4.2 What are early-grade teachers' Pedagogical Knowledge of the implementation of the standard-based curriculum in the Atwima-Kwawoma District?

This section presents data on early-grade teachers' perception of the implementation of the standard-based curriculum in the Atwima-Kwawoma District. Teachers provided responses to 9 items in the questionnaire.

Table 4.2: Early-grade teachers' perceptions of the implementation of the standard-based curriculum

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	M/Std
I can explain the standard-based curriculum.	0 (0.0)	0 (0.0)	19 (14.)	96 (72.7)	17 (12.9)	3.98/0.53
I have received two or three trainings on the implementation of the standard-based curriculum.	2 (1.5)	2 (1.5)	22 (16.7)	81 (61.4)	25 (18.9)	3.95/0.74
I know of three and more principles of curriculum change.	0 (0.0)	4 (3.0)	45 (34.1)	74 (56.1)	9 (6.8)	3.67/0.65
I have observed that the standard-based curriculum is well-aligned with the needs of our learners.	0 (0.0)	2 (1.5)	34 (25.8)	63 (47.7)	33 (25.0)	3.96/0.76
With my experience, I have identified that the standard-based curriculum provides clear learning objectives for learners.	0 (0.0)	7 (5.3)	30 (22.7)	68 (51.5)	27 (20.5)	3.87/0.80
I have noticed that the standard-based curriculum has improved learner-learning outcomes.	0 (0.0)	2 (1.5)	20 (15.2)	67 (50.8)	43 (32.6)	4.14/0.72
My readiness in executing the standard-based curriculum is essential in enhancing the learning outcomes of learners	0 (0.0)	0 (0.0)	25 (18.9)	71 (53.8)	36 (27.3)	4.08/0.68
The standard-based curriculum has provided me with useful guidance for planning my lessons	0 (0.0)	7 (5.3)	10 (7.6)	64 (48.5)	51 (38.6)	4.20/0.80
the standard-based curriculum has improved the overall quality of instruction in our school	4 (3.0)	7 (5.3)	13 (9.8)	88 (66.7)	20 (15.2)	3.86/0.85

Source: Field Survey, 2023

Table 4.2 reveal that 17 respondents agreed to the statement that "I can explain the standard-based curriculum." whiles 96 respondents disagreed with the statement. However, 19 of the respondents remained neutral in their responses to the statement.

The statement recorded a mean value of 3.98 (Std= 0.53). Also, the result reveals that 25 of the respondents strongly agreed to the statement “I have received two or three trainings on the implementation of the standard-based curriculum” whiles 81 agreed to the statement, 22 of them were neutral. However, 2 of respondents disagreed to the statement and 2 of them strongly disagreed with the statement. The statement recorded a mean value of 3.95 (Std= 0.74). These findings highlight the need for continued efforts to improve understanding and confidence in the standard-based curriculum, as well as to tailor training programs to address the specific needs and concerns of different respondents. Additionally, the relatively low standard deviation for the first statement suggests a more consistent perception of respondents' ability to explain the curriculum compared to the training statement, which had a higher standard deviation, indicating more varied responses.

Moreover, the analysis reveals that 9 of the respondents agreed to the statement that “I know of three and more principles of curriculum change.” while 74 of them agreed to the statement; 45 of them neither agreed or disagreed to the statement with 4 of them disagreeing to the statement. The statement recorded a mean value of 3.67 (Std= 0.76). Furthermore, the analysis shows that 33 of the respondents agreed to the statement “I have observed that the standard-based curriculum is well-aligned with the needs of our learners”; 63 of them disagreed to statement, whereas, 34 respondents were neutral and 2 of them disagreed to the statement. The statement recorded a mean value of 3.96 (Std= 0.76). The results also indicates that 27 of the respondents strongly agreed to the statement “with my experience, I have identified that the standard-based curriculum provides clear learning objectives for learners.”, whereas 68 of them agreed to the statement; 30 of them were neutral in their responses to this statement. However, 7 of them disagreed to the statement. The

statement recorded a mean value of 3.87 (Std= 0.80). In addition, the analysis revealed that 43 of the respondents rated the statement "I have noticed that the standard-based curriculum has improved learner-learning outcomes" strongly agreed; 67 of them rated the statement as agreed whiles 20 of them were neutral in their rating. However, 2 of the them disagreed to this statement. The statement recorded a mean value of 4.14 (Std= 0.72).

The data suggests that there is a mix of opinions and perceptions among the respondents regarding curriculum change principles and the standard-based curriculum's effectiveness. While some respondents are familiar with curriculum change principles and perceive the curriculum as having clear learning objectives and improving learner outcomes, there is a significant degree of variability and divergence in views, particularly concerning the alignment of the curriculum with learner needs.

Furthermore, the result reveals that 36 of the respondents strongly agreed to the statement "My readiness in executing the standard-based curriculum is essential in enhancing the learning outcomes of learners" whiles 71 of them agreed to this statement. However, it could be seen that 25 of the respondents were neutral in rating this statement. The statement recorded a mean value of 4.08 (Std= 0.68). Again, it could be seen in Table 4.2 that 51 of the respondents strongly agreed to the statement "The standard-based curriculum has provided me with useful guidance for planning my lessons", 64 of them agreed to the statement, however, 7 of them disagreed to the statement whereas 10 were neutral in their responses to the statement. The statement recorded a mean value of 4.20 (Std= 0.80). Again, the results show that 20 respondents strongly agreed to the statement "the standard-based curriculum has improved the overall quality of instruction in our school". 88 of them agreed with the

statement while 13 of them were neutral. 7 of them disagreed while 4 of them strongly disagreed to the statement. The statement recorded a mean value of 3.86 (Std= 0.85).

Research Question 2

4.3 What pedagogical approaches do early-grade teachers adopt to teach learners at early childhood centres in the Atwima-Kwawoma District?

This section presents data on thep edagogical approaches early-grade teachers adopt to teach learners at early childhood centres in the Atwima-Kwawoma District. Teachers provided responses to 7 items in the questionnaire.

Table 4.3: pedagogical approaches do early-grade teachers adopt to teach learners at early childhood centres

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	M/Std
I adopt play-based pedagogy to teach learners	0 (0.0)	0 (0.0)	0 (0.0)	62 (47.0)	70 (53.)	4.53/0.50
I adopt inquiry-based learning approach to teach learners	2 (1.5)	9 (6.8)	21 (15.9%)	65 (49.2)	35 (26.5)	3.92/0.91
I adopt project-based learning approach to teach learners	8 (6.1)	4 (3.0)	52 (39.4)	36 (27.3)	32 (24.2)	3.61/1.08
I adopt technology-based learning approach to teach learners	17 (12.9)	30 (22.7)	24 (18.2)	45 (34.1)	16 (12.1)	3.09/1.25
I adopt theme-based approach to teach learners	8 (6.1)	3 (2.3)	9 (6.8)	74 (56.1)	38 (28.8)	3.99/0.99
I adopt activity-based learning approach to teach learners	0 (0.0)	5 (3.8)	4 (3.0)	53 (40.2)	70 (53.0)	4.42/0.73
I adopt differentiated instruction to teach learners	0 (0.0)	0 (0.0)	17 (56.8)	75 (27.3)	4 (3.0)	4.20/0.70

Source: Field Survey, 2023

table 4.3 above presents data on the pedagogical approaches adopted by early-grade teachers to teach learners at early childhood centers in the Atwima-Kwawoma District. The data is based on teachers' responses to seven specific statements in the questionnaire. The table also includes percentages for different response categories, including Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), and Strongly Agree (SA). Additionally, there is a Mean (M) and Standard Deviation (Std) calculated for each statement.

Data show that out of a sample of 132 teachers, 47.0% agreed that they adopt play-based pedagogy to teach learners and 53.0% strongly agreed that they adopt play-based pedagogy to teach learners. The results show that none of the teachers disagree or strongly disagree with the use of play-based pedagogy to teach learners. The result also recorded a mean value of 4.53 and standard deviation of 0.50. The result shows that a significant majority of early-grade teachers in the Atwima-Kwawoma District strongly agree (53.0%) that they adopt a play-based pedagogy to teach learners. This indicates a high level of utilization of this approach.

Also, out of 132 teachers, 49.2% agreed that they adopt an inquiry-based learning approach to teach learners and 26.5% strongly agreed to the use of an inquiry-based learning approach to teach learners. Only 1.5% and 6.8% of the respondents strongly disagree and disagree respectively. It can be deduced that a considerable percentage of teachers agree (49.2%) or strongly agree (26.5%) (M= 3.92 and SD= 0.91) that they adopt an inquiry-based learning approach, suggesting a substantial use of this approach in their teaching.

Data in table 4.3 further shows that majority (39.4%) of the teachers were neutral concerning the adoption of a project-based learning approach to teach learners.

However, 27.3% of them agreed to adopt a project-based learning approach to teach learners and 24.2% of the teachers strongly agreed. Only 3.0% and 6.1% of the total sampled teachers disagree and strongly disagree with adopting a project-based learning approach to teach learners. Teachers in the district exhibit a wide range of responses, with the highest percentage being neutral (39.4%). This suggests a mixed use of project-based learning approaches in early-grade classrooms.

Again, the data in table 4.3 shows that 34.1% of the teachers strongly agreed that they adopt a technology-based learning approach to teach learners, 12.1% of them strongly agree. However, a significant number of the teachers (22.7%) disagree that they use a technology-based learning approach to teach learners and 12.9% strongly disagree. Also, 18.2% were indifferent as to whether they adopt a technology-based learning approach to teach learners. This result means that (46.2%) of teachers agree with the adoption of technology-based learning approaches. However, a significant proportion is neutral (18.2%) or disagrees (35.6%), indicating a need for further exploration of technology integration in teaching.

Furthermore, data in table 4.3 shows that a substantial majority of teachers either agree (56.1%) or strongly agree (28.8%) that they adopt a theme-based approach, indicating a high utilization of this approach in teaching. Again, the majority of teachers either agree (40.2%) or strongly agree (53.0%) with the adoption of activity-based learning approaches, suggesting a strong emphasis on this approach in their teaching.

Lastly data in 4.3 shows that a significant percentage of teachers are neutral (56.8%) about the adoption of differentiated instruction, while a smaller proportion agrees (27.3%) with its use. Few strongly agree (3.0%). This indicates a need to explore the

extent and effectiveness of differentiated instruction in early-grade classrooms further. In summary, table 4.3 reveals the varying degrees to which early-grade teachers in the Atwima-Kwawoma District adopt different pedagogical approaches in their teaching. Some approaches, such as play-based and activity-based learning, are widely embraced, while others, like technology-based learning and project-based learning, exhibit more diverse adoption patterns. These findings is line with existing literature such as (Nganga, Madrid Akpovo, Kambutu, Thapa & Mwangi, 2023; Agormedah, Ankomah, Frimpong, Quansah, Srem-Sai, Hagan Jr & Schack, 2022). These findings can guide educational policymakers and professionals in understanding the prevalent pedagogical practices and potentially inform targeted training and support for teachers to enhance their teaching methods.

Research Question 3

4.4 What resources are available to support early-grade teachers in the successful implementation of the standard-based curriculum in the Atwima-Kwawoma District?

This section sought to find out the available resources that support early-grade teachers in the successful implementation of the standard-based curriculum in the Atwima-Kwawoma District. To answer the question, items 17 – 23 under section 'C' of the questionnaire was used. Data in Table 4.4 present the results.

Table 4.4: Available to support early-grade teachers in the successful implementation of the standard-based curriculum

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	M/Std
I have an official standard-based curriculum.	20 (15.2)	20 (15.2)	9 (6.8)	69 (52.3)	14 (10.6)	3.28/1.28
I have books for all my learners.	60 (45.5)	52 (39.4)	10 (7.6)	10 (7.6)	0 (0.0)	1.77/0.88
The textbooks I have are enough for all the learners.	79 (59.8)	45 (34.1)	4 (3.0)	4 (3.0)	0 (0.0)	1.49/0.70
I have a teachers' resource pack.	28 (21.2)	32 (24.2)	19 (14.4)	34 (25.8)	19 (14.4)	2.88/1.39
I have adequate teaching and learning resources in my class.	18 (13.6)	31 (23.5)	35 (26.5)	46 (34.8)	2 (1.5)	2.87/1.09
I have been a beneficiary of professional training.	5 (3.8)	16 (12.1)	14 (10.6)	55 (41.7)	42 (31.8)	3.86/1.11
I have technology-based tools to support teaching.	27 (20.5)	48 (36.4)	28 (21.2)	21 (15.9)	8 (6.1)	2.51/1.16

Source: Field Survey, 2023

Table 4.4 provides information about the availability of resources to support early-grade teachers in the successful implementation of the Standard-Based Curriculum (SBC) in the Atwima-Kwawoma District. The responses are categorized into five levels, from Strongly Disagree (SD) to Strongly Agree (SA), with corresponding percentages. The Mean (M) and Standard Deviation (Std) are also included to provide a summary of the data dispersion. The result shows that majority the majority of teachers (52.3%) agree that they have an official standard-based curriculum, indicating that they are aware of and have access to the prescribed curriculum. However, a significant portion is neutral (6.8%) or disagrees (15.2%), suggesting that some teachers may not possess the official curriculum, which could impact their alignment with SBC guidelines.

Also, with a mean value of 1.77 and a standard deviation of 0.88, the data reveals a concerning situation where a large proportion of teachers (84.9% combined between

strongly disagree and disagree) do not have books for all their learners. This raises serious concerns about the availability of essential learning materials for students in early-grade classes. The high percentage of teachers who indicated a lack of sufficient books for all their learners is a cause for concern. It implies that a substantial number of early-grade students in the Atwima-Kwawoma District do not have access to individual textbooks or reading materials. This can hinder their ability to practice reading, develop literacy skills, and engage in self-directed learning, which are critical in the early stages of education. Research in the field of education consistently shows that the availability of textbooks and reading materials is positively correlated with students' academic performance and learning outcomes. Studies have demonstrated that access to textbooks can lead to improved reading comprehension, vocabulary development, and overall academic achievement (Abid, Aslam, Alghamdi & Kumar, 2023; Attakumah, 2020, Dahar & Faize, 2011). Therefore, the lack of books can potentially have a detrimental impact on the educational progress of early-grade students in the district.

In a similar vein, the majority of teachers (93.9% combined between strongly disagree and disagree) report that the textbooks they have are not sufficient for all their learners. This highlights a significant deficiency in the availability of instructional materials, which can hinder effective teaching and learning. The high percentage of teachers expressing a shortage of textbooks suggests that there is a severe inadequacy of learning resources in early-grade classrooms in the Atwima-Kwawoma District. This inadequacy extends beyond a lack of books for individual students and points to a shortage of textbooks in general, which can impact the entire teaching and learning process. Inadequate textbooks can hinder effective teaching and learning in several ways. Teachers may find it challenging to plan and deliver lessons that align with the

curriculum if they lack the necessary instructional materials. This situation can lead to fragmented teaching and hinder teachers from following a structured approach to curriculum delivery. This result is line with Attakumah, 2020 and Loeneto (2014)

Also, data in table 4.4 shows that while a substantial number of teachers (40.6% combined between strongly disagree and disagree) do not have a teachers' resource pack, a similar proportion (40.2% combined between agree and strongly agree) indicates its availability. This suggests a more balanced distribution of this resource compared to textbooks. This result is line with Arthur & Obeng (2023). The balanced distribution suggests that, in comparison to textbooks, teachers' resource packs may be more evenly distributed among the surveyed teachers in the Atwima-Kwawoma District. This could be due to targeted efforts by educational authorities or other stakeholders to provide these resource packs to educators. The fact that 40.2% of teachers agree that they have access to teachers' resource packs is a positive sign. These resource packs often contain supplementary teaching materials, instructional aids, and support materials that can enhance the teaching-learning process. Having access to such resources can help teachers be more effective in their instructional practices.

Again the result in table 4.4 revealed that a significant portion of teachers (37.1% combined between strongly disagree and disagree) feel that they lack adequate teaching and learning resources in their classrooms, while 36.3% (combined between A and SA) believe they have sufficient resources. The neutral responses (26.5%) indicate some uncertainty in this area. Data in table 4.4 further shows that the majority of teachers (73.5% combined between agree and strongly agree) have received professional training, which is crucial for their capacity development. However, a notable proportion (16.9% combined between strongly disagree and disagree) either

did not receive training or are uncertain about it. However, a significant number of teachers (56.9% combined between strongly disagree and disagree) report not having technology-based tools to support teaching. This could potentially limit their ability to incorporate technology into their teaching methods, which is increasingly important in modern education.

In summary, the results suggest that there are substantial challenges regarding the availability of essential resources for early-grade teachers in the Atwima-Kwawoma District. The shortage of books and teaching materials is particularly concerning and may hinder the effective implementation of the Standard-Based Curriculum. Additionally, while many teachers have received professional training, there is room for improvement in providing technology-based tools and resources to support teaching. These findings underscore the importance of addressing resource gaps to enhance the quality of early-grade education in the district.

Research Question 4

4.5 Challenges early-grade teachers face in implementing the standard-based curriculum in the Atwima-Kwawoma District.

This section sought to find out the Challenges early-grade teachers face in implementing the standard-based curriculum in the Atwima-Kwawoma District. To answer the question, items 24 – 32 under section 'D' of the questionnaire was used. Data in Table 4.5 present the results.

Table 4.5: Available to support early-grade teachers in the successful implementation of the standard-based curriculum

Statement	SD (%)	D (%)	N (%)	A (%)	SA (%)	M/Std
I don't understand the standard-based curriculum	35 (26.5)	53 (40.2)	32 (24.2)	7 (5.3)	5 (3.8)	2.84/3.91
The school don't have enough teaching and learning materials to help me implement the Early childhood curriculum	9 (6.8)	14 (10.6)	22 (16.7)	60 (45.5)	27 (20.5)	3.62/1.13
My class size is too large for me to go by the early childhood curriculum	25 (18.9)	28 (21.2)	13 (9.8)	20 (15.2)	46 (38.8)	3.25/1.57
I don't receive any in-service training on the early childhood curriculum	56 (42.4)	50 (37.9)	17 (12.9)	9 (6.8)	0 (0.0)	1.84/0.89
There is too much workload with the standard-based curriculum	11 (8.3)	60 (45.5)	19 (14.4)	23 (17.4)	19 (14.4)	2.84/1.23
The pupils do not understand the learning concepts when I go by the early childhood curriculum	46 (34.8)	51 (38.6)	12 (9.1)	17 (12.9)	6 (4.5)	2.14/1.16
Parents don't involve themselves in the implementation of the early childhood curriculum	12 (9.1)	7 (5.3)	26 (19.7)	46 (34.8)	41 (31.1)	3.73/1.21
The facilities in the school don't facilitate the implementation of the early childhood curriculum.	7 (5.3)	60 (45.5)	28 (21.2)	22 (16.7)	15 (11.4)	2.83/1.12
The administration of the school doesn't support the implementation of the early childhood curriculum	27 (20.5)	57 (43.2)	19 (14.4)	18 (13.6)	11 (8.3)	2.46/1.20

Source: Field Survey, 2023

Table 4.5 provides insights into the challenges that early-grade teachers in the Atwima-Kwawoma District face when implementing the Standard-Based Curriculum (SBC). Like in the earlier tables, responses are categorized into five levels, from Strongly Disagree (SD) to Strongly Agree (SA), with Mean (M) and Standard Deviation (Std) included for summary and data dispersion.

The results indicate that a significant proportion of teachers express challenges in understanding the Standard-Based Curriculum, with 66.7% having a negative

perception (combining strongly disagree and disagree). The high standard deviation (3.91) suggests considerable variability in responses, highlighting the need for targeted training and support in understanding and implementing the curriculum. The high percentage of teachers who find it challenging to understand the SBC suggests that there is a notable gap in their comprehension of the curriculum framework. This gap may stem from a lack of familiarity with the SBC's principles, objectives, and guidelines. The presence of a substantial number of teachers who struggle to understand the curriculum underscores the importance of targeted training and professional development programs. Teachers require training that not only introduces them to the SBC but also provides them with the necessary skills and knowledge to effectively implement it in the classroom. This finding is line with that of Wah & Yu (2007) and Mmopi (2015).

In relation to the statement that the school doesn't have enough teaching and learning materials to help me implement the Early childhood curriculum, a majority of teachers (66% combining agree and strongly agree) report a lack of sufficient teaching and learning materials in their schools. The low standard deviation (1.13) suggests a relatively consistent experience among teachers, indicating a clear resource gap that needs to be addressed to support effective curriculum implementation. Also, large class size has been identified as one of the challenges that early-grade teachers in the Atwima-Kwawoma District face when implementing the Standard-Based Curriculum (SBC). The data in table 4.5 shows a substantial number of teachers (60% combining agree and srongly agree) feel that large class sizes hinder their ability to adhere to the early childhood curriculum. The high standard deviation (1.57) suggests varying degrees of class size challenges across teachers, but the overall trend is clear—large

class sizes pose a significant obstacle. This result is supported by Arthur & Obeng (2023).

Also, in relation to the statement I don't receive any in-service training on the early childhood curriculum, a significant portion of teachers (80.3% combining strongly disagree and disagree) report not receiving in-service training on the early childhood curriculum. The low standard deviation (0.89) indicates a consistent lack of training among respondents, highlighting the need for professional development opportunities.

With regards to there being too much workload with the standard-based curriculum, a substantial proportion of teachers (53.8% combining strongly disagree and disagree) perceive the SBC as being associated with a heavy workload. The moderate standard deviation (1.23) suggests that while many teachers feel burdened, there are varying degrees of workload concerns. The perception of a heavy workload is a significant concern as it can contribute to teacher stress and burnout. Teachers who feel overwhelmed by their workload may experience increased stress levels, which can negatively impact their job satisfaction, well-being, and overall effectiveness in the classroom. Teachers play a critical role in the successful implementation of any curriculum. When they perceive the curriculum as having a heavy workload, it may indicate that they feel there is not enough time to adequately cover the curriculum's content and meet the learning objectives. This time constraint can lead to rushed teaching practices, potentially compromising the depth and quality of instruction. The perception of a heavy workload can be a barrier to effective curriculum implementation. Teachers may struggle to balance the demands of covering the curriculum with other essential teaching responsibilities, such as lesson planning, assessment, and individualized support for students. This finding is line with Mochiah & Adibi (2023).

Also, data shows that a majority of teachers (73.4% combining strongly disagree and disagree) express concerns about students' comprehension of learning concepts under the early childhood curriculum. The standard deviation (1.16) indicates some variation in teachers' experiences but underscores a prevalent issue with student understanding.

On the statement that parents don't involve themselves in the implementation of the early childhood curriculum, many teachers (44.4% combining SD and D) report a lack of parental involvement in curriculum implementation, with a notable proportion (65.9% combining A and SA) expressing this concern. The moderate standard deviation (1.21) suggests varying degrees of parental involvement but overall indicates a challenge in this area. The statement that the facilities in the school don't facilitate the implementation of the early childhood curriculum, was disagreed on by 50.8% of the teachers. However, a substantial number of the teachers 49.2% agreed to the statement. The low standard deviation (1.12) suggests a relatively consistent experience among teachers, emphasizing the need for infrastructure improvements.

Again, data in table 4.5 shows that 63.7% of the teachers selected have disagreed that the administration of the school doesn't support the implementation of the early childhood curriculum. Only 21.9 agree that the administration of the school doesn't support the implementation of the early childhood curriculum. This result suggests that a significant majority of the surveyed teachers believe that their school's administration is supportive of the implementation of the early childhood curriculum. They perceive that the school leadership is actively involved or engaged in facilitating the effective execution of the curriculum in their classrooms. This level of agreement indicates that, from the teachers' perspective, the administration is playing a positive role in curriculum implementation, which can be seen as a favorable aspect of the

educational environment within the Atwima-Kwawoma District. It implies that the administration is likely providing the necessary support, resources, and guidance to help teachers adhere to the curriculum guidelines and achieve the desired educational outcomes.

In summary, the results from Table 4.5 reveal several significant challenges that early-grade teachers in the Atwima-Kwawoma District face when implementing the Standard-Based Curriculum. These challenges include a lack of understanding of the curriculum, inadequate teaching materials, large class sizes, insufficient training, heavy workloads, student comprehension issues, limited parental involvement, inadequacy of school facilities, and perceived lack of administrative support. The variations in standard deviations indicate that while some challenges are widespread, others may be more context-specific. Addressing these challenges is critical to improving the quality of education in the district and ensuring effective curriculum implementation.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Overview

This chapter presents a summary, major findings, and conclusion. Based on the conclusion drawn from the study some possible recommendations to the findings in the study were made.

5.2 Summary

The purpose of the study is to examine early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in Atwima-Kwawoma district. Specifically, the study sough to find out early-grade teachers' perception of the implementation of the standard-based curriculum in the Atwima-Kwawoma District, pedagogical approaches early-grade teachers adopt to teach learners at early childhood centres in the Atwima-Kwawoma District, available resources that support early-grade teachers in the successful implementation of the standard-based curriculum in the Atwima-Kwawoma District and challenges early-grade teachers face in implementing the standard-based curriculum in the Atwima-Kwawoma District.

The study was guided by Gautam's curriculum implementation theory (Gautam, 2015). This theory is advanced by Gautam (2015), who hypothesised that the degree to which a curriculum is implemented is a function of the extent to which conditions are present during the process of implementation. The study adopted quantitative research approach and descriptive survey research design. The study used a sample of

the 132 early-grade teachers in Atwima-Kwawoma District. A structured questionnaire was used to gather data on early-grade teachers' perception of the implementation of the standard-based curriculum in the Atwima-Kwawoma District, pedagogical approaches early-grade teachers adopt to teach learners at early childhood centres in the Atwima-Kwawoma District, available resources that support early-grade teachers in the successful implementation of the standard-based curriculum in the Atwima-Kwawoma District, challenges early-grade teachers face in implementing the standard-based curriculum in the Atwima-Kwawoma District. Descriptive statistics such as frequency tables, mean and standard deviations were used to analyze the data collected.

5.3 Summary of Major Findings

Based on the results presented in Tables 4.2 to 4.5, the study has uncovered several major findings related to early-grade teachers' perception of the implementation of the Standard-Based Curriculum (SBC) in the Atwima-Kwawoma District and the challenges they face in this process:

Objective 1: Pedagogical Understanding of the SBC Implementation

The study found that a significant percentage of teachers expressed challenges in understanding the SBC, with 66.7% having a negative perception. It was again found that many teachers reported receiving multiple training sessions on the implementation of the SBC, but the responses were more varied, indicating that not all teachers have had the same level of training and exposure. In summary, teachers had mixed perceptions regarding their understanding of curriculum change principles and the alignment of the SBC with learner needs. Understanding and Perception of the

SBC: Many teachers face challenges in understanding the SBC, and there is a need for improved clarity and training to enhance their comprehension.

Objective 2: Pedagogical Approaches

The study found that play-based pedagogy is widely adopted, with 53.0% of teachers strongly agreeing and 47.0% agreeing to its use. Also, it was reaveld that nn inquiry-based learning approach is also prevalent, with 49.2% of teachers agreeing and 26.5% strongly agreeing. Project-based learning and technology-based learning approaches exhibit more diverse adoption patterns. Again, theme-based and activity-based learning approaches are widely embraced by teachers. The study also revealed that differentiated instruction is less commonly adopted, with a majority of teachers remaining neutral about its use. In summary, the study reveals the varying degrees to which early-grade teachers in the Atwima-Kwawoma District adopt different pedagogical approaches in their teaching. Some approaches, such as play-based and activity-based learning, are widely embraced, while others, like technology-based learning and project-based learning, exhibit more diverse adoption patterns.

Objective 3: Available Resources

In line with the third objective, the study found that while the majority of teachers have access to an official standard-based curriculum (52.3%), a significant proportion does not. It was also revealed that a concerning number of teachers (84.9%) reported not having books for all their learners, indicating a serious lack of essential learning materials. Most teachers (93.9%) indicated that the textbooks they have are not sufficient for all their learners. It was found that there is a balanced distribution of teachers' resource packs compared to textbooks. Also, a significant portion of teachers (37.1%) feel that they lack adequate teaching and learning resources in their

classrooms. Again, the majority of teachers (73.5%) have received professional training, but there is room for improvement in providing technology-based tools and resources to support teaching. In summary, the results suggest that there are substantial challenges regarding the availability of essential resources for early-grade teachers in the Atwima-Kwawoma District. The shortage of books and teaching materials is particularly concerning and may hinder the effective implementation of the Standard-Based Curriculum. Additionally, while many teachers have received professional training, there is room for improvement in providing technology-based tools and resources to support teaching.

Objective 4: Challenges in Implementing the SBC

In line with the fourth objective, the study found that the most prominent challenge reported by teachers is the lack of understanding of the SBC, with 66.7% expressing negative perceptions. Also, a majority of teachers (66%) reported a lack of sufficient teaching and learning materials in their schools. Again, large class sizes were identified as a significant challenge, with 60% of teachers feeling hindered by them. Also, many teachers (80.3%) reported not receiving in-service training on the early childhood curriculum. It was further revealed that more than half of the teachers (53.8%) perceive the SBC as being associated with a heavy workload.

Concerns about students' comprehension of learning concepts were expressed by a majority of teachers (73.4%). Parental involvement in curriculum implementation was reported as lacking by a significant proportion of teachers (44.4%). Also, a majority of teachers (63.7%) believe that the administration of the school supports the implementation of the early childhood curriculum. In summary, the results reveal several significant challenges that early-grade teachers in the Atwima-Kwawoma

District face when implementing the Standard-Based Curriculum. These challenges include a lack of understanding of the curriculum, inadequate teaching materials, large class sizes, insufficient training, heavy workloads, student comprehension issues, limited parental involvement, and inadequacy of school facilities.

5.4 Conclusions

The research findings provide valuable insights into the state of early-grade education and the implementation of the Standard-Based Curriculum (SBC) in the Atwima-Kwawoma District. The study reveals significant resource constraints in early-grade education. Teachers reported a lack of essential teaching and learning materials, including textbooks, which can hinder effective curriculum implementation. This finding underscores the importance of addressing resource gaps to provide students with the tools they need for successful learning. Early-grade teachers in the district employ a variety of pedagogical approaches in their classrooms. While some approaches, such as play-based and inquiry-based learning, are widely adopted, others, like technology-based and project-based learning, exhibit more diverse usage patterns. This diversity highlights the need for tailored professional development programs that address teachers' varying needs and preferences.

Teachers face several challenges in implementing the SBC, including large class sizes, heavy workloads, and concerns about student comprehension. These challenges can impact the quality of instruction and necessitate targeted interventions and support mechanisms. A positive finding is that a majority of teachers believe that the school administration supports the implementation of the early childhood curriculum. This administrative support is crucial for fostering a conducive learning environment and addressing some of the challenges faced by teachers. While many teachers have received training on the SBC, there is room for improvement, especially regarding

technology integration and addressing teachers' understanding of curriculum change principles. Continuous professional development is essential to keep teachers updated and equipped with the necessary skills.

The research findings highlight both strengths and areas for improvement in early-grade education in the Atwima-Kwawoma District. They underscore the importance of addressing resource constraints, providing tailored professional development, and fostering a supportive administrative environment. Ultimately, improving early-grade education is vital for laying a strong foundation for students' future academic success and overall development in the district. The findings of this study can inform policymakers, educational authorities, and stakeholders in making informed decisions to enhance the quality of education for early-grade learners.

5.5 Policy recommendations

Based on the research findings and conclusions regarding early-grade teachers' pedagogical knowledge and the implementation of the Standard-Based Curriculum (SBC) in the Atwima-Kwawoma District, the following policy recommendations are proposed:

- The school authorities and Ministry of Education should increase funding for early-grade education to address resource constraints, particularly the availability of textbooks and teaching materials. Also, there should be develop a systematic plan for the procurement and distribution of textbooks to ensure that all early-grade learners have access to essential reading materials. The should authorities should also make conscious effort to invest in the development and provision of teachers' resource packs to support educators in their instructional practices.

- The Ministry of Education and Ghana Education Service should design and implement targeted professional development programs for early-grade teachers, focusing on improving their understanding of the SBC and curriculum change principles. The ministries should provide ongoing training opportunities that equip teachers with the necessary skills to effectively integrate technology into their teaching methods. The school heads should also foster collaboration among teachers to share best practices and innovative pedagogical approaches.
- The school authorities, the Ministry of Education and Ghana Education Service should explore strategies to reduce class sizes in early-grade classrooms, as large class sizes were identified as a significant challenge. The ministries should consider implementing policies that promote teacher-to-student ratios conducive to individualized attention and effective teaching.
- National Council for Curriculum and Assessment (NaCCA), Ministry of Education and Ghana Education Service should regularly review and adapt the SBC to align with the needs and comprehension levels of early-grade learners. There should be involvement of teachers and educational experts in the curriculum development and adaptation processes to ensure relevance and effectiveness.
- The school Authorities should develop strategies to increase parental involvement in early-grade education, recognizing its critical role in supporting learners' progress. The school should organize workshops and informational sessions to educate parents about the curriculum, their role in their child's education, and how to support learning at home.

- National Council for Curriculum and Assessment (NaCCA), Ministry of Education and Ghana Education Service should establish a robust system for monitoring and evaluating the implementation of the SBC, including teacher performance and student outcomes. Use data-driven insights to make informed decisions and adjustments to curriculum implementation strategies.

5.6 Suggestions for Further Study

Other researchers should consider conducting a larger-scale study involving multiple early-grade schools across various regions or districts to compare and contrast the early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum in different contexts. Other researchers should undertake longitudinal research to track changes in early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum over an extended period. Future studies should consider combining qualitative data with quantitative data to provide a more comprehensive understanding of the early-grade teachers' pedagogical knowledge in the implementation of the standard-based curriculum.

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APPENDIX

QUESTIONNAIRE FOR TEACHERS

Dear Respondents,

I am Evelyn Kwarteng, a Master of Education candidate at the University of Education, Winneba researching on the topic "Early-grade Teachers' Pedagogical Understanding in the Implementation of the Standard-Based Curriculum in Atwima-Kwawoma District". Your candid and objective responses to the items in the questionnaire will go a long way in assisting the researcher to get the needed information. This questionnaire is strictly for an academic exercise, and you are humbly requested to provide accurate and frank information that will assist the researcher in obtaining the correct data for this exercise. Your responses will be treated in strict confidence. You are please requested to tick (√) a number that best describes your view and anywhere applicable. Thank you.

PART I

BIO-DATA OF PARTICIPANTS

1. Gender Male [ ] Female [ ]

2. Age Range 20 and below [ ] 21 – 30 [ ] 31 – 40 [ ] 41 – 50 [ ]
51 – 60 [ ]

3. Area of Specialisation
Early Childhood Education [ ] Basic Education [ ] Special Education [ ]
Other (specify)……...

4. Professional Qualification
Certificate in ECE [ ] Diploma in ECE [ ] Degree in ECE [ ]
Post Graduate Diploma in Education [ ] Masters in ECE [ ]
Other (specify)……

5. Rank in the Ghana Education Service

Superintendent I [ ] Superintendent II [ ] Senior Superintendent II [ ]
Senior Superintendent I [ ] Principal Superintendent [ ] Assistant Director II [ ]
Assistant Director I [ ] Other (specify) ……

6. Number of years of teaching at present level

0 – 5 years [ ] 6 – 10 years [ ] 11 – 15 years [ ] 16 – 20 years [ ]
21 years and above [ ]

PART II

DATA ON RESEARCH OBJECTIVES

SECTION A: Teachers' Perception of the Implementation of Standard-Based Curriculum.

The table below presents data on teachers' perceptions of the implementation of the standard-based curriculum. Read each statement carefully and indicate the extent to which you agree or disagree with the statements by ticking (√) 5=Strongly Disagree (SD), 4=Disagree (D), 3=Neutral (N), 2=Agree (A) and 1=Strongly Agree (SA)

S/N	Statement	SD 5	D 4	N 3	A 2	SA 1
1	I can explain the standard-based curriculum.					
2	I have been two or three times on the implementation of the standard-based curriculum.					
3	I know of three and more principles of curriculum change.					
4	I have observed that the standard-based curriculum is well-aligned with the needs of our learners.					
5	With my experience, I have identified that the standard-based curriculum provides clear learning objectives for learners.					
6	I have noticed that the standard-based curriculum has improved learner-learning outcomes.					
7	My readiness in executing the standard-based curriculum is essential in enhancing the learning outcomes of learners					
8	The standard-based curriculum has provided me with useful guidance for planning my lessons					
9	the standard-based curriculum has improved the overall quality of instruction in our school					

SECTION B: Pedagogical Approaches Early Childhood Teachers Adopt to Teach Learners at Early Childhood Centres.

The table below presents data on pedagogical approaches early childhood teachers adopt to teach learners at early childhood centres. Please read each statement carefully and indicate the extent to which you agree or disagree with the statements by ticking (√) 5=Strongly Disagree (SD), 4=Disagree (D), 3=Neutral (N), 2=Agree (A) and 1=Strongly Agree (SA).

S/N	Statement	SD 5	D 4	N 3	A 2	SA 1
10	I adopt play-based pedagogy to teach learners					
11	I adopt inquiry-based learning approach to teach learners					
12	I adopt project-based learning approach to teach learners					
13	I adopt technology-based learning approach to teach learners					
14	I adopt theme-based approach to teach learners					
15	I adopt activity-based learning approach to teach learners					
16	I adopt differentiated instruction to teach learners					

SECTION C: Available Resources That Support Teachers in the Successful Implementation of the Standard-Based Curriculum.

The table below presents data on available resources that support teachers in the successful implementation of the standard-based curriculum. Please read each statement carefully and indicate the extent to which you agree or disagree with the statements by ticking (√) 5=Strongly Disagree (SD), 4=Disagree (D), 3=Neutral (N), 2=Agree (A) and 1=Strongly Agree (SA)

S/N	Statement	SD 5	D 4	N 3	A 2	SA 1
17	I have an official standard-based curriculum.					
18	I have books for all my learners.					
19	The textbooks I have are enough for all the learners.					
20	I have a teachers' resource pack.					
21	I have adequate teaching and learning resources in my class.					
22	I have been a beneficiary of professional training.					
23	I have technology-based tools to support teaching.					

SECTION D: Challenges Early Childhood Teachers Face in Implementing the Standard-Based Curriculum.

The table below presents data on the challenges early childhood teachers face in implementing the standard-based curriculum. Please read each statement carefully and indicate the extent to which you agree or disagree with the statements by ticking (√) 5=Strongly Disagree (SD), 4=Disagree (D), 3=Neutral (N), 2=Agree (A) and 1=Strongly Agree (SA)

S/N	Statement	SD 5	D 4	N 3	A 2	SA 1
24	I don't understand the standard-based curriculum					
25	The school don't have enough teaching and learning materials to help me implement the Early childhood curriculum					
26	My class size is too large for me to go by the early childhood curriculum					
27	I don't receive any in-service training on the early childhood curriculum					
28	There is too much workload with the standard-based curriculum					
29	The pupils do not understand the learning concepts when I go by the early childhood curriculum					
30	Parents don't involve themselves in the implementation of the early childhood curriculum					
31	The facilities in the school don't facilitate the implementation of the early childhood curriculum.					
32	The administration of the school doesn't support the implementation of the early childhood curriculum					

Thank You for Your Participation. I'm Very Grateful for Your Time