University of Education,Winneba http://ir.uew.edu.gh

UNIVERSITY OF EDUCATION, WINNEBA

EARLY CHILDHOOD CLASSROOM ENVIRONMENTS AND LEARNERS' ATTENTIVENESS IN ASUOGYAMAN DISTRICT, GHANA

REBECCA TETTEH

MASTER OF PHILOSOPHY

2024

University of Education,Winneba http://ir.uew.edu.gh

UNIVERSITY OF EDUCATION, WINNEBA

EARLY CHILDHOOD CLASSROOM ENVIRONMENTS AND LEARNERS' ATTENTIVENESS IN ASUOGYAMAN DISTRICT, GHANA

REBECCA TETTEH
(8231900022)

A thesis in the Department of Early Childhood Education,
Faculty of Applied Behavioural Sciences in Education,
Submitted to the School of Graduate Studies, in partial fulfilment
of the requirements for the award of the degree of
Master of Philosophy
(Early Childhood Education)
in the University of Education, Winneba

JUNE, 2024

University of Education,Winneba http://ir.uew.edu.gh

DECLARATION

Candidate's Declaration

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

Signature: ……..…….

Date: ……..…

Supervisor's Declaration

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

Prof. Michael Subbey (Supervisor)

Signature: ……..…….

Date: ……..…

University of Education,Winneba http://ir.uew.edu.gh

DEDICATION

To my late Father, Pastor John Alfred Tetteh.

University of Education,Winneba http://ir.uew.edu.gh

ACKNOWLEDGEMENTS

I would like to express my sincere gratitude to my supervisor, Professor Michael Subbey of the Department of Early Childhood, Winneba for his professional guidance, advice, encouragement and goodwill with which he guided this work. I am really very grateful.

I am also grateful to Professor Samuel Oppong Frimpong, Mr. Joseph Baidoo for their generous contribution to make this work better. I am again grateful to Mr. David Ablorh Sowah, Dr. Praise Salome Otami, Pastor Moses Senawasa Datsumor and Mrs. Elizabeth Lartey, for their unwavering support throughout my life. Finally, I wish to thank my family and friends for their support, especially my children, Micah Dromi Tettey Doomah, Micaiah Sina Tetteh Doomah and Mark Manye Teye Doomah.

Finally, to everyone who played a role in my academic and personal growth, I say a very big thank you.

University of Education,Winneba http://ir.uew.edu.gh

TABLE OF CONTENTS

Contents	**Page**
DECLARATION	iii
DEDICATION	iv
ACKNOWLEDGEMENTS	v
TABLE OF CONTENTS	vi
LIST OF TABLES	ix
LIST OF FIGURES	x
ABSTRACT	xi
CHAPTER ONE: INTRODUCTION	**1**
1.0 Overview	1
1.1 Background to the Study	1
1.2 Statement of the Problem	7
1.2 Purpose of the Study	11
1.3 Research Objectives	11
1.4 Research Questions	11
1.5 Significance of the Study	12
1.6 Delimitation	13
1.7 Operational Definition of Terms	14
1.8 Organization of the Study	15
CHAPTER TWO: LITERATURE REVIEW	**16**
2.0 Overview	16
2.1 Theoretical Underpinning	16
2.2 Conceptual Review	24
2.2.1 Early Childhood Classroom Environment	24

University of Education,Winneba http://ir.uew.edu.gh

2.3 Conceptual Framework 53

2.4 Empirical Studies 56

2.5 Summary of Review 61

CHAPTER THREE: METHODOLOGY 63

3.0 Overview 63

3.1 Philosophical Paradigm 63

3.2 Research Approach 64

3.3 Research Design 66

3.5 Study Area 68

3.6 Population 69

3.7 Sample and Sampling Technique 70

3.7 Data collection instruments 72

3.8 Pilot-Testing 75

3.9 Validity and Reliability of the Instrument 77

3.10 Trustworthiness of the instrument 78

3.11 Data Collection Procedures 81

3.10 Data Processing and Analysis 82

3.11 Ethical Considerations 83

CHAPTER FOUR: RESULTS AND DISCUSSION 85

4.0 Overview 85

4.1 Results on Demographic Information 85

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 140

5.0 Overview 140

5.1 Summary of the Study 140

University of Education,Winneba http://ir.uew.edu.gh

5.2 Key Findings 141

5.3 Conclusion 142

5.4 Recommendations 143

5.5 Suggestions for further research 144

REFERENCES 146

APPENDIX A – Questionnaire for teachers 163

APPENDIX B – Classroom observation guide 170

APPENDIX C – Semi-structured interview guide for early childhood teachers 172

APPENDIX D – Introductory letter 174

APPENDIX E – Permission letter from Asuogyaman Dist. Education Office 175

University of Education,Winneba http://ir.uew.edu.gh

LIST OF TABLES

Tables **Page**

3.1: Distribution of Teachers Based on Circuits 71

4.1: Demographic Distribution of Teachers 86

2: The State of Early Childhood Classroom Environments 89

4.3: Setup of the Early Childhood Classrooms 94

4.4: The Comfort of the Early Childhood Classrooms 98

4.5: Teachers Knowledge of Classroom Factors Influencing Learners' Attentiveness 102

4.6 Teachers Use of Classroom Environment to Enhance Learners' Attentiveness 111

4.7: Available resources for the creation of classroom learning environment towards learners' attentiveness 118

4.8: Availability and Use of Instructional Materials 124

University of Education,Winneba http://ir.uew.edu.gh

LIST OF FIGURES

Figures **Page**

2.1: Conceptual framework on early childhood classroom environment and its influence on learners' attentiveness in the Asuogyaman District of Ghana. 55

1: A well decorated class 96

2: A less decorated class 96

3: A more print-rich environment 96

4: A print-rich environment 96

5: A more spacious classroom 97

6: A less spacious classroom 97

7: A class with more than one learning centre 97

8: A class with a single learning 97

9: A class with wooden windows 99

10: A class with louver blades 99

11: Class with round tables 100

12: Class with rectangular tables 100

13: Sample textbooks for learners 127

14: Sample books and writing materials 126

15: Class with lots of manipulatives 127

16: Class with few manipulative 127

17: Class with a sand tray 127

University of Education,Winneba http://ir.uew.edu.gh

ABSTRACT

This study aimed to investigate early childhood classroom environments and learners' attentiveness in the Asuogyaman District of Ghana. Employing a sequential explanatory mixed-method design, the study adopted both quantitative and qualitative approaches, with data collection occurring in two distinct phases: quantitative followed by qualitative. A total of 122 early childhood teachers participated in the study, providing data through a structured questionnaire, semi-structured observations, and semi-structured interviews. For the quantitative data analysis, descriptive statistics, including mean, standard deviation, and percentages, were used, while the qualitative data underwent thematic analysis. The findings of the study revealed that the state of the classroom environment in early childhood settings in the Asuogyaman District is characterized by a varied landscape of conditions and resources. The classroom conditions range from well-equipped and stimulating environments to spaces constrained by resource theft, inadequate ventilation, broken windows, and insufficient lighting. Additionally, the teachers perceived various classroom environmental factors, including instructional materials, environmental quality (including ventilation and lighting), teacher-learner interactions, and engaging activities, as crucial in enhancing learners' attentiveness. They employed various strategies, including play-based and active learning methods, visual aids, instructional resources, and personalized attention to enhance learners' attentiveness. Lastly, needed resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District are mostly basic resources like writing materials while others such as technology, manipulatives, and sensory materials are largely absent. The conclusion is that creating and implementing effective classroom environments that influence learners' attentiveness in the Asuogyaman District is not without challenges. Based on these findings, it is recommended that the Asuogyaman District Education Directorate liaise with NGOs to supply early childhood schools with adequate resources, maintain infrastructure, and increase access to in-service training for its early childhood teachers.

University of Education,Winneba http://ir.uew.edu.gh

CHAPTER ONE

INTRODUCTION

1.0 Overview

This chapter presents the background to the study, statement of the problem, the purpose of the study, objectives of the study, research questions, significance of the study, delimitations of the study, operational definitions of terms and organization of the study.

1.1 Background to the Study

Early childhood education (ECE) is widely acknowledged as a critical phase in a child's overall development, spanning their formative years from infancy to around eight years old (Nawaz, Ashraf & Siddique, 2021). It plays an integral role in laying the groundwork for a child's early development, providing a conducive educational environment that incorporates various forms of play and essential activities essential for growth (Adnan et al., 2016). The experiences children have during this period can significantly impact their educational achievements and prospects. ECE encompasses a broad spectrum of developmental areas, including physical, motor, health, dietary, intellectual, aesthetic, psychological, and societal aspects (Baffoe, 2013; Lehrer et al., 2022; Vandenbroeck, Lenaerts, & Beblavy, 2018). UNESCO (2021) underscores that ECE goes beyond mere preparation for primary school; it aims to address the holistic needs of children, fostering their social, emotional, cognitive, and physical development to establish a strong foundation for lifelong learning and well-being. Indeed, as Mohammed (2022) contends, the cultivation of caring, capable, and responsible citizens hinges significantly on the

University of Education,Winneba http://ir.uew.edu.gh

provision of quality early childhood education. Therefore, recognizing the importance of ECE is essential not only for individual child development but also for shaping the future of society as a whole.

However, research indicates that not all early childhood education (ECE) experiences are equal in their impact on developmental milestones; rather, it is the quality of these experiences that yields significant benefits (Oppong Frimpong, 2019). Numerous factors contribute to the quality of ECE learning, with the indoor learning environment, teaching methodologies, teacher-child interactions, and the availability of resources emerging as pivotal determinants of attentiveness and engagement during the early years of education. The quality of the learning environment during this critical period plays a crucial role in shaping children's experiences and outcomes. According to the National Core Curriculum for Early Childhood Education and Care (NACCE, 2018), the objective of early childhood education is to ensure that children are immersed in a development-oriented, healthy, safe, and accessible classroom environment. Such an environment not only fosters the development of children's healthy self-esteem but also supports their learning and social skills. Recognizing and prioritizing the quality of the learning environment is thus essential for maximizing the benefits of early childhood education and laying a solid foundation for children's future success.

Sule (2023) contextualized the learning environment as a place that supports children’s learning, growth, and interaction taking the child’s age and development into consideration thus, supporting the development of positive self-esteem in them. These include facilities, communities, methods used while working with children, and availability of resources. Learning environments are designed in a way that the children feel safe, heard, and motivated to participate in the learning process. The

University of Education,Winneba http://ir.uew.edu.gh

classroom environment in this context refers to the physical and psychological settings in which learning takes place. It includes factors such as the layout and design of the classroom, the arrangement of furniture, the presence of visual aids and learning materials, curricula, teaching approach as well as the social interactions and relationships among learners and between learners and teachers. Similarly, Berti, Cigala and Sharmahd (2019) see the learning environment as the overall design of a center, covering features such as size, density, privacy, well-defined activity settings, modified open-plan space, a variety of technical design attributes, as well as outdoor play spaces, which are linked to the emotional, social, and cognitive development of children. In other words, the classroom environment encompasses both the tangible aspects of the physical space and the intangible social dynamics that contribute to a conducive learning atmosphere.

The importance of such environments is underscored by their alignment with children's rights, as emphasized in reputable sources such as the Finnish National Agency for Education (2022) and the ECE curriculum (NACCE 2018). Learning environments within Early childhood education settings are characterized by their ability to provide a pedagogically appropriate space where children can engage in versatile, play-oriented, and peaceful activities. These environments not only facilitate learning but also foster independence, encourage child-oriented planning, and ensure active participation among children. Furthermore, learning environments in ECE settings serve as platforms for developing essential communication and interaction skills, identifying and addressing children's support needs, and promoting language development. They also play a vital role in cultivating aware ness about different cultures, fostering healthy self-esteem, and heightening children's awareness of their surroundings. Additionally, these environments are instrumental in developing strong

University of Education,Winneba http://ir.uew.edu.gh

social skills and supporting holistic growth, laying the foundation for lifelong learning.

Recognizing the multifaceted nature of learning environments, they encompass physical, social, and psychological aspects, each serving distinct purposes in nurturing children's development (NACEE 2022). This implies that the classroom environments greatly influence learner's learning experiences as well as their health and development more generally (Adlerstein & Cortazar 2022). The right learning environment is about more than just a physical space. It is, at its best, about creating an environment developmentally appropriate for learning that ensures that learners' feel safe, make sense of the world, and feel empowered, understood, and free to learn actively and flexibly. The right learning environment allows learner to interact with their teachers, peers and environments in a way that helps them to learn and better understand the world. This aligns with Perry (2013) who defined the early childhood classroom environment as the content teacher arrange; an atmosphere they create and feeling they communicate. This suggests that it is imperative for all teachers, including those in Asuogyaman District, to create a developmentally appropriate early childhood environment that fosters sustained learner attention, active participation, and engagement.

Another key element of effective ECE learning is attentiveness. Ajiboye, Adebayo and Abubakar (2020) argues that learners' attentiveness in the classroom involves active learning time or its equivalents, which include duration on an activity, active learning time, or endurance. It encompasses a child's capacity to engage with educational content, listen actively, follow instructions, and participate actively in classroom activities. Attentiveness in this context refers to a child's ability to focus, concentrate, and sustain learner's interest in learning activities and tasks. Thus,

University of Education,Winneba http://ir.uew.edu.gh

attentiveness stands as a critical skill in early childhood development, recognized for its profound impact on learning and cognitive advancement. Recent studies have shed light on its pivotal role in shaping the trajectory of a child's educational journey. For instance, research conducted by Blair and Raver (2015) underscores the significance of attentiveness in early childhood education, highlighting its association with improved academic performance and social competence. Furthermore, findings from Diamond and Ling (2016) emphasize the link between attentiveness and executive function development, indicating that fostering attentiveness during the early years lays a strong foundation for higher-order cognitive skills later in life. In contemporary literature, the work of McClelland et al. (2019) underscores the importance of attentiveness in predicting academic achievement and school readiness among young children. Their findings suggest that interventions aimed at enhancing attentiveness in early childhood can lead to long-term benefits in academic success. Additionally, recent studies by Neville et al. (2021) have elucidated the neural mechanisms underlying attentiveness in early childhood, providing insights into how environmental factors and educational practices can modulate attention processes in young learners.

However, inattention, which often comes with its attendant consequence, has become a notorious phenomenon that manifests among school children of lower ages, especially pre-school learners (Ajiboye et al., 2020). Inattention refers to a situation of reduced concentration span of mental powers upon an object or activity. These abilities enable learners' to fully engage with educational content, follow instructions, and actively participate in classroom activities. from learning activities, leading them to develop a negative perception of their abilities. Inattentive behaviour is often irritable because of the adverse effect on pupils' performance and the efforts of

University of Education,Winneba http://ir.uew.edu.gh

teachers and parents. Attentive behaviours are directly related to learning outcomes (Smith et al., 2019). The studies suggested that attentiveness is an important variable associated with learners' behaviour at school, through which the effect of learning experiences is mediated to influence learning outcomes. Children with inattentive behaviour are more likely to show the following characteristics in a way that disrupts classroom activities: an apparent inability to pay close attention to a task or a tendency to make careless mistakes, difficulties in focusing on activities or tasks and giving the impression of not listening while other people are talking (Nall, 2018). Other features include experiencing difficulty with time management and task organization, losing items or accessories necessary for daily function frequently, becoming distracted easily, forgetting to complete tasks and fulfill obligations, avoiding tasks that require prolonged focus and thought, and finding it difficult to play or engage in activities without creating excessive noise, difficulties with following instructions to complete tasks as identified by Ajiboye et al. (2020).

Research from around the world has consistently shown that the indoor environment within ECE settings plays a pivotal role in shaping children's behaviour and attention. A study conducted by Byers et al. (2018) investigated how classroom design influences learners' perceptions and learning outcomes. They found that well-organized learning centers and visually engaging displays positively impacted learners' engagement during lessons. The study suggests that an organized and visually stimulating classroom layout can enhance attentiveness and learning. Gore et al. (2016) focused on the effects of classroom design elements, including natural lighting and vibrant colours, on learner engagement. It revealed that classrooms with ample natural light and vibrant colour schemes were associated with increased motivation and interest in learning among learners. This suggests that the physical

University of Education,Winneba http://ir.uew.edu.gh

environment can influence learners' attentiveness and enthusiasm. Bergen (2015) explored the impact of play-based learning on children's attentiveness and problem-solving skills. Their research revealed that play-based learning strategies effectively enhanced children's attentiveness and promoted the development of problem-solving skills, highlighting the significance of teaching approaches in shaping attentiveness. Similarly, project-based learning and inquiry-based approaches have been linked to higher levels of motivation and sustained attention (Krajcik et al., 2014). For these reasons, this study sought out to investigate how early childhood classroom environment influence learners' attentiveness.

1.2 Statement of the Problem

The classroom environment's role in fostering attentiveness in Early Childhood Education (ECE) settings has garnered substantial attention on a global scale. The ECE phase is critical in shaping a child's cognitive and social development, and attentiveness is a vital component in this process. However, classroom conditions and environmental factors that either support or hinder attentiveness have been underexplored in certain geographical contexts.

Amissah-Essel et al. (2020) reported that both private and public early childhood centres in Ghana have compromised physical environment that affect effective learning. Also, a study by Ampadu and Opoku-Asare (2023) found that Ghanaian ECE teachers are aware of classroom factors affecting effective teaching and learning but are constrained by resource availability and training in implementing the needed measures. In addition, Antwi et al. (2023) found that early childhood teachers in rural Ghana rely heavily on traditional teaching aids, such as blackboards and locally sourced materials, to focus learners' attention while urban areas integrate

University of Education,Winneba http://ir.uew.edu.gh

modern resources like projectors. It is therefore not surprising that Oppong-Frimpong (2021) and Adu-Larbi (2018) reported challenges such as inappropriate furniture, under-resourced learning centers, and overcrowded classrooms in ECE centers in Ghana.

In the Asuogyaman District of Ghana, an observable trend of disengagement among early childhood learners has raised concerns regarding the inadequacies of the learning environments. This issue emerged during inspections carried out by the researcher as part of official duties, where it was frequently observed that learners exhibited behaviours indicative of disengagement, such as frequently leaving the classroom for washrooms or wandering about during lessons. It was also observed that teachers lack awareness of the individual learning needs, poorly maintained classroom environment and classroom having inadequate seating or desk arrangement leading to discomfort, making it difficult for learners to focus and pay attention.

These observations aligned with recurring discussions at the District Education Oversight Committee (DEOC) meetings, where the inattentiveness of pupils transitioning from kindergarten to primary school in the Asuogyaman District was a prominent topic for discussion. Additionally, these concerns were echoed at Social Services Sub-committee meetings at the District Assembly. Reports by “Save the Children” (2019) and the Ministry of Education, Ghana (2019) corroborate these concerns, emphasizing the particular challenges faced in rural areas in the Asuogyaman District. Such concerns highlight the pressing need for an in-depth investigation into the environmental conditions of ECE classrooms in the district, as the failure to address these deficiencies could result in long-term disengagement, which might undermine the educational outcomes of these children, in line with findings by Wilson et al. (2018).

University of Education,Winneba http://ir.uew.edu.gh

While the relationship between learning environments and learner attentiveness has been extensively studied globally (LeBlanc, 2020) and regionally in Africa (Kibriya & Jones, 2020), specific investigations in the Ghanaian context, particularly in ECE settings, remain sparse. LeBlanc's study, for instance, focused on kindergarten (KG) schools in Nova Scotia, while Kibriya and Jones conducted a similar study in Tanzania. In Ghana, researchers like Deku (2018), Oppong Frimpong (2021), and Tackie-Ofosu et al. (2015) have explored various aspects of early childhood education, but these studies were concentrated on districts other than Asuogyaman and did not focus explicitly on how classroom environments influence learner attentiveness. For example, Deku's study explored best practices in early childhood centers in Cape Coast, while Oppong Frimpong investigated ECE perceptions in Kumasi.

Research at higher education levels in Ghana has highlighted similar environmental concerns. Studies by Baafi (2021), Asamoah et al. (2020), Pobbi et al. (2018), Baidoo-Anu (2018), and Opoku-Asare and Siaw (2015) have predominantly concentrated on senior high school environments, overlooking the ECE context. For example, Baafi's study explored how classroom environments impact academic performance in senior high schools within Greater Accra, while Asamoah focused on the school environment in Kumasi's public senior high schools. These studies underscore the influence of classroom environments on academic performance, but the early childhood stage, a critical period for child development, remains under-researched in the Ghanaian educational discourse.

The limited studies on early childhood learning environments in Ghana focus primarily on infrastructure, class sizes, and teacher-learner ratios rather than on learner attentiveness. Kissi-Abrokwah et al. (2021), Amissah-Essel et al. (2020), and

University of Education,Winneba http://ir.uew.edu.gh

Oppong Frimpong (2021) are among the few researchers who have studied the quality of ECE environments in Ghana. For instance, Kissi-Abrokwah investigated class sizes and their impact on classroom management in ECE centers, but this study did not explore how these factors influence attentiveness. Similarly, Amissah-Essel's study was conducted in the Cape Coast Metropolis and revealed that the physical environments of ECE centers were compromised. However, there was no direct observation of the teacher-learner interactions, a crucial factor in understanding learner attentiveness. Oppong Frimpong's research used convergent mixed methods design to examine ECE centers in the Ga-West Municipality and identified challenges such as inappropriate furniture, overcrowded classrooms, and poorly resourced learning centers, but again, the specific impact of these factors on attentiveness was not explored.

Given the significant gaps in research, especially in the context of early childhood education in the Asuogyaman District, there is a clear need for a comprehensive investigation into the relationship between classroom environments and learner attentiveness. The current study seeks to address these gaps by focusing on the specific factors within early childhood classroom environments that influence attentiveness in the district. While previous studies have either examined environmental quality or looked at broader educational settings, few have delved into how the ECE classroom environment directly impacts attentiveness, especially in rural settings like Asuogyaman. By exploring this connection, the research provides insights that are crucial for improving educational outcomes in the district and similar contexts across Ghana and beyond.

University of Education,Winneba http://ir.uew.edu.gh

1.2 Purpose of the Study

The purpose of this study was to investigate early childhood classroom environments and its influence on learners' attentiveness in the Asuogyaman District of Ghana.

1.3 Research Objectives

The objectives of the study were to:

1. Assess the state of the classroom environment in early childhood education settings in the Asuogyaman District.
2. Examine teachers' knowledge of the classroom environmental factors that influence learners' attentiveness in the Asuogyaman District.
3. Find out the manner through which early childhood teachers utilize the classroom environments in dealing with learners' attentiveness in Asuogyaman District.
4. Assess the needed resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District.

1.4 Research Questions

The study was driven by these research questions:

1. What is the state of the classroom environment in early childhood education settings in the Asuogyaman District?
2. What knowledge do early childhood teachers possess about the classroom environmental factors that influence learners' attentiveness in the Asuogyaman District of Ghana?

University of Education,Winneba http://ir.uew.edu.gh

3. In what manner do early childhood teachers in the Asuogyaman District utilize the classroom environment in dealing with learners' attentiveness?

4. What are the needed resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District?

1.5 Significance of the Study

The significance of this study lies in its potential to contribute to the understanding of how the early childhood classroom environment will influence learners' attentiveness. This understanding is crucial for teachers, policymakers, and stakeholders in the field of early childhood education in Ghana in terms of practice, policy, and theory.

The findings of this study will provide valuable insights into the state of classroom environments in early childhood education settings in the Asuogyaman District. This assessment will inform educators and practitioners about areas of strength and areas needing improvement in creating conducive learning environments. Again, by examining teachers' knowledge of classroom environmental factors that influence learners' attentiveness, this study will contribute to the enhancement of teacher training programs making teachers to benefit from a better understanding of these factors to optimize their instructional strategies and classroom management techniques.

Also, the findings will inform early childhood educational authorities and policy makers in the Asuogyaman District about the specific needs and barriers faced by early childhood educators in the Asuogyaman District. This information can guide the development of policies and initiatives aimed at improving early childhood education infrastructure and support systems. This would allow the policymakers to

University of Education,Winneba http://ir.uew.edu.gh

advocate for resources and investments targeted at addressing the identified challenges. This can lead to the formulation of evidence-based policies that prioritize the creation of conducive learning environments to enhance learners' attentiveness.

Lastly, the study's findings would contribute to theoretical frameworks in educational psychology and classroom management. It would help to refine existing theories or develop new models that elucidate the dynamic interplay between environmental factors and learner engagement. Other researchers in the field of early childhood education can also build upon the findings of this study by conducting further investigations into similar contexts or exploring additional variables related to classroom environments and learner outcome aimed at advancing our understanding of effective teaching practices in early childhood settings.

1.6 Delimitation

The study focused specifically on early childhood classrooms in the Asuogyaman District of Ghana. This implies that while the findings offer valuable insights in this context, they may not be generalizable to other districts or regions. Also, the study primarily examines teachers' knowledge and practices regarding classroom environmental factors, and the availability of resources (material and human) that influence learners' attentiveness. Lastly, the study considered the influence of the physical classroom environment, teaching approaches, teacher – learner resources, classroom management teacher-learner and learner-learner interactions and its influence on learners' attentiveness. Hence, other aspects of the learner's development such as academic achievement were not covered.

University of Education,Winneba http://ir.uew.edu.gh

1.7 Operational Definition of Terms

1. Attentiveness: attentiveness is contextually defined as the ability of learners to maintain focused attention and engage in classroom activities, including listening to the teacher, actively participating in discussions and activities, and demonstrating interest and concentration in learning tasks.
2. Classroom Environment: In context, the classroom environment refers to the physical, social and psychological factors within the early childhood classroom that has influence on the learners' attentiveness.
3. Influence: in context of early childhood classroom environments and learners' attentiveness, influence refers to the degree to which the physical, social, and emotional environment affects learners' engagement, focus, motivation, and behaviour positively or negatively
4. Knowledge: in context, knowledge refers to the understanding and awareness of factors in the classroom environment that promote or hinder attentiveness. That is, understanding of child development, learning styles, pedagogical strategies, and individual learners' needs, and teacher-learner relationship.
5. Utilization: In context, refers to intentional and strategic use of classroom environmental factors to promote, support and sustain learners' attentiveness. That is purposeful arrangement of physical space, materials, lighting, classroom routines, and adaptation of instructional methods to accommodate diverse learning styles and needs.
6. Resources: resources refer to the material, technological, physical and human resources that support teachers in promoting and sustaining learners' attentiveness. These resources may include classroom design, educational materials, teacher training, teaching assistances, and digital tools.

University of Education,Winneba http://ir.uew.edu.gh

1.8 Organization of the Study

The study is organized under five chapters. Chapter one which is the introductory chapter captures the background to the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of study, delimitations, and organization of the study. Chapter two deals with the Literature review. Chapter three is the methodology of the study. Chapter four gives details of the results and discussion. Chapter five deals with the summary, conclusion, recommendations, and limitations of the study. The chapter five ends with suggestions for further studies.

University of Education,Winneba http://ir.uew.edu.gh

CHAPTER TWO

LITERATURE REVIEW

2.0 Overview

This chapter focused on providing insights into the theoretical frameworks and conceptual definitions relevant to the specific objectives of the study. Theoretical perspectives such as Uri Bronfenbrenner's Ecological System Theory (1977) and Lev Vygotsky's Sociocultural Theory (1978) were examined to contextualize the study within established theoretical frameworks. Additionally, the review defined key concepts including the Early Childhood Classroom Environment, the Status of Early Childhood Classroom Environment, Learner's Attentiveness in Early Childhood Classroom, How Teachers Utilize the Classroom Environment to Enhance Attentiveness, and Challenges of implementation of effective Attentive classroom environment. Through an empirical review, existing research and studies related to these concepts were synthesized to provide a comprehensive understanding of the state of knowledge in the field.

2.1 Theoretical Underpinning

Uri Bronfenbrenner's Ecological System Theory (1977)

Lev Vygotsky's Sociocultural Theory (1978)

Two prominent theoretical frameworks, the Ecological Systems Theory (EST) by Urie Bronfenbrenner (1977) and Lev Vygotsky's Sociocultural Theory (1978), converge to offer a broad understanding of the influence of the classroom environment on learners' attentiveness in the context of the Asuogyaman District.

University of Education,Winneba http://ir.uew.edu.gh

2.1.1 The Ecological Systems theory (EST)

The Ecological Systems theory (EST) developed by Uri Bronfenbrenner 1979, refers to an Ecological Systems Framework that emphasizes the impact of social interaction on child Development (Harkonen, 2007). The theory is often used in the fields of child development, psychology, and sociology to understand how various factors impacting an individual's growth and development. The Ecological Systems Theory emphasizes the interconnectedness between individuals and their environment, viewing development as a product of the dynamic interactions between various systems that surround and influence the individual. Bronfenbrenner's theory consists of five systems: microsystem, mesosystem, exosystem, macrosystem, and chronosystem, each of which plays a role in shaping human development.

The theory's layers, including the microsystem, mesosystem, exosystem, macrosystem, and chronosystem, profoundly impact learners' attentiveness in Early Childhood Education (ECE) settings. In the microsystem, encompassing immediate surroundings like home, teachers, and classrooms, the quality of interactions directly influences learners' focus and engagement (Rudasill et al., 2018). For example, supportive interactions with teachers and conducive classroom environments enhance attentiveness, while negative interactions or distracting surroundings may detract from it.

Moving to the mesosystem, interactions between different microsystems such as parents and teachers can also influence learners' attentiveness in ECE settings (Bouchard & Smith, 2017). Collaborative relationships between parents and educators, characterized by open communication and shared goals, can promote consistent support for children's learning, thereby enhancing their attentiveness.

University of Education,Winneba http://ir.uew.edu.gh

The exosystem, which includes broader social systems indirectly affecting learners, also plays a role (Iruka et al., 2020). Access to resources both within and outside the school environment, such as extracurricular activities or community support programs, can impact learners' attentiveness by enriching their learning experiences and providing additional sources of motivation.

In the macrosystem, societal values, policies, and beliefs shape the educational landscape and can influence learners' attitudes towards learning and their willingness to engage attentively (Seginer, 2006). For instance, cultural norms regarding the importance of education or stereotypes about certain academic subjects may impact learners' perceptions and behaviours in ECE settings.

Lastly, the chronosystem, which considers the temporal dimension of learners' development, acknowledges that changes over time, such as transitions between ECE programs or significant life events, can affect learners' attentiveness (Lau & Ng, 2014). Adapting to new environments or coping with personal challenges may temporarily impact learners' ability to stay focused in ECE settings.

The model is essential because it aids teachers to create personalized learning experiences for learners. The systems support teachers and school administrators to develop a developmentally appropriate school environments that are suitable for learners' needs, characteristics, culture, and family background (Taylor & Gebre, 2016), because the model focuses on the context (Schunk, 2016), teachers and school administration uses the model to increase learners' academic achievement and education attainment by involving parents and observing other contextual factors; teacher-learner interaction, learner-peer interaction, teaching approaches, learning materials that may help or inhibit their attentiveness and learning.

University of Education,Winneba http://ir.uew.edu.gh

This theory was chosen for this study based on these reasons. Firstly, the microsystem includes the child's immediate environment, specifically the classroom's physical state and organization. This level is reflected in the study's objective that aimed to assess the state of classroom environments, as factors like design, comfort, and accessibility of resources directly influence learner's attentiveness and learning engagement. A well-structured classroom can support early learning by creating a comfortable, stimulating space that encourages focus.

Also, the mesosystem relates to how various elements within a child's immediate environment, such as teacher knowledge and practices, interact to shape their learning experience. This aspect of Bronfenbrenner's model applies to the second objective of examining teachers' knowledge of environmental factors that promote attentiveness. The more teachers understand these factors, such as lighting, seating arrangement, and classroom setup, it will guide them as to how well they can structure environments to engage learners effectively. Additionally, the mesosystem is relevant in exploring how teachers utilize their classroom environments. Teachers' strategies for organizing and using resources have a significant effect on children's attention levels and overall classroom experiences.

The exosystem considers factors external to the classroom that indirectly influence children's learning, such as the availability of training, institutional support, and resources provided by the school. The study's objective on available resources for enhancing classroom attentiveness aligns with this level. Resource limitations or availability, driven by broader policy and funding considerations, shape what teachers can incorporate into their classrooms to maintain learners' focus. For instance, lack of access to sensory materials or technology can restrict how teachers engage learners, emphasizing how exosystem factors impact the microsystem.

University of Education,Winneba http://ir.uew.edu.gh

Together, these layers show how learner's attentiveness and learning experiences are shaped by an interconnected web of direct and indirect influences. Bronfenbrenner's model thus emphasizes the importance of both classroom-level factors and broader community and policy support in creating environments that foster early childhood attentiveness in the Asuogyaman District.

2.1.2 Vygotsky's Sociocultural Theory

The Sociocultural Theory, formulated by psychologist Lev Vygotsky (1997) defines education as "the artificial mastery of natural processes of development" (p.88). That is, according to him, development is possible in nature, but the level of the development is enhanced by a set environment or opportunities. Vygotsky perceives the classroom as a social environment and focuses on the effects of this environment on self-consciousness. Vygotsky focused on the role of social interaction and cultural context in shaping a child's cognitive development and learning. These theories were chosen for this study because they provide a comprehensive understanding of the factors that influence child development and learning.

Both Bronfenbrenner's Ecological Systems Theory and Vygotsky's Sociocultural Theory share some commonalities. Firstly, they both emphasize the importance of the social context influencing child development. Secondly, both theories recognize the dynamic nature of development and the bidirectional influences between the child and their environment. These theories relate to the research topic of child development and learning as they provide a framework for understanding how various environmental factors, such as family, school, community, and culture, shape a child's development and learning experiences.

Vygotsky's theory comprises concepts such as culture-specific tools, private speech, and the zone of proximal development. Vygotsky believed cognitive

University of Education,Winneba http://ir.uew.edu.gh

development is influenced by cultural and social factors. He emphasized the role of social interaction in the development of mental abilities e.g., speech and reasoning in the learner. Vygotsky emphasized that cognitive development is a socially mediated process in which learner acquire cultural values, beliefs, and problem-solving strategies through collaborative dialogues with more knowledgeable members of society. The more knowledgeable other (MKO) is someone who has a higher level of ability or greater understanding than the learner regarding a particular task, process, or concept (Vygotsky, 1978).

The MKO can be the teacher, parent, coach, or even a peer who provides guidance and modeling to enable the child to learn skills within their zone of proximal development - the gap between what a child can do independently and what they can achieve with guidance. The interactions with more knowledgeable others significantly increase not only the quantity of information and the number of skills a child develops, but also affects the development of higher-order mental functions such as formal reasoning. Vygotsky argued that higher mental abilities could only develop through interaction with more advanced others. According to Vygotsky, adults in society foster learner's cognitive development by engaging them in challenging and meaningful activities. Adults convey to learner how their culture interprets and responds to the world. They show the meaning they attach to objects, events, and experiences. They provide the child with what to think (the knowledge) and how to think (the processes, the tools to think with) which could be achieved through attentiveness.

Vygotsky's theory encourages collaborative and cooperative learning between learner and teachers or peers. Scaffolding and reciprocal teaching are effective educational strategies based on Vygotsky's ideas. Scaffolding involves the teacher

University of Education,Winneba http://ir.uew.edu.gh

providing support structures to help learners' master skills just beyond their current level. In reciprocal teaching, teachers and learners take turns leading discussions using strategies like summarizing and clarifying. Both scaffolding and reciprocal teaching emphasize the shared construction of knowledge, in line with Vygotsky's views.

Each culture provides its learner with tools of intellectual adaptation that allow them to use basic mental functions more effectively/adaptively. Tools of intellectual adaptation is Vygotsky's term for methods of thinking and problem-solving strategies that learner internalize through social interactions with the more knowledgeable members of society. Vygotsky refers to this as cooperative or collaborative dialogue. The child seeks to understand the actions or instructions provided by the teacher and then internalize the information, using it to guide or regulate their performance.

The use of Sociocultural Theory was necessary for several reasons. Firstly, Vygotsky's concept of the Zone of Proximal Development (ZPD) is applicable to this study's objective that aims at examining teachers' knowledge of environmental factors. The ZPD describes the range between what a child can do independently and what they can achieve with guidance. In a well-prepared classroom, teachers can create opportunities for children to reach higher levels of attentiveness by scaffolding learning experiences using resources and arranging the classroom in ways that engage learners just beyond their current abilities. Teachers knowledgeable about environmental factors that support attentiveness can, therefore, structure classroom activities and interactions to facilitate cognitive engagement within each child's ZPD.

Moreover, the importance of social interaction emphasized in Vygotsky's theory supports the study's investigation into how teachers utilize classroom environments to manage attentiveness. Teachers play a key role as facilitators of

University of Education,Winneba http://ir.uew.edu.gh

learning by providing verbal prompts, guiding interactions, and encouraging group activities that maintain learners' focus. In early childhood classrooms, attentiveness can be enhanced when teachers actively use the environment to encourage positive interactions, allowing children to learn both from the teacher and their peers.

Vygotsky's emphasis on culturally relevant tools and resources is also pertinent to this study's assessment of available resources in classrooms. From a sociocultural perspective, tools such as visual aids, manipulatives, and even technology provide cognitive support and help scaffold learning within children's ZPD. However, as the study notes, the availability of such resources may be limited in the Asuogyaman District. When adequate resources are unavailable, teachers face challenges in fully supporting learners' attentiveness and engagement, highlighting the importance of accessible educational tools that are relevant to learner's cultural and social backgrounds.

Therefore, the theory shows how learner's cognitive development and attentiveness are shaped by the social context in which they learn, showing the importance of teachers' roles and the resources they use.

The uses of both theories were therefore relevant. In the context of the study, the Ecological Systems Theory helped to understand how attentiveness in early childhood classrooms is influenced by various environmental factors and systems. This aligns with the research objectives, as the theory emphasizes the importance of different environmental systems in learners' development. Specifically, the study explored the microsystem, which encompasses the immediate environments within early childhood classroom in the Asougyaman District. Additionally, the mesosystem perspective was adopted to analyze the perceptions and experiences of both teachers and learners, with a focus on how these factors collectively impact attentiveness.

University of Education,Winneba http://ir.uew.edu.gh

The choice of these theories is informed by the belief that studying child development and learning necessitates a comprehensive understanding of the multiple influences and interactions that shape a child's development. These theories help to provide a framework for examining the influence of various environmental factors on a child's development, including the role of teachers in the school environment. These theories also emphasize the importance of considering the individual child within their specific cultural and social context, as well as recognizing that development is not solely determined by internal processes but is also influenced by external factors and social interactions (Williams, 2021).

2.2 Conceptual Review

2.2.1 Early Childhood Classroom Environment

The concept of the classroom learning environment has been expounded upon by various educationists. Fraser (1986) considered it shared perception of the learners and sometimes of the teachers in that environment. Walberg (1974) opined that the classroom psychological or social environment refers to the climate or atmosphere of a class as a social group that potentially influences what learners learn. Moss & Trickit (as cited in Rahman et al., 2018) said that the classroom learning environment is a dynamical social system which includes not only teachers' behaviour and teacher – learner interaction but learner - learner as well". Fraser & Hebert (1991) explained the concept of classroom environment as: “Classroom learning environment carries a variety of meanings; it generally refers to the total climate, structures, processes, ethos within classrooms which are integral elements affecting learner's learning" (p231). Adediwura & Tayo (2007) considered perception as psychological and physiological perspective and elaborated their effect on learning. The perception is described as, the

University of Education,Winneba http://ir.uew.edu.gh

way we judge or evaluate others with whom we are familiar in everyday life. It is important that background knowledge of the learners in the form of schemas affects their perception and subsequent learning. This is called the cognitive dimension of the perception that is why, in this study, the researcher was interested in perception of knowledge about the classroom learning environment that influences attentiveness.

According to Thein et al., (2020), the classroom environment refers to the physical, social, and psychological aspects of the learning space that can impact learners' engagement, behaviour, and learning outcomes. Thein et al., (2020) further highlighted that physical factors such as noise, classroom temperature, and long sessions without breaks or refreshments can make it difficult for learners and teachers to relax and pay attention. An early childhood classroom is a specialized learning environment that caters to the developmental needs of young learners', typically between the ages of three and five. This classroom provides a safe, nurturing, and stimulating environment where learners' can engage in play-based activities, socialize with their peers, and acquire foundational skills such as literacy, numeracy, and social-emotional skills. Teachers in an early childhood classroom often utilize developmentally appropriate teaching strategies, and materials to create a child-centered learning environment.

In the view of Sule (2023), learning environment is a supportive space that fosters children's learning, growth, and interaction while considering their age and developmental stage, thereby nurturing positive self-esteem. This encompasses various elements such as facilities, communities, teaching methods, and the availability of resources. The design of learning environments aims to ensure that children feel safe, valued, and motivated to engage in the learning process. In this context, the classroom environment encompasses both the physical and psychological

University of Education,Winneba http://ir.uew.edu.gh

aspects of the learning space, including factors such as layout, furniture arrangement, visual aids, curricula, teaching approaches, and social interactions among learners and between learners and teachers. Similarly, Berti, Cigala, and Sharmahd (2019) perceive the learning environment as the comprehensive design of a center, incorporating features such as size, density, privacy, well-defined activity settings, technical attributes, and outdoor play spaces. This holistic perspective underscores the interconnectedness of tangible physical elements and intangible social dynamics in creating an environment conducive to children's emotional, social, and cognitive development.

The school learning environment encompasses the overall atmosphere within an educational setting where academic activities take place (Aslam et al., 2012). UNESCO (2018) defines the school environment as encompassing physical, social, psychological, and academic conditions that facilitate learning. Similarly, the Organisation for Economic Cooperation and Development (OECD) characterizes the school as a learning environment that fosters learners' educational experiences (OECD, 2018a). Within this framework, the school environment includes elements such as school climate, parental involvement, and school leadership, all contributing to knowledge acquisition (OECD, 2018a). Scholars have also conceptualized the learning environment as comprising the physical and social dimensions of the classroom that influence learning outcomes (Malik & Rizvi, 2018).

Kostelnik et al. (2019) assert that the early childhood classroom environment should be purposefully crafted to facilitate independent exploration and learning, featuring clearly labeled activity centers and a diverse array of materials. Copple and Bredekamp (2009) underscore the necessity of tailoring the environment to suit the needs and capabilities of young learners. This entails providing a secure and

University of Education,Winneba http://ir.uew.edu.gh

stimulating space that encourages exploration, autonomy, and self-regulation. They further emphasize the importance of fostering positive social interactions and collaborative relationships among peers, as well as promoting diversity and inclusivity through culturally representative materials to cultivate a sense of belonging for all learners. Additionally, establishing consistent routines and maintaining a language-rich atmosphere are deemed essential components for creating a conducive and high-quality classroom environment.

Research on the status of early childhood classroom environments continues to evolve, with recent studies shedding light on various factors influencing their quality and effectiveness. Investigations into the physical layout of classrooms, the availability of learning materials, teacher-learner interactions, and overall classroom atmosphere remain prominent areas of focus in current literature.

Contemporary research underscores the critical role of the physical environment in early childhood classrooms, with factors like classroom layout, lighting, temperature, and noise levels being key determinants of children's ability to focus and engage (Fridkin, 2018). Moreover, recent studies emphasize the importance of incorporating age-appropriate learning materials and resources, such as interactive technology, diverse literature, and sensory materials, to facilitate hands-on learning experiences and promote children's holistic development (Siraj-Blatchford, 2003).

In addition to physical aspects, the significance of positive teacher-learner interactions in shaping the classroom environment remains a focal point of current research. Recent literature highlights the impact of warm, responsive, and supportive teacher-learner relationships on fostering a sense of safety, trust, and belonging among children, thereby promoting their social and emotional development (Hamre & Pianta, 2001). Effective classroom management strategies and the cultivation of a

University of Education,Winneba http://ir.uew.edu.gh

collaborative learning community are also emphasized as essential components of a positive classroom environment (Howes et al., 2015).

Numerous empirical studies have underscored the compromised state of classroom learning environments in Ghana, citing insufficient resources as a barrier to effective learning (Asamoah et al., 2020; Baafi, 2021; Baidoo-Anu, 2018; Opoku-Asare; Siaw, 2015 and Pobbi et al., 2018;). Furthermore, investigations specifically focused on the Early Childhood Education (ECE) level have similarly revealed challenges with poor infrastructure (Amissah-Essel et al., 2020; Kissi-Abrokwah et al., 2021; Oppong Frimpong, 2019).

For instance, Kissi-Abrokwah examined the impact of large class sizes and teacher-to-learner ratios on classroom management in ECE centers in Ghana. Findings revealed behavioural issues among preschoolers, including out-of-seat behaviour and verbal aggression, exacerbated by inadequate seating, high teacher-to-learner ratios, irregular testing schedules, and limited teacher attention.

Amissah-Essel et al. focused on the physical environments of Early Childhood Care and Development (ECCD) centers in the Cape Coast Metropolis. They found that both private and public centers faced challenges with compromised physical environments. Recommendations included stakeholder collaboration to improve infrastructure and provide financial support for basic equipment, alongside in-service training for educators to enhance their understanding of the importance of physical environments for children's development.

Similarly, Oppong Frimpong's study in the Ga West Municipality highlighted challenges such as inappropriate furniture, under-resourced learning centers, and overcrowded classrooms in ECE centers. These issues hindered teachers' ability to translate training into practice and limited the potential of the classroom environment

University of Education,Winneba http://ir.uew.edu.gh

as a facilitator of learning. Recommendations included infrastructure improvements, appropriate arrangement of classroom spaces to facilitate movement, and provision of well-sized furniture and resources to enhance learning experiences.

These studies emphasize the importance of creating high-quality early childhood classroom environments that support children's diverse needs and promote their overall development. By integrating insights from recent studies into classroom practices, educators can create environments that optimize learning, engagement, and well-being for all children.

2.2.2 Learner's Attentiveness in Early Childhood Classroom

Learners' attentiveness in early childhood classrooms refers to the level of focus, engagement, and concentration that young learners' exhibit during instructional activities and interactions with their teachers and peers. Learners' need to be attentive in the classroom as it directly impacts their learning and information absorption. To be attentive learners, young learners actively participate in classroom activities, show interest in learning materials, maintain eye contact with the teacher, actively listen, and follow instructions. Research has shown that the visual environment of the classroom plays a significant role in shaping learners''s attentiveness. For instance, cluttered or visually distracting classrooms can hinder a child's ability to stay focused and engaged during learning tasks (Fardlillah & Suryono, 2019). Additionally, the quality of teaching practices and the overall classroom environment also influence learners' attentiveness (Jin & Peng, 2022; Syahrir & Hartina, 2021).

Many scholars argue that young learners' have a short attention span and easily lose focus during classroom activities. Forcing them to maintain rigid attentiveness may hinder their ability to learn. (Boese, 2022). learner's participation in classroom activities is highly influenced by their teachers' guidance and directions.

University of Education,Winneba http://ir.uew.edu.gh

Teachers should incorporate elements of fun and playfulness into the learning environment, to captivate the leaners' interest and maintain their engagement throughout the day through the use of interactive and hands-on activities.

However, the duration of focused attention remains uncertain, with no conclusive evidence available (Bradbury, 2016). Studies suggest that attention levels tend to decline over time, varying with factors such as age, task complexity, and timing within a learning session (Bunce, Flens, & Neiles, 2010; Cummings Hlas, Neyers, & Molitor, 2017). Indeed, widespread observations indicate that learners encounter challenges in sustaining attention across all educational levels (Wang, 2015; Weimer, 2014).

Inattentive behaviour poses a persistent challenge due to its detrimental effects on learners' performance and the efforts of teachers and parents. Conversely, attentive behaviours are directly linked to positive learning outcomes (Smith et al., 2019; Stöppler, 2010). Research suggests that attentiveness serves as a crucial factor influencing learners' behaviour in school, mediating the impact of learning experiences on academic achievement. Children displaying inattentive behaviour often exhibit characteristics that disrupt classroom activities, such as difficulty maintaining focus on tasks, making careless mistakes, and appearing disengaged during discussions (Nall, 2018).

Additional features associated with inattentive behaviour include struggles with time management and organization, frequent loss of necessary items, easy distractibility, forgetfulness regarding tasks and obligations, avoidance of tasks requiring sustained attention, and difficulty engaging in quiet activities. Moreover, they may encounter challenges in following instructions to complete tasks effectively. Inattentive behaviour presents a significant hindrance, impacting not only learners'

University of Education,Winneba http://ir.uew.edu.gh

academic progress but also impeding teachers' efforts to deliver quality classroom instruction effectively. Research indicates that learners displaying inattentiveness during childhood exhibit poorer academic outcomes even up to a decade later (Rodriguez, 2017).

Consequently, a crucial responsibility for educators is guiding learners to focus on relevant stimuli and maintaining alertness throughout lessons to optimize learning opportunities (Kaymak & Demir, 2012). Attention plays a vital role in encoding information into memory effectively, enhancing resistance to forgetting (Prakash, 2015). It is indispensable for problem-solving, idea generation, and fostering creativity and critical thinking (Piaw, 2014). Learners struggling with attention may find it challenging to follow instructions, lose interest quickly, neglect learning tasks, violate classroom rules, and disrupt the learning environment (Lauth & Naumann, as cited in Kaymak & Demir, 2012).

Therefore, attention serves as a cornerstone for cognitive, social, and emotional development during childhood.

2.2.3 Teachers Knowledge about Classroom Environmental Factors and Learners' Attentiveness

Early childhood teachers play a critical role in shaping the classroom environment and promoting learners' attention. Their understanding and knowledge of the factors that influence attention in early childhood settings are crucial for creating an optimal learning environment. There’s a growing recognition of the importance of classroom environment in early childhood education globally, in Africa and specifically in Ghana. Research shows a strong link between well-designed environments and learners’ attention, learning outcomes and overall development (Adu-Gyamfi et al., 2020). However, the depth of understanding and application of

University of Education,Winneba http://ir.uew.edu.gh

this knowledge may vary across due to differences in educational systems, materials, and professional development opportunities.

In Africa, particularly in areas with limited materials, early childhood education may face challenges in providing optimal learning environments. Cultural factors and traditional teaching practices may also influence teachers' approaches to creating stimulating learning environments (Myers, 2015; UNESCO, 2019). In Ghana, efforts have been made to improve early childhood education through policies and programs aimed at enhancing teacher training and curriculum development (Mukama & Katabaro, 2016). However, challenges such as inadequate infrastructure and limited access to professional development opportunities affect teachers' awareness and implementation of effective classroom environmental strategies (Adu-Larbi, 2018; Tsikata & Arhinful, 2013 and Oppong Frimpong, 2021).

In the field of education, understanding the factors that contribute to learners' attentiveness in the classroom is crucial for effective learning. These factors include:

a) The Physical Classroom Environment

The physical environment of a classroom plays a crucial role in shaping learners' attentiveness and overall academic performance. Numerous studies have examined the impact of various physical environmental factors on learners' attentiveness, including classroom layout, organization, and minimization of distractions. focused on the relationship between the physical setting of the classroom and the behaviour of teachers and learners (Cattaruzza, 2018, Bergen, 2015; Smith, 2017). Their findings suggested that the classroom environment significantly influenced both teacher and learner behaviours, ultimately affecting learners' attentiveness. Other physical environmental factors that have been found to influence

University of Education,Winneba http://ir.uew.edu.gh

learners' attentiveness include lighting, acoustics, colour, temperature, and sitting arrangement (Dong et al., 2021).

Scholars have extensively investigated the impact of various environmental factors on the learning experience, delving into aspects of classroom design, ambient noise, colour aesthetics, and sitting arrangements. For instance, studies by Barrett et al. (2013) and Tanner (2009) have elucidated the significance of thoughtful classroom design, highlighting how elements such as lighting, temperature, and sitting configurations can influence learner' attention and focus. Furthermore, investigations into the effects of ambient noise, as conducted by Banbury & Berry (1998) and Hygge et al. (2002), have underscored the delicate balance between an optimal noise level that can enhance cognitive performance and distractions that may impede learner' ability to concentrate.

Beyond the physical attributes of the learning environment, researchers have also explored the role of technology integration, examining how the incorporation of digital tools can impact learner engagement and attentiveness (Kay, 2006). The literature additionally encompasses studies investigating the psychological and emotional dimensions of the classroom, including the effects of colour and aesthetics (Kwallek et al., 1996) and the potential benefits of integrating natural elements, such as plants or natural light, into the classroom setting (Shibata & Suzuki, 2021). As teachers strive to create optimal learning environments, a comprehensive understanding of these diverse factors becomes imperative.

Contrary to the emphasis placed on environmental factors in shaping learners' attentiveness, some scholars argue that the impact of these elements remains inconclusive or subject to contextual variability. For instance, while studies by Barrett et al. (2013) and Tanner (2009) underscore the importance of classroom design,

University of Education,Winneba http://ir.uew.edu.gh

dissenting opinions propose that the significance of physical layout may be dependent on individual differences among learners and teaching methods. Additionally, the presumed benefits of technology integration, as suggested by Kay (2006) are met with skepticism by those who contend that the effectiveness of digital tools depends on the specific educational context and the pedagogical approaches employed. Moreover, conflicting viewpoints exist regarding the psychological aspects of the classroom environment, with some arguing that the influence of colour and aesthetics (Kwallek et al., 1996) may be more subjective than universally applicable.

Considering these divergent perspectives, the discourse surrounding the impact of classroom environmental factors on attentiveness reflects a nuanced and evolving field of study. While some researchers advocate for a comprehensive understanding of these factors, others caution against overgeneralization, highlighting the need for tailored approaches that consider the diverse needs and preferences of both teachers and learners in context.

b) Teacher- Learner Interaction

Positive teacher-learner interactions are vital for building strong teacher-learner relationships, which, in turn, influence attentiveness. The sensitive and responsive behaviour of teachers fosters a sense of security and trust among young learners (Hamre & Pianta, 2001). Such interactions promote social and emotional development, which is closely tied to attentiveness (Rimm-Kaufman et al., 2000). In Africa, teachers often serve as mentors and role models to learners (Brouwers et al., 2018, Anamuah-Mensah, 2003). Establishing trust and emotional support is particularly crucial in overcoming the social and cultural challenges that learners may face (Harrison et al., 2013). Therefore, a nurturing relationship between the teacher

University of Education,Winneba http://ir.uew.edu.gh

and the learner is seen as fundamental to successful education. Several studies have highlighted the importance of learner-teacher interaction in enhancing attentiveness.

For example, Smith et al. (2016) found that learners are more attentive when they have frequent and meaningful interaction with their teachers. In the study by Bashar and Ahmad (2018), the critical influence of teacher-learner interaction on learner motivation, attentiveness, and academic achievement is explored. Their research unveiled a robust correlation between positive teacher-learner interactions characterized by warmth, support, and clear communication, and heightened intrinsic motivation among learners (Deci & Ryan, 2000). Furthermore, the study highlighted that such positive interactions were closely associated with increased cognitive engagement and attentiveness in the classroom, as learners demonstrated a higher capacity to focus on tasks and actively participate (Zimmerman, 2002). Importantly, this heightened motivation and attentiveness resulting from positive interaction were found to have a subsequent positive impact on learners' academic achievement (Hattie & Timperley, 2007). These findings underscore the significance of fostering constructive teacher-learner interactions in promoting learners' attentiveness, and by extension, their academic performance, thereby contributing to the broader discourse on effective teaching strategies and their impact on learner's engagement.

In their seminal work "Relationships between teachers and learner" (Pianta, Hamre, & Stuhlman, 2003), delve into the fundamental role of teacher-learner relationships in the educational context, emphasizing the profound impact such relationships have on maintaining learners' attentiveness and mitigating disruptive behaviours. The study is underpinned by attachment theory, which posits that secure emotional bonds between individuals, in this case, teachers and learners, are central to psychological well-being and development (Bowlby, 1988). Again, Pianta and

University of Education,Winneba http://ir.uew.edu.gh

colleagues draw on this theoretical framework to argue that positive, secure relationships between teachers and learners serve as a foundational element in creating a conducive learning environment (Hamre & Pianta, 2001). They contend that when learners feel a sense of security, trust, and emotional connection with their teachers, they are more likely to be motivated and attentive in the classroom. This is because these positive relationships can reduce anxiety, increase feelings of belongingness, and enhance learners' emotional regulation (Hamre & Pianta, 2001; O'Connor, Dearing, & Collins, 2011). Additionally, the study underscores the significant role of teacher-learner relationships in diminishing disruptive behaviours, as learners who experience positive connections with their teachers are less prone to engage in disruptive conduct (O'Connor et al., 2011).

The findings provided a well-rounded understanding of the emotional dynamics at play in the classroom. Also, the findings offer valuable insights into the importance of attending to the emotional aspect of learning to foster attentiveness and motivation. Also, teachers play a pivotal role not only in imparting knowledge but also in shaping the emotional climate of the classroom, which can significantly impact learners' attentiveness and motivation.

c) Learner-learner interaction

Similarly, another study conducted by Johnson et al., (2018) examined the impact of learner-learner interaction on attentiveness and found that collaborative learning activities enhanced learners' engagement and focus. In their seminal work, "Cooperation and Competition: Theory and Research" (Johnson & Johnson, 1989), conduct an extensive analysis of the influence of cooperative and competitive interactions among learners in educational settings. Their research provided valuable academic insights into the dynamics of classroom interaction, shedding light on how

University of Education,Winneba http://ir.uew.edu.gh

cooperative learning strategies can significantly enhance learners' attentiveness by creating a positive classroom atmosphere.

Drawing from social interdependence theory (Deutsch, 1949), the Johnsons argue that the manner in which learners interact with one another - whether through cooperative or competitive methods, profoundly affects their engagement and attentiveness in the learning process. Cooperative learning, particularly, is emphasized as a potent tool for improving attentiveness, fostering a collaborative environment, and enhancing the overall educational experience. The work delves into the theoretical underpinnings of cooperative learning, such as the concept of positive interdependence (where individuals perceive that their success is intertwined with that of their peers) and the promotion of individual and group accountability (Slavin, 2015). They illustrate how these principles serve to create an environment where learners are motivated to pay attention, collaborate, and participate actively in classroom activities.

Furthermore, Johnson and Johnson's research examines the practical application of cooperative learning techniques, offering insights into the structuring of tasks and group activities that promote attentiveness. They emphasize the role of positive teacher guidance in facilitating cooperative interactions, thereby maintaining an environment conducive to learning and attentiveness. Implementing cooperative learning strategies, as discussed by the Johnsons, can positively impact learners' attentiveness by creating an atmosphere that encourages active participation, collaboration, and engagement in the learning process.

Again, a study conducted by Kurvers, Custers & Reijntjes (2010) on the Power of Social Interaction: Examining the Role of Social Interaction, Co-regulation, and Co-creation in Developing Attentiveness among learners", the study provides a

University of Education,Winneba http://ir.uew.edu.gh

comprehensive examination of the influence of peer interactions, co-regulation, and co-creation on learners' attentiveness and focus during classroom activities. This research is grounded in the principles of social cognitive theory (Bandura, 1986) and self-regulated learning (Zimmerman, 2002), offering valuable academic insights into the dynamics of social learning and its impact on attentiveness.

The study underscores the importance of social interactions as a catalyst for learners' cognitive engagement and attentiveness. Kurvers and colleagues posit that when learners engage in collaborative activities with their peers, they could co-regulate their attention, meaning they collectively monitor and manage their focus on the task at hand. This process of co-regulation involves peer interaction that fosters shared goals, feedback, and mutual support.

Moreover, the study delves into the concept of co-creation, which entails learners collaboratively generating ideas, solutions, or content during learning activities. Co-creation is presented as a dynamic process that not only enhances attentiveness but also leads to a deeper understanding of the subject matter. The authors highlight that this form of social interaction can stimulate cognitive engagement, as it necessitates active participation and the exchange of diverse perspectives. Kurvers et al. also discussed the mechanisms through which peer interactions, co-regulation, and co-creation positively influence attentiveness. They cite the role of social support, shared responsibility, and the regulation of cognitive load in promoting learners' ability to sustain their focus and involvement during classroom activities.

Slavin (2015), conducted an in-depth exploration of cooperative learning strategies in the context of elementary education. Specifically, Slavin delves into the role of competition within cooperative learning environments and how it can either

University of Education,Winneba http://ir.uew.edu.gh

enhance or hinder learners' attentiveness and engagement. Slavin begins by addressing the underlying principles of cooperative learning, emphasizing the collaborative nature of this pedagogical approach. According to (Johnson & Johnson, 1989), Cooperative learning involves learners working together in small groups to achieve common goals, which often fosters a positive, interdependent atmosphere in the classroom. This collaborative atmosphere is generally conducive to enhancing attentiveness because learners are more likely to stay engaged when they feel a sense of responsibility to their peers (Webb, 2019).

However, Slavin also acknowledges that competition can be a powerful motivator. He examines how competition, when introduced thoughtfully within a cooperative framework, can serve as a catalyst for learners' attentiveness and active participation. Competition can be used to create a stimulating learning environment by instilling a sense of challenge and achievement (Tjosvold, 1998). Slavin offers insights into strategies for maintaining a healthy competitive atmosphere, ensuring that competition remains constructive rather than disruptive. He suggests the use of structured activities and clear goals to strike a balance that encourages attentiveness and collaboration while harnessing the benefits of competition.

Slavin presents evidence to demonstrate that properly managed competition can lead to increased learner engagement, motivation, and attentiveness (Holubec, 1998). Thus, competition, when integrated judiciously within a cooperative learning framework, can promote attentiveness and active participation among learners.

d) Teaching Approaches and Attentiveness in Early Childhood

In early childhood education, the teaching approaches used in the classroom have a significant impact on learner’s attentiveness. This is evident from several research studies that have examined different approaches in early childhood

University of Education,Winneba http://ir.uew.edu.gh

education. For example, one study highlighted the importance of self-reflection and awareness in teacher preparation, as well as the integration of information technology into early childhood teacher education (Khotimah & Reza, 2022) (Li et al., 2022). This study emphasized that these elements contribute to creating an engaging and stimulating learning environment, which ultimately enhances learner's attentiveness. Additionally, child-centered approaches, where the focus is on nurturing learner's interests and giving them autonomy in their learning, have been found to improve comprehension and performance compared to more teacher-directed approaches (İnan, 2020). Another study pointed out that child-centered educational practices are consistent with learner's developmental needs and individual abilities, leading to greater attentiveness in the classroom (Sakai et al., 2019; Kenari, 2018).

According to Kaplan et al. (2022), the shift from a readiness-focused approach to a child-centered approach in early childhood education has also been associated with improved attentiveness among young learners. These findings suggest that the teaching approaches used in early childhood education play a crucial role in fostering attentiveness among young learners. Using a child-centered approach in early childhood education, which emphasizes the individual needs and interests of learner, has been found to improve attentiveness in the classroom and promote active engagement with learning (Scheirlinckx et al., 2023). These findings highlight the importance of considering teaching approaches when designing and implementing early childhood education programs.

Teachers need to recognize that developmentally appropriate practices, child-centered approaches, and play-based learning results in increased attentiveness among learners. By incorporating interactive and hands-on activities into lessons, teachers capture learner's interest and foster a sense of curiosity, which ultimately enhances

University of Education,Winneba http://ir.uew.edu.gh

attentiveness. Additionally, creating a flexible and responsive learning environment that accommodates learner's need for concentrated and sustained interactions also promote attentiveness. (Adjei, 2023) Overall, the research suggests that child-centered approaches in early childhood education, which prioritize autonomy and individual interests, as well as a flexible and engaging learning environment, are more likely to promote attentiveness among young learners.

Furthermore, Brophy (1984) delves into the instructional strategies employed by teachers, noting their influence on attentiveness. He explores techniques such as clarity of instruction, active learner involvement, and differentiation, demonstrating how these strategies can either promote or hinder learners' focus (Weinstein, Husman, & Dierking, 2000). The author highlights that clear and engaging teaching methods are pivotal in sustaining attentiveness among learners. Importantly, the study examines the role of feedback and its impact on attentiveness. Brophy stresses the constructive nature of feedback, indicating that well-structured and timely feedback not only informs learners of their progress but also encourages them to remain attentive and make necessary adjustments to their learning strategies (Hattie & Timperley, 2007).

Additionally, the study underscores the expectations teachers hold for their learners. Brophy posits that setting high, yet attainable, expectations can motivate learners to remain focused and attentive in order to meet these expectations (Rubie-Davies, 2014). Overall, effective teaching approaches, characterized by positive teacher-learner interactions, clear instruction, constructive feedback, and high expectations, play a pivotal role in maintaining learners' attentiveness in the classroom.

University of Education,Winneba http://ir.uew.edu.gh

e) Classroom Management

Evertson and Weinstein open their handbook by framing the significance of classroom management within the educational context. They argue that effective classroom management is not solely about maintaining order but also about creating an environment conducive to optimal learning. The authors emphasize that when learners perceive their classroom as organized, predictable, and respectful, they are more likely to engage in learning tasks and sustain their attentiveness (Emmer & Sabornie, 2015).

The study explores a wide array of classroom management strategies, encompassing both preventive and reactive measures. It delves into proactive strategies such as classroom layout, instructional planning, and creating a positive classroom climate that sets the stage for attentiveness (Marzano & Marzano, 2003). It also addresses reactive strategies for addressing classroom disorder, examining techniques for handling disruptions while minimizing their impact on overall attentiveness (Jones & Jones, 2013).

The study revealed that practices such as clear communication, consistent rules and consequences, and positive reinforcement can positively influence learners' behaviour and attentiveness (Evertson, Emmer, & Worsham, 2006).

In "Ecological Approaches to Classroom Management" by Doyle (2006), the author offers a sophisticated examination of classroom management from an ecological perspective, providing profound insights into the creation of a classroom environment that not only minimizes disruptions but also optimizes learners' attentiveness. This work is grounded in the field of educational psychology, emphasizing the interplay between the classroom environment, instructional strategies, and learners' behaviour and engagement. Doyle's work introduces the

University of Education,Winneba http://ir.uew.edu.gh

concept of classroom ecology, which considers the classroom as a dynamic system influenced by a multitude of interconnected factors. The author underscores that effective classroom management should not merely focus on controlling learners behaviour but should also aim to cultivate a harmonious and conducive learning environment (Emmer & Stough, 2001). By addressing the broader ecosystem of the classroom, teachers can influence attentiveness more comprehensively.

Doyle explores the importance of the physical classroom layout, such as seating arrangements and instructional materials, in shaping learners' behaviour and attentiveness. The book discusses how a thoughtfully designed classroom can minimize distractions and facilitate active participation, as learners are more likely to remain attentive when the physical environment supports learning (Fisher et al. 1980). Furthermore, the ecological perspective of classroom management extends to instructional strategies and the teacher-learner relationship. Doyle emphasizes the need for clear communication, engaging teaching methods and the establishment of a positive teacher-learner rapport as key elements in maintaining an attentive and orderly classroom (Brophy, 1984).

f) Teaching and Learning Materials and Leaners Attentiveness

Teaching and learning materials play a crucial role in the classroom, as they have the potential to enhance learner's attentiveness and overall learning experience. Access to appropriate learning materials further enhances attentiveness, participation and engagement. Age-appropriate educational materials and technological tools stimulate curiosity and support different learning styles (Neuman & Dickinson, 2010). The availability and utilization of these materials in early childhood classrooms are key in facilitating effective learning experiences. Meanwhile, access to learning materials remains a challenge in some parts of Africa, limiting learners' opportunities

University of Education,Winneba http://ir.uew.edu.gh

for active engagement (UNESCO, 2015). Borquaye et al., (2018) argued that disparities in the availability of books, educational technology, and age-appropriate materials affect attentiveness and the development of foundational skills.

Several studies have emphasized the importance of educational materials in promoting learner's attentiveness in the classroom. For instance, in the realm of educational psychology, the influence of visual aids on learner attentiveness has been rigorously examined. Smith and Johnson's (2017) research, employing a mixed-methods approach, demonstrated a marked increase in learner engagement and focus through the strategic integration of visually stimulating materials. Quantitative measures, including surveys and assessments, revealed statistically significant improvements in attentiveness among learners exposed to such materials. Qualitatively, classroom observations and interviews underscored the positive impact, with learners expressing heightened interest and active participation.

Building on this, Garcia and Weiss (2019) delved into the specifics of visual aids, emphasizing the role of colourful and interactive elements in maintaining sustained attention. Their exploration of colour psychology highlighted the cognitive impact of specific hues, while the study's focus on interactive visuals, such as clickable diagrams, shed light on strategies for preventing cognitive fatigue and ensuring continuous engagement. Both studies collectively suggest that a thoughtful integration of visually stimulating materials, considering factors such as design and interactivity, not only enhances attentiveness but also fosters a positive and engaging learning environment.

The pivotal role of textbooks in classrooms is a multifaceted subject, as evidenced by the divergent findings of Brown and Davis (2018) as well as Brown and Johnson (2016). Brown and Davis conducted a comprehensive study that illuminated

University of Education,Winneba http://ir.uew.edu.gh

the nuanced relationship between textbook design and learner attentiveness. Their research focused on the positive impact of well-designed textbooks characterized by clear content and relevant graphics. Through a combination of quantitative measures and qualitative insights, the study discerned that such materials contributed to heightened focus among learners. The clear presentation and visually enriching elements were identified as key contributors to increased attentiveness.

Conversely, Johnson's (2016) research provided a contrasting perspective by examining the potential drawbacks of textbooks. The study underscored that dense or overly complex texts may act as impediments to attentiveness. Johnson's findings call attention to the importance of striking a balance between content richness and cognitive load. The implication is that while detailed content is essential, an excess of complexity may overwhelm learners, resulting in decreased attentiveness during learning activities.

The integration of multimedia presentations in contemporary pedagogy, as illuminated by Smith (2020), represents a paradigm shift in instructional approaches. Smith's study, characterized by a rigorous empirical framework, elucidated the efficacy of dynamic presentations enriched with videos and interactive elements. Employing both quantitative and qualitative methodologies, the research discerned a demonstrable increase in learner attention and retention when exposed to multimedia-enhanced lessons. The dynamic nature of these presentations was identified as a catalyst for heightened engagement and knowledge retention, suggesting a positive correlation between multimedia integration and attentiveness.

Nevertheless, it is imperative to heed the cautionary note articulated by Clark (2015) in the scholarly discourse on multimedia in education. Clark's research provides a counterbalance by emphasizing the potential risk of cognitive fatigue

University of Education,Winneba http://ir.uew.edu.gh

associated with an excessive use of multimedia. The intricate dynamics of information processing and cognitive load, central to Clark's argument, underscore the necessity for judicious implementation. This dichotomy underscores the importance of a balanced approach, where the benefits of multimedia in capturing attention are maximized without compromising cognitive materials

The incorporation of interactive tools and technology into the educational landscape has been a transformative force, as evidenced by researches conducted by Li & Wang (2021) and Johnson et al. (2018). Li & Wang's study marked by methodological rigor, delved into the impact of well-designed educational apps and interactive software on attentiveness. Through meticulous analysis, the research demonstrated a noteworthy correlation between the use of these technological tools and heightened attentiveness among learners. The emphasis on personalization and engagement emerged as key contributors to the observed positive outcomes, suggesting that interactive technology can cater to individual learning preferences, thereby enhancing overall attentiveness.

Complementing this, Johnson et al. (2018) contributed valuable insights by exploring the intentional integration of technology into lessons. Their findings echoed the positive correlation between purposeful technology integration and increased attentiveness. This alignment suggests a consensus in the literature that the strategic incorporation of interactive tools, rather than technology for its own sake, plays a pivotal role in fostering an attentive and participatory learning environment.

2.2.4 How Teachers Utilize the Classroom Environments in dealing Attentiveness

Attentiveness is a crucial component of effective teaching and learning in the early childhood classroom. Teachers utilize the classroom environment to enhance

University of Education,Winneba http://ir.uew.edu.gh

attentiveness by creating a supportive and engaging learning atmosphere. Through various techniques and strategies, teachers promote attentiveness and keep learners actively engaged in the learning process (Redeș & Roman., 2023). Current research on the effectiveness of early childhood education programs highlights the importance of other elements in the preparation of teachers such as self-reflection and awareness and the integration of information technology into early childhood teacher education (Ardilla et al., 2021). According to Bitzinger & Suna (2023) and Nair et al. (2017), opined that enhancing teachers' level of education alone is not sufficient for improving classroom practices.

According to Balter et al. (2022) and Mubiar et al., (2020), whether interactions are with teachers or peers, routines in early childhood centers must be flexible enough to accommodate the need for concentrated, sustained interactions that facilitate deep learning, supports the child-centered and environment-rich approach to early years education alongside the reciprocal and responsive relationship of an adult attuned to the child's world. Packard states that the classroom attention requires a combination of curriculum materials, teacher instructions, and appropriate learner behaviours. Furthermore, research suggests that the physical arrangement of the classroom plays a significant role in enhancing attentiveness. Studies have shown that the layout and organization of the classroom can have a profound impact on learners' attentiveness and engagement. For example, setting up learning centers and providing clear visual cues can help learners understand expectations and stay focused on activities.

Kenari (2018) emphasizes that the classroom environment communicates expectations to learner and that the use of learning centers is key to ensuring adequate output from learners. Research suggests that teacher professional development

University of Education,Winneba http://ir.uew.edu.gh

activities and supports targeted towards teachers' interactions with learner can enhance the effectiveness of early childhood education and promote attentiveness in the classroom (Nair et al., 2017). Specific strategies that teachers can employ to utilize the classroom environment and enhance attentiveness in early childhood classrooms include creating a visually organized space, using clear visual cues to establish expectations, incorporating sensory elements, such as music or scents, to engage learner's senses, and providing a variety of learning centers that promote exploration and hands-on learning. Furthermore, teachers can enhance attentiveness by integrating technology into the classroom environment. For example, the use of interactive whiteboards, tablets, and educational apps can capture learner's interest and engagement, promoting attentiveness during lessons.

The research literature suggests that teachers can also enhance attentiveness by incorporating nature and environmental education into the classroom environment. This can be done through outdoor activities, nature walks, and incorporating nature-based materials and materials into the learning environment. While there is a consensus in the literature about the importance of the classroom environment in enhancing attentiveness, it is important to note that that teacher professional development and supports are also crucial in maximizing the effectiveness of the classroom environment. According to Early et al, simply improving teachers' level of education is not enough to enhance classroom practices; rather, a range of professional development activities and supports that specifically target teachers' interactions with learner are needed. Teachers' level of education is not the sole determining factor in enhancing the classroom environment; instead, a comprehensive approach that includes ongoing professional development and support is essential. The literature review highlights the importance of a positive and structured classroom

University of Education,Winneba http://ir.uew.edu.gh

environment in enhancing attentiveness in early childhood classrooms. Teachers must create a developmentally appropriate and organized physical environment that fosters meaningful learning experiences for learner.

2.2.5 Available Resources for the creation of Attentive Classroom Learning Environment

Creating an effective early childhood classroom environment that promotes attentiveness in learners is a critical aspect of early childhood education. This requires careful selection and use of physical resources, digital tools, structured teaching aids, and effective classroom management strategies. According to Nolan (2022), when instructional materials are employed, learners' attention is piqued, the lesson becomes genuine, learners participate more actively, and they remember significantly more information than when instructional materials are not used.

The proverb that "a picture is worth a thousand words" is accurate. Nolan (2022) believed that children remember far more information when they see and hear in addition to reading and seeing. Additionally, he believed that learning occurs in less time when instructional resources are utilized. Studies such as those done by Bekaiye (2019) and Iwoh (2018) found that teaching resources were either unavailable in schools or ineffectively utilized where they were accessible.

For instance, Epstein (2018) found that many teachers face challenges in creating and implementing a classroom environment that supports learners' attention, participation, and engagement due to limited resources. This includes limited access to materials, technology, and support staff. Epstein (2018) suggest that teachers can overcome this challenge by seeking out alternative resources and materials, leveraging technology when available, and collaborating with other professionals or community organizations to supplement their resources.

University of Education,Winneba http://ir.uew.edu.gh

It has been determined that using only words to express meaning, concepts, and information is unproductive (Nwuke & Nwanguma, 2024). In addition to being unsuccessful, it contradicts several learning concepts. Common experience and study have demonstrated that people learn differently; hence, the instructor must offer teaching in a manner that captures the learners' attention so that they may retain what is being taught with less trouble and ensure that learning occurs efficiently. This can be accomplished through the teacher's use of a variety of instructional tools that facilitate successful learning (Abidoye & Adeyemi, 2024). Consequently, the purpose of instructional materials is to accommodate the distinct learning styles of diverse types of learners.

Research on physical resources suggests that a thoughtfully designed space can have a significant impact on learners' ability to focus. Flexible seating arrangements, including adjustable desks and ergonomic chairs, support comfort and accommodate various learning preferences, which contribute to improved attentiveness (Barrett et al., 2015).

In early childhood education (ECE), human resources are fundamental to establishing attentive and engaging classroom environments. Teacher experience and professional development have been shown to directly impact the quality of classroom interactions and learner attentiveness. Experienced teachers with specific training in early childhood strategies, such as play-based and inquiry-based learning, are better equipped to implement interactive, responsive practices that foster attentiveness (Darling-Hammond et al., 2017). Continuous professional development also enhances teachers' skills in classroom management, emotional regulation, and scaffolding techniques, all of which contribute to children's engagement (Pianta et al., 2016).

University of Education,Winneba http://ir.uew.edu.gh

Teacher aides or assistants are another vital resource in ECE, especially in large classes where individualized attention can become challenging. Research by Rimm-Kaufman & Hamre (2010) highlights that teacher aides can help maintain learners' focus by assisting with small group activities or one-on-one support, reducing distractions and creating a more orderly, attentive classroom.

The integration of technology tools and interactive media into teaching practices poses challenges for early childhood teachers operating within an age defined by digital learning. An important aspect pertains on how these teachers integrate technology tools or online course they may not be familiar with or comfortable using. Kucirkova & Littleton (2016) argue that teachers' digital literacy is a challenge in the teaching of early childhood education. Creating and implementing a classroom environment that supports learners' attention, participation, and engagement poses several challenges for teachers.

Additionally, studies indicate that lighting, colours, and spatial arrangement in classrooms should be designed to minimize distractions. Natural lighting and calming colours, for instance, create an environment conducive to sustained attention, while excessive visual decorations may overwhelm learners, particularly younger ones (Küller et al., 2009; Fisher et al., 2014).

Digital resources also play an important role in maintaining learners' focus. Interactive whiteboards and projectors allow teachers to present content dynamically, keeping learners engaged through direct interaction with learning materials (Beeland, 2002). Moreover, educational platforms such as Google Classroom, Cahoots, and near pod support attentiveness by offering interactive and personalized experiences, allowing learners to engage with material at their own pace (Churchill, 2014). Audio-visual aids, including videos and animations, are effective for sustaining focus as they

University of Education,Winneba http://ir.uew.edu.gh

cater to diverse learning styles and simplify complex concepts. Mayer's (2001) research shows that multimedia content aligned with learning objectives promotes cognitive engagement, making it easier for learners to follow along and stay attentive.

In addition to digital resources, physical teaching aids and manipulative enhance attentiveness, particularly among younger learners. Hands-on tools such as blocks, flashcards, and models make abstract concepts tangible, allowing learners to explore ideas actively, which fosters attentiveness (Carbonneau et al., 2013). Visual aids like Venn diagrams, flowcharts, and timelines further aid comprehension by organizing information visually, making complex information more accessible and maintaining learners' focus throughout the lesson (Marzano et al., 2001).

Classroom structure and management techniques also have a profound impact on attentiveness. Establishing consistent routines and clear expectations reduces unpredictability and creates a safe environment for learning, which supports attentiveness, particularly among young learners and those with attention difficulties (Evertson & Weinstein, 2006). Additionally, integrating mindfulness activities and movement breaks has been shown to help learners manage distractions effectively. Zenner et al. (2014) found that mindfulness practices improve focus, reduce anxiety, and help learners better regulate their attention during class.

The role of the teacher is equally crucial in fostering an attentive classroom environment. Differentiated instruction, which adapts teaching methods to meet individual needs, has been shown to keep learners engaged by respecting their unique learning styles (Tomlinson, 2014). Reinforcement strategies, such as praise and recognition, can motivate learners to stay focused. Skinner's (1953) work on operant conditioning supports the use of positive reinforcement to encourage desired

University of Education,Winneba http://ir.uew.edu.gh

behaviours, such as attentiveness, reinforcing the importance of a supportive classroom climate.

However, many teachers face challenges in creating and implementing a classroom environment that supports learners' attention, participation, and engagement due to limited resources. This includes limited access to materials, technology, and support staff. Epstein (2018) suggest that teachers can overcome this challenge by seeking out alternative resources and materials, leveraging technology when available, and collaborating with other professionals or community organizations to supplement their resources.

In summary, an effective classroom environment for fostering attentiveness relies on a blend of well-designed physical spaces, interactive digital tools, hands-on teaching aids, and structured classroom management techniques. Teachers who incorporate these resources thoughtfully can create engaging learning spaces that maintain learners' focus and support active participation throughout the learning process.

2.3 Conceptual Framework

The conceptual framework shows how various aspects of the early childhood learning environments such as the status of the classroom environment, teacher knowledge of environmental factors, and available resources interact to influence learners' attentiveness as follows:

The Status of the Classroom Environment: The status of the classroom environment refers to the current condition, layout, design, and resources available within the learning space. A well-designed and adequately resourced classroom environment can create a conducive atmosphere for learning, promoting engagement and attentiveness among learners. For example, a classroom with appropriate seating

University of Education,Winneba http://ir.uew.edu.gh

arrangements, age-appropriate learning materials, and visually stimulating displays may enhance learners' focus and attention.

Teacher Knowledge of Environmental Factors: Teacher knowledge of environmental factors encompasses educators' understanding of how various aspects of the classroom environment impact learners' attentiveness. Teachers who are knowledgeable about the effects of environmental factors such as lighting, noise levels, and classroom layout can make informed decisions to optimize the learning environment. For instance, teachers may strategically arrange seating to minimize distractions or adjust lighting to create a calm and focused atmosphere conducive to attentiveness.

Needed Resources: Resources in the classroom, including educational tools, sensory materials, and technological aids, play a pivotal role in capturing and holding young learners' attention. These resources can be tailored to suit the developmental needs of children, allowing for interactive and sensory-rich learning experiences that enhance engagement. The availability and quality of these resources directly affect the variety and richness of learning activities, providing stimuli that can sustain attention through exploration and active participation.

University of Education,Winneba http://ir.uew.edu.gh

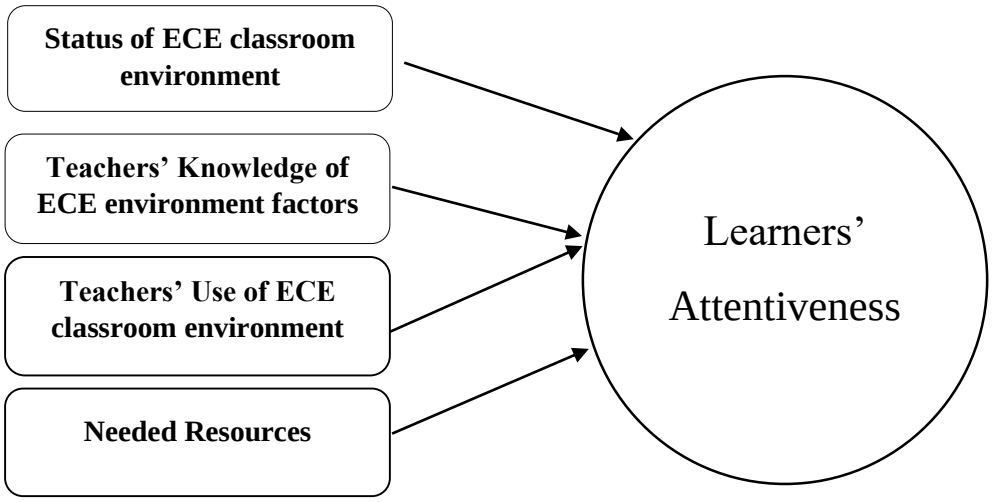

Figure 2.1: Conceptual framework on early childhood classroom environment and its influence on learners' attentiveness in the Asuogyaman District of Ghana.

The framework in Figure 2.1 shows that the interactions between these variables are dynamic and reciprocal. A well-maintained classroom environment can facilitate effective teaching practices, leading to enhanced attentiveness among learners. Conversely, the availability of resources or infrastructure may promote the quality of the learning environment, potentially improving learners' ability to stay attentive. Additionally, teachers' awareness of environmental factors and their ability to adapt teaching strategies accordingly can mitigate the impact of external challenges on attentiveness, creating a more supportive learning environment for learners.

The conceptual framework highlights the complex interplay between the status of the classroom environment, teacher knowledge of environmental factors, and external challenges in shaping learners' attentiveness in early childhood education settings. By understanding these interactions, educators and policymakers can develop targeted interventions to optimize the learning environment and promote attentiveness among young learners in early childhood education settings in the Asuogyaman District.

University of Education,Winneba http://ir.uew.edu.gh

2.4 Empirical Studies

Studies addressing the school learning environment have mainly been contextualized in other levels of education, predominantly senior high levels, leaving out the early childhood level, which is a key stage of the child's development (Asamoah et al., 2020; Baafi, 2021; Baidoo-Anu, 2018; Opoku-Asare & Siaw, 2015 and Pobbi et al., 2018). These studies have also focused on the influence of the learning environment on academic performance instead. For instance, Kibriya &Jones (2020) conducted a mixed-methods study to explore the influence of a safe school environment on learners in Tanzania. The research employed a quantitative approach through the administration of standardized tests, including the Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA), to assess learners' literacy and numeracy skills. Additionally, a qualitative approach was utilized to gather insights from learners, teachers, and administrators regarding the impact of the school environment on academic performance. The study design involved a cross-sectional survey conducted within primary schools across Tanzania. The findings revealed a significant positive correlation between a safe school environment and enhanced academic performance. Moreover, demographic factors and home influences were identified as key determinants affecting learners' learning outcomes.

Baidoo-Anu (2018) employed a qualitative research design to investigate the influence of school and home environments on learners in Ghana. The research utilized self-designed questionnaires as data collection instruments to gather insights from both learners and teachers. The qualitative approach allowed for in-depth exploration of factors related to teaching and learning environments, parental involvement, and their effects on academic outcomes. The study was conducted

University of Education,Winneba http://ir.uew.edu.gh

within junior high schools in the Asikuma-Odoben-Brakwa District, providing context-specific insights into the research area. The results highlighted deficiencies in teaching and learning supplies, infrastructure, and parental involvement as primary contributors to poor academic performance. The study emphasized the importance of favorable teaching environments and parental engagement in enhancing academic outcomes.

Pobbi et al. (2018) conducted a quantitative research study to analyze the school climate in Ghana. The research employed a survey research design, utilizing standardized instruments such as the Inventory of School Climate (ISC) and the National School Climate Center (NSCC) tool to measure school climate. Academic performance was assessed quantitatively through the analysis of standardized test scores in Mathematics, English, Integrated Science, and Social Studies. The study covered schools across ten administrative regions in Ghana, providing a comprehensive understanding of the research area. The findings revealed that teaching and learning, interpersonal relationships, institutional environment, and school safety significantly influenced academic outcomes. The study concluded that school climate plays a crucial role in enhancing learners' academic performance.

Asamoah et al. (2020) utilized a quantitative research approach to investigate the impact of the school environment on learners' academic performance in public senior high schools in Ghana. The research employed a survey research design, utilizing structured questionnaires administered to learners and mathematics teachers to collect data on various factors affecting academic performance. Academic performance was assessed quantitatively through the analysis of standardized test scores in the West African Senior School Certificate Examination (WASSCE) in core mathematics. The study was conducted in the Kumasi metropolis, providing insights

University of Education,Winneba http://ir.uew.edu.gh

into urban school environments. Data were collected through questionnaires to assess school environment, teacher factors, and academic performance. The results indicated that inadequate teaching and learning materials, deficiencies in teacher professionalism, and teaching methods were primary contributors to poor academic performance in mathematics. The study emphasized the critical importance of a well-resourced teaching environment in fostering effective learning outcomes.

Opoku-Asare & Siaw (2015) employed a mixed-methods research approach to assess disparities in rural and urban school learning environments in Ghana. The research utilized a combination of quantitative surveys, qualitative observations, and interviews to gather data from learners and teachers. Academic performance was assessed quantitatively through the analysis of grades achieved in the West African Senior School Certificate Examination (WASSCE). The study was conducted in the Kumasi metropolis and involved learners from both rural and urban senior high schools, allowing for a comprehensive analysis of the research area. The findings highlighted variations in academic performance attributed to factors such as school location, facilities, learner background, and motivation. Urban schools were found to outperform rural schools due to attracting learners with higher entry grades and fostering a more motivating learning environment. The study underscored the significance of school location and adequate facilities in improving learning environments and enhancing academic outcomes.

There was limited number of studies that delved into the fields of Early Childhood Education (ECE) concerning the quality of learning environments. Notably, Kissi-Abrokwah et al. (2021), Amissah-Essel et al. (2020), Oppong Frimpong (2021) and Oppong Frimpong (2019) have contributed to this field. These studies, however, have revealed various gaps, prompting the current research to

University of Education,Winneba http://ir.uew.edu.gh

address these deficiencies. For instance, Kissi-Abrokwah et al. (2021) focused on investigating the impact of class size and teacher-to-learner ratio on classroom management within Early Childhood Educational Centers (ECECs) in Ghana. Employing a concurrent triangulation mixed-method design grounded in pragmatic philosophical thought, the study utilized a descriptive survey during the quantitative phase and a case study approach during the qualitative phase. Data collection involved questionnaires, semi-structured interviews, and observational guides, with a total of 228 respondents participating. The findings unveiled several behavioural patterns exhibited by preschoolers in large class sizes, including challenges such as inadequate seating, permeability issues, and difficulties in organizing exercises and class tests regularly.

Amissah-Essel et al.'s (2020) study, set in the Cape Coast Metropolis, sought to evaluate the quality of physical environments in Early Childhood Care and Development (ECCD) centers and explore potential associations with center auspices (private or public). Utilizing a sequential explanatory mixed-methods research design, the study assessed all 160 ECCD centers in the Metropolis using a modified version of the Children's Physical Environment Rating Scale (CPERS) and conducted semi-structured interviews. The findings indicated a compromised physical environment in ECCD centers, highlighting the need for stakeholders' intervention to improve infrastructure and provide essential learning materials. Additionally, educators were identified to require in-service training to deepen their understanding of the significance of physical environments on children's developmental outcomes.

Oppong Frimpong (2021) investigated the significance of teaching and learning materials (TLMs) and interaction in facilitating quality early childhood education (QECE) in the Agona East District of the Central Region of Ghana.

University of Education,Winneba http://ir.uew.edu.gh

Employing a case study design, data were gathered through interviews and observations from twelve early childhood education (ECE) schools in the district, involving twelve ECE teachers and twelve head teachers, totaling twenty-four participants. The results indicated that participants recognized TLMs as crucial for QECE provision, yet they were not readily available, impeding children's interaction with them. The study highlighted the lack of TLMs as a barrier to children's accessibility and active engagement. Moreover, the findings underscored the limited role of interaction in ECE provision due to the scarcity and inaccessibility of TLMs. To address these challenges, the study recommends that educators and ECE providers ensure the availability and accessibility of TLMs, while also encouraging the development of innovative, locally-sourced TLMs. Furthermore, fostering children's active interaction with TLMs is emphasized as essential for effective learning outcomes.

Similarly, Oppong Frimpong (2019) investigated the state of ECE centers in the Ga West Municipality, Ghana, and their role as a "third teacher" for quality ECE provision. Employing a convergent mixed-methods approach, data were collected through questionnaires, interviews, and observations from 142 participants, including ECE circuit coordinators, teachers, and head teachers. The study revealed infrastructural challenges such as inappropriate furniture, under-resourced learning centers, and overcrowded classroom spaces, hindering effective translation of teacher training into classroom practices and limiting the environment's potential as a facilitator of learning. Recommendations were made to improve infrastructure, optimize classroom arrangements, and enhance resource allocation to ensure a conducive learning environment for children's holistic development.

University of Education,Winneba http://ir.uew.edu.gh

The empirical studies reviewed shed light on the influence of the learning environment on academic performance across various educational levels, with a predominant focus on senior high schools in Ghana. These studies emphasized the significance of factors such as teaching and learning resources, infrastructure, teacher professionalism, and school climate in shaping learners' learning outcomes. However, there remains a notable gap in research concerning the early childhood education (ECE) sector, a pivotal stage in child development. While a limited number of studies have explored aspects of ECE learning environments, such as class size and physical infrastructure, significant gaps persist in understanding the holistic impact of classroom environments on young learners' attentiveness and developmental outcomes.

2.5 Summary of Review

The chapter has illuminated the perspectives of various scholars and researchers regarding the early childhood learning environment and its influence on learners' attentiveness. Through an exploration of the Ecological System Theory and Sociocultural Theory, the study was grounded within theoretical frameworks. Furthermore, key concepts such as the Early Childhood Classroom Environment, the Status of Early Childhood Classroom Environment, Learner's Attentiveness in Early Childhood Classroom, How Teachers Utilize the Classroom Environment to Enhance Attentiveness, and availability of Resources for creating an effective Attentive classroom environment were examined in detail. Additionally, an empirical review synthesized existing research and studies on early childhood learning environments and their impact on learners' attentiveness, offering a comprehensive understanding of the state of knowledge in the field.

University of Education,Winneba http://ir.uew.edu.gh

The review uncovered notable gaps that this study seeks to address, notably the limited scope of research on early childhood learning environments and their influence on attentiveness. Moreover, previous studies have overlooked critical aspects, including the lack of investigation into how classroom environments specifically within the Asuogyaman District affect learner attentiveness. Furthermore, existing research on classroom environments and learner attentiveness has predominantly focused on other educational levels, neglecting the unique context of early childhood classrooms. To bridge these gaps and provide valuable insights, this study endeavors to explore the specific factors within early childhood classroom environments that influence learner attentiveness in the Asuogyaman District of Ghana.

University of Education,Winneba http://ir.uew.edu.gh

CHAPTER THREE

METHODOLOGY

3.0 Overview

This chapter will present a description of the methods used in gathering data to investigate the influence of early childhood environment on learners' attentiveness. The chapter is organized under the following sub-headings; research paradigm, research approach, design, population, sample and sampling procedures, data collection instruments, data collection procedures, and data analysis.

3.1 Philosophical Paradigm

A research paradigm represents the ability to apply scientific methods to explore issues that occur in practice. Pragmatic researchers prioritize real-world application and value the integration of different research methods to address complex problems. (Kivunja & Kuyini, 2017). It must be noted that all research is founded on philosophical assumptions about what constitutes 'valid' research and the type of research method acceptable for the advancement of knowledge in a given field. In this study, the researcher seeks to use research paradigm as a basic belief system or worldview that guides not only in the choices of method, but also in ontologically and epistemologically fundamental ways (Bogna, Raineri & Dell, 2020). It is asserted by scholars that there are three main research paradigms that can be employed in a given study that is; positivist, interpretivist, and critical theory/pragmatist paradigm (Wahyuni, 2012).

This study adopted the pragmatist research paradigm because the philosophy of pragmatism offers assumptions that underpin the incorporation of both quantitative and qualitative methods in mixed research approaches. Researchers can select the

University of Education,Winneba http://ir.uew.edu.gh

most appropriate methodology based on their specific context and the nature of their research question, thanks to pragmatism's adaptability. Pragmatism prioritizes practical problem-solving and outcome-oriented thinking, making it a fitting paradigm for studies in today's fast-paced world. The compatibility between pragmatism and mixed methods research is one key reason for using pragmatism as a research paradigm. (Maarouf, 2019; Kurniawati & Malasari, 2022). The pragmatic research paradigm investigates the influence of early childhood classroom environment on learners' attentiveness in the Asuogyaman District of Ghana. A pragmatic paradigm is appropriate for this study as it focuses on practical solutions to real-world problems, and this study aims to investigate the interplay of the classroom environments on learners' attentiveness.

3.2 Research Approach

This study adopted the mixed method research approach which combines both quantitative and qualitative methods to gather and analyze data. It involves collecting and analyzing both numerical data (quantitative) and non-numerical data (qualitative) to gain a comprehensive understanding of a research problem or question (Creswell, 2013). The mixed-methods approach recognizes that using multiple research methods can provide a more complete and robust understanding of complex phenomena. It allows researchers to complement and triangulate findings from different sources and perspectives, enhancing the overall validity and reliability of the study (Dawadi, Shrestha, & Giri, 2021). The mixed-methods approach offers a flexible and comprehensive research strategy that allows researchers to explore complex research questions, capture diverse perspectives, and generate more robust and nuanced findings.

University of Education,Winneba http://ir.uew.edu.gh

On the aspect of the strength of the mixed-method approach is its methodological Synergy. In order to overcome each method's unique shortcomings, the mixed-methodologies strategy makes the most of both quantitative and qualitative methods. By utilizing the other way to fill the gaps, it enables researchers to get beyond the flaws inherently present in each approach (Manzoor, 2020). It can be methodologically and analytically challenging to combine quantitative and qualitative data, though. Different data kinds must be combined or compared, and it can be difficult to combine the results of various approaches into a comprehensible whole (Iaquinto, 2016).

The mixed method approach was followed in this study for several reasons. The adoption of a mixed-method research approach in this study is justified by its ability to provide a comprehensive understanding of the research problem. By combining quantitative and qualitative methods, this approach enabled the collection of both numerical data, such as survey responses, and non-numerical data, such as observations and interviews, to capture the complexity of early childhood classroom environments and their influence on learners' attentiveness. This approach allows for triangulation of findings from multiple sources, enhancing the validity and reliability of the study. Additionally, the mixed-methods approach offered the researcher flexibility in exploring diverse perspectives and generating nuanced insights into the research questions. Despite the challenges associated with integrating quantitative and qualitative data, such as methodological and analytical complexities, the methodological synergy of the mixed-methods approach enables researchers to overcome limitations inherent in individual methods and provides a more comprehensive understanding of how ECE environment influence learners attentiveness

University of Education,Winneba http://ir.uew.edu.gh

3.3 Research Design

The study employed the sequential explanatory design to investigate the influence of early childhood environment on learners' attentiveness in the Asuogyaman District of Ghana. The sequential explanatory design is employed when researchers seek to explore a research question or problem by first collecting and analyzing quantitative data, followed by collecting and analyzing qualitative data (Subedi, 2016). This design aims to provide a deeper, more nuanced understanding of the phenomenon under investigation by using the qualitative phase to explain, interpret, or elaborate on the quantitative findings. It allows researchers to bridge the gap between numerical data and the rich context and meaning behind those numbers.

The research process begins with the collection and analysis of quantitative data. This phase typically involves the use of surveys, experiments, or other structured data collection methods. Researchers generate numerical data and perform statistical analyses to identify patterns, trends, or relationships (Creswell & Creswell, 2017). After analyzing the quantitative data, researchers draw preliminary conclusions or identify areas where further explanation is needed. This phase often leads to the formulation of qualitative research questions.

In the qualitative phase, researchers collect and analyze qualitative data to provide a deeper understanding of the quantitative findings. Qualitative methods such as interviews, focus groups, or content analysis are employed to explore the context, meaning, and experiences related to the research topic. The researcher after collecting both quantitative and qualitative data needs to integrate the findings from each. Researcher compares and contrasts the results, seeking to explain and interpret the quantitative data in light of the qualitative insights (Creswell & Creswell, 2017). This integration enhances the overall understanding of the research question.

University of Education,Winneba http://ir.uew.edu.gh

This design allows researchers to achieve a more comprehensive understanding of the research topic by combining quantitative data for patterns and qualitative data for context and meaning (Taguchi, 2018). It provides a form of methodological triangulation, enhancing the validity and reliability of the research findings through the convergence of different data sources and methods. The sequential nature of the design allows researchers to refine and adapt their qualitative research questions based on the preliminary quantitative findings, ensuring that the qualitative phase addresses gaps or uncertainties.

However, despite the advantages that come with the use of this design, it can be resource-intensive in terms of time, funding, and personnel, as it involves two distinct phases of data collection and analysis. Managing and integrating quantitative and qualitative data can be complex, requiring a high level of expertise in both research paradigms. Also, researchers' preconceived notions or biases from the quantitative phase may influence the design and execution of the qualitative phase, potentially affecting the validity of the qualitative findings.

Despite its challenges, this design was chosen over others because of its ability to provide an in-depth understanding of the influence of early childhood environments on learners' attentiveness in the Asuogyaman District. By initially collecting and analyzing quantitative data, the researchers was able to establish patterns, trends, and associations related to the classroom environment and attentiveness levels. Subsequently, the qualitative phase allowed the researcher to delve for a deeper exploration and interpretation of these quantitative findings, offering insights into the underlying reasons, contexts, and experiences that contribute to learners' attentiveness. This sequential approach enables researchers to bridge the gap between

University of Education,Winneba http://ir.uew.edu.gh

numerical data and the rich qualitative context, providing a holistic understanding of the phenomenon under investigation.

3.5 Study Area

The study was conducted in the Asuogyaman District, located within the Eastern Region of Ghana. The Asuogyaman District Assembly is one of the 33 Municipal and District Assemblies in the Eastern Region. It was established under local government instrument L.I. 1431 of 1988 as part of the Ghana Government's re-demarcation exercise to implement the decentralization program in the country, replacing the defunct Kaoga District, with Somanya as its capital. Situated approximately between latitudes 6º 34º N and 6º 10º N, and longitudes 0º 1º W and 0º14E, the Asuogyaman District sits at around 120 meters above Mean Sea Level (MSL). Covering an estimated surface area of 1,507 sq. km, it constitutes 5.7 percent of the total area of the Eastern Region. The district shares boundaries with Kwahu Afram Plains North to the north, Upper Manya District to the west, Lower Manya Krobo District to the south, and South Dayi, Ho West, and North Tongu Districts to the east.

The Asuogyaman District, intricately woven by the Volta Lake, holds significant potential as a tourism and aquaculture hub, as well as for agricultural development. According to the 2021 National Population and Housing Census, the district has a population of 101,256, with 52,802 females (52%) and 48,723 males (48%). This figure is projected to rise to approximately 105,627.65 by 2023 (Source: 2022-2024 MTDP). The 2021 Population and Housing Census also reveal that approximately 46 out of every 100 employed individuals aged 15 years and older are

University of Education,Winneba http://ir.uew.edu.gh

engaged in skilled agriculture, forestry, and fishing industries, making this sector the primary source of employment in the Asuogyaman District.

The number of schools in the district continues to grow, with the current academic year witnessing a total of 283 schools, comprising 184 public and 99 private institutions at both the basic and secondary levels. The increase is primarily observed at the basic level due to the establishment of new private schools in the district. Gender Parity Index (GPI) records stand at 1.02, 1.04, and 1.07 for Kindergarten (KG), Primary, and Junior High School (JHS) respectively. Net Admission Rates are recorded at 51.9%, 57.4%, and 33.4% for KG, Primary, and JHS respectively. The completion rate for the district is 80% for Primary and 66.30% for JHS, totaling a completion rate of 74%. However, this contrasts with completion rates of 83.90% and 67.4% for boys, and 65% for girls in Primary and JHS respectively.

3.6 Population

In this study, the population comprises all early childhood teachers working in public schools within the Asuogyaman District. According to data obtained from the District Education Directorate as documented in the District Assemblies Annual Report (2021), there are sixty (60) public kindergarten (KG) schools in the district, with a total early childhood teacher population of one hundred and forty-one (141) teachers of which sixty (60) of them also doubled as head teachers of the KG department. The district is further segmented into seven (7) circuits, each overseen by a school improvement support officer (SISO). Casteel & Bridier (2021) define the population as the individuals, dyads, groups, organizations, or other entities that researchers seek to understand and whose characteristics or outcomes the study aims to generalize or transfer. It encompasses a predefined, accessible, and finite set of

University of Education,Winneba http://ir.uew.edu.gh

instances. These instances form the foundation for selecting the sample and must meet specific criteria, as noted by Etikan, Musa and Alkassim (2016).

3.7 Sample and Sampling Technique

The quality of a piece of research stands or falls not only by the appropriateness of methodology and instrumentation but also by the suitability of the sampling strategy that has been adopted (Cohen, Manion, & Morrison, 2017). The census technique was used to include all the one hundred and forty-one (141) early childhood teachers in the kindergarten schools within the Asuogyaman District in the study. One hundred and twenty-two teachers responded to the questionnaire. Ten (10) teachers were purposively selected from among the one hundred and twenty-two (122) teachers for observation and a follow up interview. In selecting the ten teachers, the researcher chose participants based on the teachers with the highest years of teaching experience in KG in the district.

Similarly, the use of the census method was to ensure accuracy as each and every unit of the population is studied before drawing any conclusions of the research. In this method, information is collected from every unit of the population. When more and more data are collected the degree of correctness of the information also increases. Also, the results based on this method are less biased (Pandey & Pandey 2021). Despite the advantages that come with census sampling, it is regarded as a very costly method of data collection as well as it being time-consuming and labor to complete data collecting tasks.

The researcher chose census sampling to ensure the inclusion of all one hundred and forty-one (141) early childhood teachers within kindergarten schools across the Asuogyaman District, ensuring comprehensive coverage of the population.

University of Education,Winneba http://ir.uew.edu.gh

This method aligns with the research objective of obtaining accurate and representative data from every unit of the population, thereby minimizing sampling bias and increasing the validity of the study findings. Additionally, census sampling allows for a detailed examination of each teacher's perspectives and experiences, contributing to a deeper understanding of the research problem. Also, the benefits of obtaining high-quality data outweigh the potential challenges associated with the census sampling approach in this study. Table 3.1 shows the sample of teachers used for each phase of the study.

Table 3.1: Distribution of Teachers Based on Circuits

Circuit	**Number of KG**	**Number of KG teachers**	**Sample for Quantitative**	**Responses from Quantitative**	**Sample for Qualitative**
Senchi	12	32	32	24	3
Akosombo A	7	17	17	14	1
Akosombo B	8	19	19	16	1
Gyekiti	10	27	27	20	2
Apegusu	8	19	19	16	1
Frankadua - Asikuma	8	18	18	16	1
Anum Boso	7	19	19	16	1
Total	**60**	**141**	**141**	**16**	**10**

Source: Field work (2024)

University of Education,Winneba http://ir.uew.edu.gh

3.7 Data collection instruments

The study employs structured questionnaires, semi-structured interviews and observational rating scale as the data collection instruments as follows:

3.7.1 Structured Questionnaire

According to Cohen, et al (2017), a questionnaire is widely used and is a useful instrument for collecting survey information, providing structured numerical data, and can be administered without the presence of the researcher. The choice of the questionnaire was based on the assertion of Cook et al (2017) that, they are particularly advantageous whenever the sample size is large enough to make it uneconomical for reasons of time or funds to observe or interview every subject. Despite these strengths, the weaknesses are that the respondents may not complete the questionnaire resulting in low response rates (Cook, et al, 2017). In other cases, if respondents do not understand some questions, there is no opportunity for them to have the meaning clarified (Pallant, 2018). However, the limitations that came with the questionnaire were resolved as the researcher explained the purpose of the questionnaire clearly to the respondents.

The instrument was developed by taking into consideration the reviewed literature. The items on the questionnaire were carefully selected, reviewed, and contextualized from previously reviewed literature. The items were carefully developed to measure the construct to achieve the purpose of the study. The instruments had two parts. Part 1 gathered demographic data about the respondents, including sex, age group, education level, years of teaching experience in kindergarten, and grade level.

Part 2 collected data based on the research questions. It was structured into four sections. The first section consisted of seven (7) items that looked at the status of

University of Education,Winneba http://ir.uew.edu.gh

the early childhood classroom environment. The second section was about teachers' knowledge of early childhood classroom environmental factors that influence learners' attentiveness. There were 11 items in this section. Section three also explored how teachers utilize the classroom environment to influence attentiveness. There were ten (10) items under this section. Finally, section four consisted of nine items that aimed to identify the availability of resources for the creation of classroom learning environment towards learners' attentiveness.

Each section comprises a series of statements related to the research objectives, with respondents asked to rate their views on these statements using a four-point Likert scale.

3.7.2 Observation Rating Scale

The study utilized an observation rating scale to assess and document various elements of early childhood classroom environments in the Asuogyaman District. Classroom observations were systematically conducted in person by the researcher using a structured rating scale designed to evaluate key aspects of the classroom environments and the resources available to influence learners' attentiveness. The sample consisted of Kindergarten (KG) teachers from the district who had the longest teaching experience in early childhood education and had previously participated in the survey portion of the study.

The observation rating scale was organized into three main categories: (1) Classroom Nature and Setup, (2) Status of the Physical Indoor Environment, and (3) Availability and Use of Instructional Resources. Each category included criteria that allowed the researcher to rate the extent to which essential environmental features were present and utilized to support learner attentiveness. The rating scales for *Classroom Nature and Setup* included descriptors such as "Well decorated," "Too

University of Education,Winneba http://ir.uew.edu.gh

old," and "Not decorated," capturing the visual appeal and freshness of the classroom decor. For *Environmental Status,* the scale assessed key elements like lighting and ventilation, with ratings of "Good," "Spoilt," and "Natural" to reflect their condition and adequacy. In evaluating the *Availability and Use of Instructional Materials,* ratings ranged from 'All in place', 'few', 'in storeroom' to 'None'.

A total of ten early childhood classrooms were observed, focusing on specific factors influencing learners' attention, such as the organization of the space, management practices, and accessibility of teaching materials. The observations provided a quantitative rating for each criterion, along with qualitative notes on teachers' challenges, such as resource limitations and classroom management difficulties.

This observational data complemented other data collection methods by offering direct insights into classroom environments and the factors influencing attentiveness, participation, and engagement among early childhood learners. The findings from this rating scale helped in identifying common environmental strengths and areas for improvement across different centers within the district.

3.7.3 Semi-Structured Interview Guide

A semi-structured interview guide was also employed in the study. According to Kalilo et al (2016), a semi-structured interview is neither completely fixed nor completely free, and they are arguably best understood as adaptable. In most cases, interviews begin with some sort of predetermined questioning plan, but they then transition into a more conversational format, in which the questions may be answered in a sequence that is more natural to the flow of the conversation. It is possible that it

University of Education,Winneba http://ir.uew.edu.gh

will begin with only a few clearly stated inquiries, but it will pursue any fascinating abilities that may emerge.

The interview had three main sections. The first section introduced the interview to the participants while requiring their consent to be interviewed. The second section had several items under four parts. Part 1 had 4 items to delve into Teacher Knowledge of early childhood classroom environmental factors that influence learners' attentiveness. Part 2 also contained an item that required participant to describe the state of their early childhood classroom environment. Part 3 consisted of three items on how teachers utilize classroom environment to influence attentiveness. Part 4 also had four items to find out the challenges that characterize the effective creation and implementation of classroom environment that influences attentiveness. The last section concluded the interview with the closing remarks.

The interviews were conducted face-to-face interviews and audio-recorded by the researcher. The aim of the interview was to assess teachers' knowledge of early childhood education, their understanding of attentiveness and its relationship with the environment, and the strategies employed to promote attentiveness. These interviews lasted between 10-15 minutes, and responses were audio recorded. According to Kusi (2012) using this instrument in collecting data enable researchers to increase the likelihood that all the study questions are answered.

3.8 Pilot-Testing

Prior to administering the instruments to the teachers' concern, the researcher conducted a pilot test to identify any anomalies that might arise before the actual data collection. Through this, the researcher was able to adjust the instrument in terms of edits, structure, and order. The questionnaire was pilot tested using 21 public early childhood center teachers within the Lower Manya District to assess the reliability of

University of Education,Winneba http://ir.uew.edu.gh

the research instruments. This number of teachers represented 17% of the sample used in the actual study, which is appropriate based on the common rule of thumb stating that a sample size of 10 to 20% of the full-scale survey sample size, or at least 30 to 50 respondents, should be used for any pilot test. The public schools used for the pilot test were situated in a district closer to Asuogyaman and therefore shared similar characteristics with the target population. The choice of public school teachers was made because they shared similar characteristics with teachers in the same Asuogyaman but were not included in the actual study. Therefore, the responses of these teachers, who shared similar attributes with those in Asuogyaman schools, could be relied upon.

The pilot test helped the researcher to modify the instruments before using them in the actual study. For instance, the first draft of the questionnaire had 53 items, but after the pilot test, this was reduced to 44 items. This was due to the detection that some questions were ambiguous to the teachers. Additionally, the teachers complained that some items were too long to read, while others did not accurately reflect the challenges as captured in the challenges part of the instrument. Regarding demographics, the teachers asked whether the researcher meant years of teaching or years of teaching only at the early grade level; hence, this item was modified to "years of teaching experience at the KG levels." A key recommendation from the pilot test was the suggestion for a digital form of the instrument so that teachers who were occupied could fill it out in their free time. All these suggestions were implemented to shape the final draft of the questionnaire. Accordingly, two forms of the questionnaire were used: the hardcopy and the Google Form version.

Also, the initial draft of the semi-structured interview guide was presented without reference to research objectives. However, after the pilot test, the researcher

University of Education,Winneba http://ir.uew.edu.gh

realized that some questions had the same meanings, as the teachers gave similar responses to different questions. Hence, similar questions were merged, and repeated ones were deleted. The researcher also observed that the responses were skewed toward research questions two (teachers' knowledge of factors influencing learners' attentiveness) and three (how teachers utilize the classroom environment to enhance learners' attentiveness), with no questions addressing research question one (the state of the early childhood classroom environment) and four (challenges faced in creating attentive classrooms). Therefore, the final draft was modified, and questions were aligned with the objectives set to guide the study. This helped to reduce the initial 15 items on the guide to 12 items as non-applicable items were eliminated.

Lastly, the first draft of the observation guide was structured and closed-ended. However, after observing the teachers, the researcher realized some aspects of their classroom environment were not captured on the rating scale. Thus, it was modified to an unstructured and open-ended format to allow for additional input. More importantly, during the pilot test, the researcher realized that the spaces for comments were insufficient; hence more spaces were created for more details.

3.9 Validity and Reliability of the Instrument

Validity is the exactness and precision of deductions based on the findings from the research (Ponterotto & Ruckdeschel, 2007). The validation of the instrument was carried out to check the correctness of the data collection instruments during the pilot study. Pre-testing of study instruments, before the actual study, supports criterion and construct validation of the tools (Bryman, 2016). Criterion and construct validation were established through pre-testing the instruments used in the study to ensure their appropriateness (Henson, 2017).

University of Education,Winneba http://ir.uew.edu.gh

In order to enhance the validity of the study, the instruments were given to my supervisor for expert assessment. These ensured both face and content-related evidence to the items and examine whether the items related to the research questions and also comprehensively cover the details of the study. Content validity was ensured by effectively indicating the interests of the study (Rusticus, 2024).

Reliability is generally defined as the degree to which a measure of a construct is consistent and dependable. Petters, Asuquo, & Eyo (2015) further define reliability as the consistency with which a measuring instrument yields certain results when the entity being measured has not changed. Consistency of the instrument was achieved through a number of initiatives.

To assess the reliability of the instrument used in this study, coefficient alpha (α) was calculated. Coefficient alpha is a measure of internal consistency that indicates the extent to which items in a scale are correlated with each other. A high coefficient alpha value suggests that the items in the instrument are measuring the same underlying construct consistently. The reliability analysis was conducted using SPSS software, and a coefficient alpha value of .834 was obtained which is higher than the 0.70 considered acceptable for the instrument to be considered reliable for data collection (Park, 2021).

3.10 Trustworthiness of the instrument

The researcher also took measures to ensure the trustworthiness of the qualitative research instruments used in the study. Trustworthiness criteria were established for the semi-structured interview guide. One major aim of research is to put the knowledge created into practice. As a result, it is critical that researchers, practitioners, policymakers, and the general public understand and accept the findings as legitimate. Trustworthiness criteria are one-way researchers can convince

University of Education,Winneba http://ir.uew.edu.gh

themselves and readers that their study findings are worthy of attention (Nowell, Norris, White, & Moules, 2017). The criteria established confirmability, dependability, transferability and credibility.

1. Confirmability

In qualitative research, confirmability is a crucial criterion for establishing the trustworthiness of the study. It refers to the degree to which the researcher's biases are minimized and the findings accurately reflect the participants' perspectives and experiences (Creswell, 2013). In this study, confirmability was ensured by employing techniques to minimize researcher bias and ensure that the findings accurately reflected the perspectives and experiences of the participants. The researcher actively prevented personal knowledge, values, and conclusions from influencing the study's findings. Additionally, each phase of the data analysis process, including the conclusions derived, was meticulously documented, following the guidelines suggested by Charmaz and Henwood (2017). This approach ensured that the study's findings were based solely on the data collected and analyzed, enhancing the confirmability of the research.

2. Dependability

Dependability, according to Shenton (2004), refers to the consistency and reliability of the research process, ensuring that the findings are replicable and trustworthy. To enhance the dependability of the study findings, the researcher prioritized consistency and traceability throughout the research process. Clear questions were asked during data collection to ensure uniformity and minimize bias. Objectivity was carefully controlled to maintain consistency in the research procedures. Moreover, an audit trail was maintained, documenting all research procedures and decisions made during the

University of Education,Winneba http://ir.uew.edu.gh

study. By adhering to these practices, the researcher aimed to establish dependability in the study's findings, ensuring that they were reliable and consistent.

3. Transferability

Transferability, as described by Nowell et al (2017), focuses on the extent to which the findings of a qualitative study can be applied or transferred to other contexts or settings. The study also considered transferability by focusing on the applicability of its findings to other contexts. Detailed descriptions of the research context and participants were provided to enable readers to assess the relevance of the findings to their own situations. By offering rich and comprehensive insights into the study's setting and participants, the researchers aimed to enhance the transferability of the findings, allowing for their potential application in diverse contexts beyond the immediate study area.

4. Credibility

Credibility refers to the degree of confidence in the truth of the findings and interpretations drawn from the data (Creswell & Poth, 2018). Rigor in the research process and the soundness of data interpretation were ensured through various techniques. First, credibility was enhanced by using a method of triangulation of data sources and the fact that the interviews were conducted using audio recording. To further enhance the credibility of the study, member checking was employed where the interview transcripts were presented to the respective teachers to confirm their responses. Similarly, prolonged engagements with the participants strengthened the credibility of the study's findings. These practices helped validate the accuracy and validity of the interpretations drawn from the data, enhancing the overall credibility of the study.

University of Education,Winneba http://ir.uew.edu.gh

3.11 Data Collection Procedures

Before commencing data collection, the researcher obtained an introductory letter from the Department of Early Childhood, University of Education, Winneba (see Appendix A) to seek permission from the various schools, offices, and other relevant authorities. Subsequently, the researcher visited the various schools within the Asuogyaman District and presented copies of the letter to the heads of schools. Upon receiving permission from the school heads, the researcher proceeded to administer the questionnaire to individual teachers. Additionally, some teachers suggested creating an online version of the instruments for ease of completion, which was promptly implemented to facilitate a high return rate. Prior to administering the questionnaires, consent was obtained from the teachers, and the purpose of the study was explained by the researcher. The quantitative data collection phase spanned a period of two (2) weeks. To ensure a high return rate, the researcher ensured that questionnaires were distributed and retrieved on the same day.

After the quantitative data analysis, the researcher visited the schools again to conduct follow-up observations and semi-structured interviews to gain a deeper understanding of the phenomenon. The observation preceded the interview. This was done to first get firsthand information on the nature and challenges of the early childhood environments visited before engaging the teachers to probe further. The observation rating scale included items related to the physical environment, such as classroom layout, lighting, ventilation, and the needed learning resources. It also assessed aspects of teacher-learner interactions, teaching strategies employed, and overall classroom atmosphere conducive to attentiveness. During the observation sessions, the researcher recorded observations in a structured manner, noting any

University of Education,Winneba http://ir.uew.edu.gh

notable behaviours, interactions, or environmental conditions that could influence attentiveness.

Then after the observation, face-to-face interviews were conducted by the researcher to assess teachers' knowledge of early childhood education, their understanding of attentiveness and its relationship with the environment, and the strategies employed to promote attentiveness. These interviews lasted between 10-15 minutes, and responses were audio recorded.

3.10 Data Processing and Analysis

The research data collected were analyzed both qualitatively and quantitatively. The field data were collated, examined, and edited to address questions that were partially answered or not answered. The questionnaires were serially numbered to facilitate easy identification. This precaution was necessary to ensure quick detection of any errors that may have occurred in the tabulation of the data. After editing and coding, Statistical Product and Service Solution (SPSS) software was used to analyze the data.

Before performing the desired data transformation, the data were cleaned by running consistency checks on every variable. Modifications were made after verifying the questionnaires. The demographic variables from the questionnaire were analyzed using frequencies and percentages, based on the demographic characteristics of the respondents. The second section of the questionnaire was analyzed based on the research questions set for the study using descriptive statistics (means and standard deviations).

For the qualitative data (interviews), thematic and content analyses were conducted for the observational rating scale. Thematic analysis involved reading through the data set (such as transcripts from in-depth interviews) and identifying

University of Education,Winneba http://ir.uew.edu.gh

patterns in meaning across the data to derive themes. Thematic analysis involved an active process of reflexivity, where a researcher's subjective experience played a central role in meaning-making from the data. Numbers were assigned to the interviews to facilitate easy identification, ensuring effective presentation and analysis of the data.

The researcher independently coded the transcripts, grouped the codes, and generated themes and sub-themes using the framework method for the analysis of qualitative data into the adopted models. The themes and sub-themes were cross-checked by the researcher's supervisor to ensure the faithful capture of the data.

3.11 Ethical Considerations

To abide by the ethical principles of the study, the study addressed some ethical concerns which will include informed consent, anonymity, and confidentiality.

Informed Consent: Informed consent was obtained from all participants, ensuring that they understood the aims, objectives, and potential implications of their involvement in the research (Hardicre, 2014). Before data collection commenced, the researcher made prior visits to the schools to explain the study's purpose to the respondents and emphasize the importance of respecting their privacy as participants. The purpose of the study was carefully outlined to all participants before their involvement in the research process.

Anonymity: Anonymity was prioritized to protect the identities of study respondents, as suggested by Novak (2014). Fictitious names were used for identification purposes, ensuring that participants could not be traced through their responses. Codes were also employed where necessary to further safeguard the anonymity of information provided by participants.

University of Education,Winneba http://ir.uew.edu.gh

Confidentiality: To uphold the ethical principle of confidentiality, efforts were made to ensure that participants' responses remained confidential. Participants were assured that their responses would not be shared with anyone known to them, and no identifiable information was collected. Additionally, no participant names were recorded in the study, further safeguarding confidentiality.

Voluntary Participation: Participation in the study was entirely voluntary, and participants had the freedom to choose whether to take part (Babbie, 2020). There was no coercion or pressure exerted on any individual to participate, and participants were informed that they could withdraw from the study at any point without consequence. This ensured that participants engaged in the research willingly and without feeling obligated. By following these rigorous ethical principles, the study ensured the protection and welfare of all the KG teachers involved in the study.

University of Education,Winneba http://ir.uew.edu.gh

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Overview

This study sought to investigate the influence of early childhood classroom environment on learners' attentiveness in the Asuogyaman District of Ghana. Both quantitative and qualitative data were collected using a structured questionnaire, observation checklist and a semi-structured interview guide. This chapter presents the analysis of the data and discussions of findings. The data and its analysis are presented in three sections. The first section looks at the demographic background of teachers while the second section presents the analysis based on the research questions. Finally, a discussion based on the analysis is presented. In the analysis of the data, descriptive statistical tools in the form of mean, standard deviations, and simple frequency tables were used to analyze the questionnaire responses and observation rating scale whereas the interview data was analysed thematically.

4.1 Results on Demographic Information

This aspect of the analysis is on the background information of the teachers: gender, age group, educational level, the number of years spent in teaching KG and the class taught. The data gathered are presented on table 4.1 as follows;

University of Education,Winneba http://ir.uew.edu.gh

Table 4.1: Demographic Distribution of Teachers

Variables	Category	Frequency	Percent
Gender	Male	5	4.1
	Female	117	95.9
	Total	122	100.0
Age Group	20-30 Years	40	32.8
	31-40 Years	41	33.6
	41-50 Years	14	11.5
	51 and Above	27	22.1
	Total	122	100.0
Educational Level	SHS/TVET	3	2.5
	Diploma	32	26.2
	Bachelor's degree	83	68
	Master's degree	4	3.3
	Total	122	100.0
Years of KG Teaching Experience	Less than a year	10	8.2
	1-5 years	42	34.4
	6-10 years	35	28.7
	11-15years	17	13.9
	16-20 years	18	14.8
	Total	122	100.0
Grade Level	KG 1	57	46.7
	KG 2	65	53.3
	Total	122	100.0

Source: Field Data (2024)

University of Education,Winneba http://ir.uew.edu.gh

Data in Table 4.1 revealed that out of the 122 teachers surveyed, 5 (4.1%) are males while 117 (95.9%) are females. It is evident from the data that the gender distribution within the sample is heavily skewed, with females comprising a substantial majority. This significant gender disparity suggests that the kindergarten teaching profession in the Asuogyaman District is predominantly female dominated.

The age distribution showed that among the teachers, 40 (32.8%) are aged 20-30 years, 41 (33.6%) are aged 31-40 years, 14 (11.5%) are aged 41-50 years, and 27 (22.1%) are aged 51 years and above. This distribution indicates a relatively young workforce, with most teachers (66.4%) being under 40 years old. This trend suggests a potential for long-term career growth within the profession. However, it also highlights the need for retention strategies to keep experienced older teachers, who can provide valuable mentorship and stability within the educational system.

Regarding educational attainment, 3 (2.5%) have completed SHS/TVET, 32 (26.2%) hold a Diploma, 83 (68%) have a Bachelor's degree, and 4 (3.3%) possess a Master's degree. The high percentage of teachers with a Bachelor's degree suggests a well-qualified workforce. This level of educational attainment is beneficial for the quality of early childhood education. The relatively low number of teachers with a Master's degree presents an opportunity for further professional development to enhance expertise and career advancement within the kindergarten teaching field in the district.

The distribution of teaching experience shows that 10 (8.2%) have less than a year of teaching experience, 42 (34.4%) have 1-5 years of experience, 35 (28.7%) have 6-10 years of experience, 17 (13.9%) have 11-15 years of experience, and 18 (14.8%) have 16-20 years of experience. This range of experience levels indicates a diverse teaching workforce within the district, which is beneficial for peer learning

University of Education,Winneba http://ir.uew.edu.gh

and support. However, the high proportion of teachers with relatively less experience calls for the need for induction and mentorship programs to support their professional development and integration into the early childhood teaching community within the Asuogyaman District.

Lastly, the data showed that among the 122 teachers, 57 (46.7%) teach KG 1 and 65 (53.3%) teach KG 2. This suggests a nearly equal distribution of teachers teaching in the early childhood levels within the Asuogyaman District

Research Question One: What is the state of the classroom environment in early childhood education settings in the Asuogyaman District?

The first research question aimed to assess the state of the classroom environment in early childhood education settings in the Asuogyaman District. There were seven (7) items in this section. The statements had four response options as 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. For the purpose of the analysis, the responses 'Strongly Disagree' and 'Disagree' were combined and interpreted as denoting 'Disagreement (D)' while the responses, 'Strongly Agree' and 'Agree' were similarly joined as indicating 'Agreement (A)' to the statements. The responses were analysed using frequency, percentages, mean and standard deviation. The mean score was calculated with the formular; mean ($\bar{x}$) = 1 + 2 + 3 + 4 = 10/4 =2.5. Therefore, a mean score above 2.5 implies that most of the respondents agreed to the statement while ($\bar{x}$) less than 2.5 implies that most of the respondents disagreed with the statement. For the standard deviation, obtained values below 1.0 indicates the homogeneity or similarity of the responses given to the item while a standard deviation 1.0 or above indicate the heterogeneity or variation in the responses given. The results are shown on Table 4.2 as follows;

University of Education,Winneba http://ir.uew.edu.gh

Table 4.2: The State of Early Childhood Classroom Environments

Statements	Frequency				
	N	AG	DG	M	SD
The physical design and infrastructure of my classroom promote attentiveness.	122	106 (86)	16 (14)	3.09	0.72
Learning materials and resources are readily available and easily accessible in my classroom.	122	69 (57)	53 (43)	2.56	0.83
The physical condition (walls, floor, door windows) of my classrooms is well-maintained.	122	89 (73)	33 (27)	2.87	0.81
There is lighting and ventilation in my classroom.	122	84 (69)	38 (31)	2.86	0.95
There is a child-friendly and stimulating learning environment in my classroom.	122	98 (80)	24 (20)	3.05	0.92
My classroom has a working space for the learner and teacher to actively participate in varied activities.	122	82 (67)	40 (33)	2.82	0.92
My classroom is well decorated with lots of materials and play equipment.	122	62 (51)	60 (49)	2.46	0.80

Key: Agree (AG), Disagree (DG), Mean (M), Std. Dev. (SD)

Source: Field Data (2024)

The data presented in Table 4.2 indicated that most of the teachers 106 (86%) agreed that the physical design and infrastructure of their classrooms promote

University of Education,Winneba http://ir.uew.edu.gh

learning. Only 16 (14%) of them disagreed with this. However, the mean score of 3.09, which is above 2.5, supports a general agreement while the SD of 0.72 suggests a consensus among the teachers. Similarly, most of the teachers, 69 (57%), agreed that learning materials and resources are readily available and easily accessible in their classrooms. However, 53 (43%) of the teachers disagreed with this statement. The mean score of 2.56, which is above 2.5, indicates agreement, while the SD of 0.83 suggests similarity in their responses. Also, 89 (73%) of the teachers, agreed that the physical condition of their classrooms is well-maintained. In contrast, 33 (27%) of these teachers disagreed. The mean score of 2.87, above 2.5, indicates a general agreement, while the SD of 0.81 suggests consistency among their responses.

In addition, most of the teachers, 84 (69%), agreed that there is good lighting and ventilation in their classrooms. However, 38 (31%) of the teachers disagreed. The mean score of 2.86, above 2.5, indicates general agreement, while the SD of 0.95 suggests that the teachers shared a common opinion on this statement. Again, most of the teachers, 98 (80%), agreed that there is a child-friendly and stimulating learning environment in their classrooms. Only 24 (20%) of the teachers disagreed. The mean score of 3.05, above 2.5, supports a general agreement, while the SD of 0.92 suggests a consensus in responses. Also, 82 (67%) of the teachers, agreed that their classroom has a working space for learners and teachers to actively participate in varied activities. However, 40 (33%) of them disagreed. The mean score of 2.82, which is above 2.5, shows a general agreement, while the SD of 0.92 that the teachers' opinions were homogenous. Lastly, the teachers' responses were almost evenly split regarding the quality of décor and displays in their classrooms, with 62 (51%) agreeing and 60 (49%) disagreeing. The mean score of 2.46, which is below 2.5, indicates a majority disagreement, while the SD of 0.80 suggests a consistent

University of Education,Winneba http://ir.uew.edu.gh

disagreement in the responses.

In conclusion, the data revealed that the teachers had a positive perception of the state of the classroom environment in early childhood education settings in the Asuogyaman District. Most respondents agreed on the general good state of most aspects of their classroom environment, particularly regarding the physical design, maintenance, lighting, ventilation, child-friendliness, and working space. For most statements, majority of the respondents agreed that their classrooms promote learning, are well-maintained, have good lighting and ventilation, and provide a child-friendly and stimulating environment, with the exception of décor and display of materials, where responses were nearly evenly split.

In supporting this data, responses from the interview revealed that early childhood classrooms settings in the Asuogyaman District vary in conditions from well-equipped and stimulating environments with ample teaching materials and learning centers, to environment with constrained spaces lacking proper ventilation, broken windows and inadequate lighting. These conditions were attributed to theft of resources by community members. The five main themes are as follows;

Theme 1: Classroom Infrastructure and Facilities

One of the teachers lamented the poor state of the classroom stating that:

Most of the classroom windows are broken (Field data, 2024)

Similarly, another teacher added:

The classroom has no light and fun (Field data, 2024)

Another also supported the earlier responses noting that:

Our floor is not cemented (Field data, 2024)

University of Education,Winneba http://ir.uew.edu.gh

Contrary to these, a teacher reported a conductive nature of the class saying:

We have enough chairs, round tables, a big black board (Field data, 2024)

Theme 2: Classroom Aesthetics and Décor

One teacher expressed satisfaction with the classroom aesthetics, stating

My classroom is beautiful; the walls are smiling (Field data, 2024)

In agreement, another teacher highlighted:

My classroom, I can say that it is one of the print rich classrooms in the district (Field data, 2024)

Furthermore, another teacher elaborated:

The walls are decorated with charts; flash cards are hung all over (Field data, 2024)

Theme 3: Classroom Space and Ventilation

Reflecting on the classroom space, a teacher shared:

My classroom is quite conducive because, we have enough spac (Field data, 2024)

Similarly, regarding ventilation and temperature, another teacher noted:

My classroom in terms of temperature and ventilation, I can say it is very conducive (Field data, 2024)

Another teacher observed:

The classroom is airy because of the trees around (Field data, 2024)

However, highlighting challenges, one teacher mentioned:

The classroom is not well ventilated, it's cool in the morning but when the sun is up the classroom becomes very hot (Field data, 2024)

University of Education,Winneba http://ir.uew.edu.gh

Another teacher supported the poor space in the class stating:

> *The classroom is too small; we don't use round tables because it uses a lot of space as compared with the desk. I had to turn a parent down yesterday because there is no space in the classroom (Field data, 2024)*

Theme 4: Learning Centers and Interactive Materials

One teacher described the presence of a learning center, stating:

> *We have the shopping center were learners go to buy and sell (Field data, 2024)*

Detailing the operational centers, another teacher explained:

> *Currently we have three centers in operation, - the shopping center, reading center and the I.C.T center (Field data, 2024)*

Another teacher emphasized the availability of different centers stating:

> *There are varieties of centers with materials in the classroom that the children can see, communicate and interact with (Field data, 2024)*

On the contrary, a teacher mentioned:

> *I have only displayed the shopping and reading center due to lack of space (Field data, 2024)*

In conclusion, the interview data revealed that while some classrooms in the Asuogyaman District exhibit positive attributes such as adequate infrastructure and engaging aesthetics, challenges such as inadequate ventilation, resource scarcity, and space limitations persist.

Lesson Observation on the State of Early Childhood Classroom Environments

The classroom setting observation was done for ten (10) teachers before the interview. The aim of the observation was to ascertain the actual and the state of the

University of Education,Winneba http://ir.uew.edu.gh

classroom environment in early childhood education settings in the Asuogyaman District. The observation was done using a semi-structured and open-ended observation rating scale. The results of the observation are presented in table 4.3.

Table 4.3: Observation Data on Setup of the Early Childhood Classrooms

Observation Criteria	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	Overall quality
1. The classroom setup											
Class décor	Well decorated	Well decorated	Too old	Well decorated	Well decorated	Too old	Not decorated	Not decorated	Not decorated	Well decorated	5/10 (well decorated)
Organization of materials	Well arranged	Well arranged	Well arranged	Well arranged	Well arranged	In storeroom	Well arranged	Well arranged	Well arranged	Well arranged	10/10 (Well organized class)
Print – rich environment	Smiley walls	Smiley walls	Smiley walls	Smiley walls	Smiley walls	Smiley walls	Few	None	None	Smiley walls	7/10 (Print-rich environs)

University of Education,Winneba http://ir.uew.edu.gh

Rest area	None	None	None	None	None	None	None	None	None	At the Resource	None (No rest rooms)
Flexibility of space	Spacious	Spacious	Crowded	Crowded	Spacious	Spacious	Spacious	Spacious: few	Crowded	Crowded	6/10 (Spacious class)
Learning centers	1	1	1	3	1	0	0	0	1	3	5/10 1 learning center

Source: Field Data (2024)

The data in Table 4.3 revealed that in terms of the setup of the Early Childhood classrooms in the Asuogyaman District, classroom décor is well-decorated in 50% of the classrooms (T1, T2, T4, T5, T10), indicating that half of the classrooms have a visually appealing environment, while the other half either have outdated décor (20%, T3, T6) or no decoration at all (30%, T7, T8, T9). Below are classroom pictures that support this data.

University of Education,Winneba http://ir.uew.edu.gh

Picture of Classroom Décor

Fig.1: A class with lots of material **Fig.2: A poor infrastructure and facility**

Also, the organization of materials is exemplary, with 100% of the classrooms (T1, T2, T3, T4, T5, T7, T8, T9, T10) being well arranged. In terms of a print-rich environment, 70% of the classrooms (T1, T2, T3, T4, T5, T6, T10) have a print-rich setting, while the remaining 30% (T7, T8, T9) lack sufficient print materials. About the availability of rest areas, none of the classrooms (0%) have rest areas within the classroom itself, and only one classroom (T10) has access to a rest area in the resource room. Below (Fig. 3 & 4) are classroom pictures that support this data.

Fig.3: A more print-rich environment **Fig.4: A print-rich environment**

University of Education,Winneba http://ir.uew.edu.gh

Flexibility of space is adequate, with 60% of the classrooms (T1, T2, T5, T6, T7) being spacious, allowing for flexible learning arrangements, while 40% (T3, T4, T9, T10) are crowded. Figures 5 and 6 are classroom pictures that support this data.

Picture of Classroom Space

Fig.5: A more spacious class **Fig.6: A less spacious class**

Lastly, learning centers are present in 50% of the classrooms (T1, T2, T3, T5, T9), with a few having multiple centers (T4, T10). However, 30% of classrooms (T6, T7, T8) lack learning centers. Figure 7 and 8 confirms this.

Picture of Classroom Learning Centres

Fig.7: A class with many learning centers ***Fig.8:*** **A class with a single learning center**

University of Education,Winneba http://ir.uew.edu.gh

The data on Table 4.4 shows that while the organization of materials and print-rich environments are strong points in the district, there are clear areas for improvement in **classroom décor, rest areas, flexibility of space, and the number of learning centers.** Addressing these aspects will enhance the overall quality and effectiveness of the classroom setups in the district.

Table 4.4: Comfort of the Early Childhood Classrooms

Observation Criteria	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	Overall quality
2. The status of the environment											
Lighting	Natural light	2 bulbs	4	2 bulbs	2 bulbs	Natural	2	Natural	2	Natural	Good (7/10)
Temperature	Warm	Cool	Cool	Warm	Warm	Hot	Warm	Cool	Hot	Hot	Poor (7/10)
Ventilation	Airy	Airy	Airy	Poor	Ventilate		Airy	Airy		poor	Good (8/10)
Seating arrangement/ spacing	Round tables	Rectangular table	Round tables	Round tables	Round tables	Round tables	Round tables	Round tables	Round tables	Dual desks	Round and rectangular tables

Source: Field Data (2024)

University of Education,Winneba http://ir.uew.edu.gh

The data on Table 4.4 revealed that 40% of classrooms (T1, T6, T8, and T10) utilize natural light. However, 30% of classrooms (T2, T4, and T5) rely on artificial lighting provided by two bulbs. Conversely, 30% of classrooms (T3, T7, and T9) have issues with damaged bulbs.

About classroom temperature across the classrooms, 40% (T1, T4, T5, and T7) are warm, which might not be ideal for learning. Conversely, 30% of classrooms (T2, T3, and T8) are cool, providing a comfortable environment. However, the remaining 30% of classrooms (T6, T9, and T10) are hot, which can be uncomfortable and distracting for learners.

Regarding ventilation, 50% of classrooms are well-ventilated. Specifically, 20% (T1 and T3) benefit from having eight windows and surrounding trees, while 30% (T2, T7, and T8) are described as airy. However, the remaining 50% of classrooms have ventilation issues. Classrooms T4 and T9, accounting for 20%, rely on ceiling fans, which may not be sufficient. Additionally, T5 and T6 are not well-ventilated, and T10 has smaller windows, each contributing 10% to the total. Figures 9 and 10 are classroom pictures that support this data.

Picture of Ventilation:

A class with widely open windows and trees planted behind the classrooms.

Fig.9: A class with wooden windows **Fig.10: A class with louver blades**

University of Education,Winneba http://ir.uew.edu.gh

The seating arrangements show that 80% of classrooms (T1, T3, T4, T5, T6, T7, T8, and T9) use round tables, which promote collaborative and interactive learning. This arrangement is highly beneficial for early childhood education, fostering group activities and peer interaction. However, 10% of classrooms (T2) use rectangular tables, and another 10% (T10) use dual desks. Classroom pictures that support this data are provided in Figure 11 and 12.

Picture of Seating Arrangements

Fig.11: Class with round tables **Fig.12: Class with rectangular tables**

The data on Table 4.4 suggests that classrooms in the district mainly benefit from natural light, with others requiring lighting maintenance due to damaged bulbs. Temperature control is another area of concern, with 50% of classrooms being warm and uncomfortably hot. Ventilation is adequate in 50% of the classrooms. Seating arrangements are predominantly round tables in 80% of the classrooms, fostering interaction.

Research Question Two: What knowledge do early childhood teachers possess about the classroom environmental factors that influence learners' attentiveness in the Asuogyaman District of Ghana?

University of Education,Winneba http://ir.uew.edu.gh

The second research question comprised eleven (11) items to examine teachers' knowledge of the classroom environmental factors that influence learners' attentiveness in the Asuogyaman District. Teachers were required to tick an option that show consent on these statements using a four-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. For the purpose of the analysis, the responses 'Strongly Disagree' and 'Disagree' were combined and interpreted as denoting 'Disagreement (D)' while the responses, 'Strongly Agree' and 'Agree' were similarly joined as indicating 'Agreement (A)' to the statements. The responses were analysed using frequency, percentages, mean and standard deviation. The mean score was calculated with the formular; mean ($\bar{x}$) = 1 + 2 + 3 + 4 = 10/4 =2.5. Therefore, a mean score above 2.5 implies that majority of the respondents agreed to the statement while ($\bar{x}$) less than 2.5 implies that majority of the respondents disagreed with the statement. For the standard deviation, obtained values below 1.0 indicates the homogeneity or similarity of the responses given to the item while a standard deviation 1.0 or above indicate the heterogeneity or variation in the responses given. The result is shown on Table 4.6 as follows:

University of Education,Winneba http://ir.uew.edu.gh

Table 4.5: Teachers Knowledge of Classroom Factors Influencing Learners' Attentiveness

Statements	Frequency N (%)				
	N	AG	DG	M	SD
The furniture in the classroom contributes to learners' attentiveness.	122	111 (91)	11 (9)	3.21	0.73
Adequate lighting, classroom temperature control and sound absorbing materials contribute to learners focus.	122	113 (93)	9 (7)	3.32	0.73
Classroom layouts disrupt learners' attentiveness.	122	76 (63)	46 (37)	2.71	0.94
Sitting arrangements disrupts learners' attentiveness.	122	81 (66)	41 (34)	2.72	0.88
Classroom Colours disrupt attentiveness.	122	47 (39)	75 (61)	2.35	1.02
Large class size disrupts learners' attentions.	122	`95 (78)	27 (22)	3.04	0.90
Good ventilation in the classroom promotes learner's attentiveness.	122	119 (98)	3 (2)	3.47	0.58
Teaching and learning materials help learners to be attentive during lessons.	122	117 (96)	5 (4)	3.53	0.55
Teaching approaches affects learners' attentiveness in class.	122	98 (80)	24 (20)	3.19	0.81
Teacher-learner interaction promotes learners' attentiveness.	122	114 (93)	8 (7)	3.45	0.69
Learner-learner interaction contributes to learners' attentiveness in the classroom	122	108 (89)	14 (11)	3.15	0.71

Key: Agree (AG), Disagree (DG), Mean (M), Std. Dev (SD)

Source: Field Data (2024)

It is revealed from Table 4.5 that majority of the teachers, 111 (91%), agreed that the furniture in the classroom contributes to learners' attentiveness. Only 11 (9%)

University of Education,Winneba http://ir.uew.edu.gh

of the teachers disagreed with this statement. The mean score of 3.21, coupled with a standard deviation of 0.73, indicates a strong consistency in their consensus. Also, majority of teachers, 113 (93%), agreed that adequate lighting, classroom temperature control, and sound-absorbing materials contribute to learners' focus. Only 9 (7%) of the teachers disagreed. The mean score of 3.32 shows a general agreement, with a similarity in their responses as indicated by the standard deviation of 0.73. About classroom layout, most of the teachers, 76 (63%), agreed that classroom layout can disrupt learners' attentiveness. However, 46 (37%) of the teachers disagreed with this statement. The mean score of 2.71 and standard deviation of 0.94 confirms this agreement with general consistency in their responses.

Similarly, most of the teachers, 81 (66%), agreed that sitting arrangements can disrupt learners' attentiveness. 41 (34%) of the teachers disagreed. The mean score of 2.72, shows a general agreement while with a standard deviation of 0.88, suggests homogeneity in their responses. Again, a minority of the teachers, 47 (39%), agreed that classroom colours can disrupt attentiveness. In contrast, 75 (61%) of the teachers disagreed. The mean score of 2.35, which is below 2.5, indicates disagreement, while the standard deviation of 1.02 suggests variability in their responses. Regarding class size, most of the teachers, 95 (78%), agreed that large class sizes can disrupt learners' attentions. Only 27 (22%) of the teachers disagreed. The mean score of 3.04, with a standard deviation of 0.90, indicates agreement with similarity in their views on this.

The teachers, 119 (98%), also agreed that good ventilation in the classroom promotes learner's attentiveness while 3 (2%) of them disagreed. The mean score of 3.47, indicates agreement with a standard deviation of 0.58, indicating a consensus among teachers. Furthermore, majority of teachers, 117 (96%), agreed that teaching and learning materials help learners to be attentive during lessons. however, 5 (4%) of

University of Education,Winneba http://ir.uew.edu.gh

the teachers disagreed. The mean score of 3.53, which is above 2.5, indicates agreement while the standard deviation of 0.55 shows that the teachers shared similar views on this. In terms of the idea that teaching approaches affect learners' attentiveness in class, most teachers, 98 (80%), agreed to this with only 24 (20%) of them disagreeing. The mean score of 3.19, with a standard deviation of 0.81, suggests agreement with consistency in their views.

Similarly, strong majority of teachers, 114 (93%), agreed that teacher-learner interaction promotes learners' attentiveness. Only 8 (7%) of the teachers disagreed. The mean score of 3.45, which is above 2.5, indicates a general agreement while the standard deviation of 0.69, shows similar responses. Lastly, the teachers also massively, 108 (89%), agreed that that learner-learner interaction contributes to learners' attentiveness in the classroom. 14 (11%) of the teachers disagreed. The mean score of 3.15, with a standard deviation of 0.71, indicates agreement with similarity in their responses.

In conclusion, the data revealed that early childhood teachers in the Asuogyaman District perceive various classroom environmental factors as influential on learners' attentiveness. These factors, ranked in highest level of agreement, included instructional materials (M=3.53), good ventilation (M=3.47), teacher-learner interactions (M=3.45), proper lighting and class temperature, (M=3.32), furniture quality (M=3.21), teaching approaches (M=3.19), learner- learner interactions (M=3.15), class size (M=3.04). Other factors least emphasized included

From the analysis of the interview data, it was found that early childhood teachers in the Asuogyaman District of Ghana possess knowledge about the factors influencing learners' attentiveness in classroom environments included the need for child-centered, resources rich and playful learning environments with small class

University of Education,Winneba http://ir.uew.edu.gh

sizes and engaging activities, good ventilation and lighting, visual and auditory stimuli such as colourful pictures and interactive tools like TV and real objects. Three themes emerged as follows;

Theme 1: Teachers' Knowledge of the Nature of Early Childhood Classroom Environment

The interview responses revealed that the teachers perceived the nature of Early childhood classrooms to be child-centered, playful learning environments with small class sizes and engaging activities, alongside print-rich, visually stimulating settings that connect classroom learning with real-world experiences and encourage exploration and interaction. Two sub- themes emerged as follows:

Sub-theme 1: Child-Centered and Playful Learning Environment

One of the teachers stated:

> *Early childhood classroom environment is helping the little ones perform classroom activities in a more relaxing manner. Eg. the class should be spacious, the class size should be small (two teachers to 20 pupils to assist the learner). (Field data, 2024)*

On the other hand, another teacher explained:

> *It should be activity based; teaching should not be in abstract. It should be child centered so as they play, they learn at the same time." (Field data, 2024)*

Furthermore, a teacher mentioned:

> *Early childhood classroom environment is a place where learners between the ages of 4 and 5 learn. And as a teacher, you should come down to their level, learn from them as they learn from you. The environment should be playful and activities should be enjoyable. (Field data, 2024)*

Lastly, another hinted that:

> *An early childhood classroom environment should be child friendly, free, playful that can promote learning. (Field data, 2024)*

University of Education,Winneba http://ir.uew.edu.gh

Sub-Theme 2: Print-Rich and Visual Stimulating Environment

In response, one of the teachers emphasized:

> *It should be print rich, so that any time the child sees materials they can learn. It should not be harmful to the children. (Field data, 2024)*

Another teacher insisted:

> *Early childhood classroom should be colourful, there should be nothing like abstraction, present real object, there should be enough pictures for them to interact with, there should be enough materials – books, the learning centers. Children like to explore, they see they remember, they want to touch. (Field data, 2024)*

Similarly, a teacher explained that:

> *Things learners see outside; they should be able to see same here in the classroom. Eg. when the child sees a goat outside, he should see same in the class; if it is numerals, the child sees 3 on the TV, he should be able to see the same. He makes connection from the classroom and the environment. (Field data, 2024)*

The last teacher hinted that:

> *The early childhood classroom environment should have so many flowers, pictures, brightly colours to attract learners' attention. (Field data, 2024)*

Theme 2: Teachers' Knowledge of Classroom Environmental Factors Contributing to Learners' Attentiveness

The interview data revealed that the teachers recognized that learners' attentiveness is influenced by the presence and variety of teaching and learning materials (TLMs), classroom atmosphere including ventilation and lighting, visual and auditory stimuli such as colourful pictures and interactive learning tools like TV and real objects, and the incorporation of play and interactive activities into teaching methods. These formed the sub-themes as follows:

Sub-theme 1: Teaching and Learning Materials (TLMs)

University of Education,Winneba http://ir.uew.edu.gh

One of the teachers emphasized: *teaching and learning material* (Field data, 2024*)*

Another teacher emphasized: *the TLMs, - when they see lots of materials, they pay attention in the class (Field data, 2024)*

Additionally, a teacher elaborated: *TLMs, (posters, painting of the classroom should be colourful, activities like songs poems, rhymes) to make them pay attention (Field data, 2024)*

Lastly, another teacher pointed out: *enough TLMs (Field data, 2024)*

Sub-theme 2: Classroom Atmosphere and Comfort

It was revealed through the response of one of the teachers that:

> *The atmosphere of the classroom eg, heat, light (Field data, 2024)*

Additionally, a teacher explained:

> *Ventilation – when the room is very hot the learners fill irritated, light – we don't have lights, yesterday for instances when the rains came, the whole place was dark, we could not do anything (Field data, 2024)*

Another response was given that:

> *Proper ventilation (Field data, 2024)*

Lastly, another teacher elaborated that:

> *Proper ventilation, the classroom should not be closer to any offensive smells (Field data, 2024)*

Sub-theme 3: Visual and Auditory Stimuli

One teacher pointed out:

> *TV, Artificial and real objects in the classroom, pictures, flash cards (Field data, 2024)*

Another teacher hinted:

> *Colourful pictures catch their attention (Field data, 2024)*

University of Education,Winneba http://ir.uew.edu.gh

Lastly, a teacher expressed:

> *TV and learning apps or CDs that can help them to focus, real objects (Field data, 2024)*

Sub-theme 4: Play and Rewards

One teacher emphasized:

> *The drawings in the classroom, flash cards, teaching styles (play) – when you are teaching you have to break for them to play small (*Field data, 2024)

Additionally, a teacher mentioned:

> *Rewards in the form of gifts, print rich walls, rhymes, songs the demeanor of the teacher (Field data, 2024)*

Theme 3: Teachers' Knowledge of How Classroom Environmental Factors Contribute to Learners' Attentiveness

The excerpts from the interview revealed, learners' attentiveness is influenced by classroom temperature and comfort, the use of visual aids and real objects to enhance understanding, and effective classroom management and teacher engagement strategies.

Sub-theme 1: Classroom Temperature and Comfort

One teacher highlighted:

> *We don't have fan, so when the weather is hot learners don't pay attention, the hot temperature does not help them to focus (Field data, 2024)*

Another teacher observed:

> *When the sun is up, the temperature doesn't support learning. When the room is cool, the learner will concentrate more (Field data, 2024)*

Lastly, a teacher pointed out:

> *When the classroom is hot, learners will not listen to you they will be fanning themselves and wanting to go out. So, if the classroom is cool*

University of Education,Winneba http://ir.uew.edu.gh

it will help them stay focused (Field data, 2024)

Sub-theme 2: Use of Visual Aids and Real Objects

One teacher described:

> *When you get the real objects and the drawn ones, it makes lessons real... When learners see it, they infer 'aaaaa madam,' this animal I have seen it in my community or we have one of this object at home. It helps them to connect with what you want them to learn (Field data, 2024)*

Another teacher explained:

> *It helps them because what you are teaching, they are seeing it and make references to it. When you have the real object or a model of it helps them to understand the concept easily (Field data, 2024)*

Furthermore, a teacher emphasized:

> *Teaching and learning materials help them understand the topic more (Field data, 2024)*

Sub-theme 3: Classroom Management and Teacher Engagement

One teacher emphasized:

> *When the child knows that he will be appreciated if he puts up good behaviour, he will listen to you as you teach (Field data, 2024)*

Another teacher highlighted:

> *The way the teacher welcomes learners to classroom can contribute to learners being attentive when the teacher is teaching (Field data, 2024)*

Additionally, a teacher observed:

> *When the classroom is ok, everything is in place and learners are comfortable they concentrate though their attention span is short. Children should be able to move freely to perform activities (Field data, 2024)*

In conclusion, the findings from the interview data revealed that early childhood teachers in the Asuogyaman District of Ghana possess knowledge about

University of Education,Winneba http://ir.uew.edu.gh

various factors influencing learners' attentiveness in classroom environments. They emphasized child-centered, playful learning environments with small class sizes and engaging activities. Additionally, they recognized the importance of teaching and learning materials (TLMs), the classroom atmosphere including ventilation and lighting, visual and auditory stimuli such as colourful pictures and interactive tools like TV and real objects. Moreover, they emphasized the significance of incorporating play and interactive activities into teaching methods to enhance attentiveness and learning among young learners.

Research Question Three: In what manner do early childhood teachers in the Asuogyaman District utilize the classroom environment in dealing with learners' attentiveness?

The third research question aimed at examining how early childhood teachers within the Asuogyaman District utilize the classroom environment in dealing with learners' attentiveness. It had ten (10) items. Respondents were required to tick an option that show their level of agreement or disagreement with these statements on a four-point Likert scale, where 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, and 4 = Strongly Agree. For the purpose of the analysis, the responses 'Strongly Disagree' and 'Disagree' were combined and interpreted as denoting 'Disagreement (D)' while the responses, 'Strongly Agree' and 'Agree' were similarly joined as indicating 'Agreement (A)' to the statements. The responses were analysed using frequency, percentages, mean and standard deviation. The mean score was calculated with the formula r; mean ($\bar{x}$) = 1 + 2 + 3 + 4 = 10/4 =2.5. Therefore, a mean score above 2.5 implies that majority of the respondents agreed to the statement while ($\bar{x}$) less than 2.5 implies that majority of the respondents disagreed with the statement. For the standard deviation, obtained values below 1.0 indicates the homogeneity or similarity of the

University of Education,Winneba http://ir.uew.edu.gh

responses given to the item while a standard deviation 1.0 or above indicate the heterogeneity or variation in the responses given. The results are presented on table 4.6 as follows;

Table 4.6 Teachers Use of Classroom Environment to Enhance Learners' Attentiveness

Statements	**Frequency N (%)**				
	N	AG	DG	M	SD
I use a visually stimulating classroom design with organized learning centers to capture learners' attention.	122	110 (90)	12 (10)	3.02	0.46
I create a calm and inviting atmosphere by using soft lighting and soothing colours to promote learners focus during lesson.	122	99 (81)	23 (19)	3.09	0.70
I provide a variety of sensory materials, such as toys or concrete objects, to engage learners 'to enhance their attentiveness.	122	110 (90)	12 (10)	3.13	0.64
I establish clear expectations for behaviour and classroom rules to encourage attentiveness and minimize disruptions.	122	115 (94)	7 (6)	3.30	0.63
I use visual aids, such as charts and posters, to help learners stay focused and remember important information.	122	113 (93)	9 (7)	3.29	0.69
I include regular movement breaks and physical activities to increase alertness and attention span.	122	113 (93)	9 (7)	3.16	0.64

University of Education,Winneba http://ir.uew.edu.gh

I offer individualized support and differentiate instruction to cater to the unique needs and interests of each child.	122	105 (86)	17 (14)	3.13	0.68
I create a print-rich environment by displaying words and labels throughout the classroom to promote literacy and language development.	122	103 (84)	19 (14)	3.06	0.73
I use classroom reward system or positive reinforcement strategy to motivate learners and promote attentiveness.	122	113 (93)	9 (7)	3.21	0.64
I use technology and multimedia resources, such as educational apps, to engage learners and enhance their attentiveness.	122	79 (65)	25 (35)	2.95	0.73

Key: Agree (AG), Disagree (DG), Mean (M), Std. Dev (SD)

Source: Field Data (2024)

The data in Table 4.6 revealed that majority of the teachers, 110 (90%), agreed that using a visually stimulating classroom design with organized learning centers helps capture learners' attention. Only 12 (10%) disagreed. The mean score of 3.02 indicates a general agreement, while the standard deviation of 0.46 suggests homogeneity in their responses. Similarly, most teachers, 99 (81%), agreed that creating a calm and inviting atmosphere using soft lighting and soothing colours promotes learners' focus. In contrast, 23 (19%) disagreed. The mean score of 3.09 shows a general agreement, with a standard deviation of 0.70 suggesting similarity in the teachers' responses. Again, a significant majority, 110 (90%), agreed that providing a variety of sensory materials, such as toys or concrete objects, enhances

University of Education,Winneba http://ir.uew.edu.gh

learners' attentiveness. Only 12 (10%) disagreed. The mean score of 3.13 indicates a general agreement, while the standard deviation of 0.64 suggests a consensus among the teachers.

Also, nearly all the teachers, 115 (94%), agreed that establishing clear expectations for behaviour and classroom rules encourages attentiveness and minimizes disruptions. However, 7 (6%) had contrary opinions to this. The mean score of 3.30 indicates agreement, with a standard deviation of 0.63 suggesting homogeneous responses. With regards to the use of visual aids, majority of the teachers, 113 (93%), agreed that using visual aids, such as charts and posters, helps learners stay focused and remember important information. On the contrary, 9 (7%) disagreed. This agreement is further affirmed by the mean score of 3.29, which is above 2.5 with the standard deviation of 0.69 suggesting a general consensus. In addition, most teachers, 113 (93%), agreed that including regular movement breaks and physical activities increases alertness and attention span. Only 9 (7%) of them disagreed. The mean score of 3.16 shows a general agreement, while the standard deviation of 0.64 indicates consistency in the teachers' responses.

In support of these earlier statements, majority of the teachers, 105 (86%), similarly agreed that offering individualized support and differentiated instruction caters to the unique needs and interests of each child. However, 17 (14%) of the teachers disagreed. The mean score of 3.13 indicates a general agreement, with the standard deviation of 0.68 also confirming similarity of the teachers' responses. About the role of rich print environment in learners' attentiveness, 103 (84%), agreed that creating a print-rich environment by displaying words and labels throughout the classroom promotes literacy and language development. However, 19 (16%) disagreed. The mean score of 3.06 shows a general agreement, while the standard

University of Education,Winneba http://ir.uew.edu.gh

deviation of 0.73 shows a consistent agreement among the teachers. Also, a significant majority, 113 (93%), agreed that using a classroom reward system or positive reinforcement strategy motivates learners and promotes attentiveness. Only 9 (7%) of these teachers disagreed. The mean score of 3.21 still indicates agreement, with the standard deviation of 0.64 also suggesting homogeneity in their responses.

On the last statement about the use of technology, 79 (65%), agreed that using technology and multimedia resources, such as educational apps, engages learners and enhances their attentiveness. However, 25 (35%) had opposing views. The mean score of 2.95 indicates a general agreement, while the standard deviation of 0.73 suggests consistency in responses.

In conclusion, the survey data indicates that early childhood teachers in the Asuogyaman District widely utilize various strategies in their classroom to enhance learners' attentiveness. These strategies, based on the highest agreement, included, setting clear expectations for behaviours (M=3.30), use of visual aids (M=3.29), classroom reward systems (M=3.21), regular movement breaks (M=3.16), variety of sensory materials (M=3.13), and individualized support (M=3.13). Other strategies such as use of soft lighting and soothing colours, print-rich environments, learning centers, as well as employing technology and multimedia resources were less emphasized.

From the analysis of the interview data, it was revealed that the teachers sustain learners' attention by preparing and adapting teaching materials thoughtfully, employing play-based and active learning strategies both indoors and outdoors, integrating songs, rhymes, and chants to engage learners, and providing personalized attention and peer interactions to maintain focus and participation in classroom activities. The three themes that emerged are as follows:

University of Education,Winneba http://ir.uew.edu.gh

Theme 1: Preparation and Adaptation of Teaching Materials

One teacher shared:

> *I prepare most of the materials with the help of the internet. I study these learners to know when they are tired or when a child is hungry (Field data, 2024)*

Another teacher explained:

> *I prepare most of the materials in the classroom myself... flash cards, reading materials were given to us by some NGO for the learners use (Field data, 2024)*

Additionally, a teacher stated:

> *Everything I teach I paste it on the wall. If I do these, it helps me because the ones after them will also use it. I change them when I feel they are old (Field data, 2024)*

The responses indicated that the teachers emphasize the importance of preparedness and adaptation of teaching materials to engage learners effectively. They utilize resources from the internet, create classroom-specific materials like flashcards, and ensure that learning aids are visually accessible and regularly updated.

Theme 2: Use of Play-Based and Active Learning Strategies

One teacher explained:

> *I mostly use the play based, activity base, questioning and answers approach to help learners refocus on what is being taught (Field data, 2024)*

In contrast, another teacher revealed:

> *Sometimes I use role play or storytelling to refocus learners' attention, peer teaching, most lessons should always be learner centered (Field data, 2024)*

Moreover, a teacher noted:

> *Most times they lose focus during the afternoon, so I take them out. We normally have our classes under the trees. We do the phonics mostly outside (Field data, 2024)*

University of Education,Winneba http://ir.uew.edu.gh

It is revealed based on the response that the teachers employ play-based methods, active learning techniques, and learner-centered approaches to maintain learner focus. This includes role-playing, storytelling, outdoor activities under trees for phonics lessons, and interactive questioning and answering sessions tailored to learner needs.

Theme 3: Use of Songs, Rhymes, and Chants

One teacher shared:

> *I also use songs and rhymes. Eg. in teaching numeral, and number names I normally sing this song with flash cards for easy identification 'number one, number one, where are you? (Field data, 2024)*

In addition, another teacher emphasized:

> *I use rhymes, call and responds (focus, focus, focus …… everybody focus, eyes on me …… eye on you) songs" (T2: Female, 7yrs experience, (Field data, 2024)*

Furthermore, a teacher stated:

> *I use songs that are related to topic we are discussing to redirect their attention (Field data, 2024)*

Lastly, teachers across multiple instances emphasized:

> *I use songs and rhymes to refocus their attention (T4, T6, T7, T8, T9)*

The responses suggest that songs, rhymes, and chants are popular tools used by the teachers to enhance learning engagement. These auditory cues are integrated into lessons to reinforce concepts, improve retention, and redirect attention effectively across various topics and learning objectives.

Theme 4: Personalized Attention and Peer Interaction

One teacher mentioned:

> *Sometimes, the learners themselves prompt their peers, look, madam is teaching. (Field data, 2024)*

University of Education,Winneba http://ir.uew.edu.gh

Another teacher also revealed:

> *"Sometimes I use questions and answer (Field data, 2024)*

In addition, a teacher added:

> *I call them by their names to re-focus them (Field data, 2024)*

Furthermore, a teacher noted:

> *Sometimes, we go out to run around the school park, we use songs, rhymes to refocus their attention (Field data, 2024)*

It is revealed based on this theme that the teachers foster attentive classroom environment through personalized attention and peer interaction strategies. They encourage peer prompting, engage learners in interactive question-answer sessions, and use individualized attention techniques like addressing learners by name to maintain focus and participation.

Overall, the interview data indicated that early childhood teachers in the Asuogyaman District leverage a combination of interactive teaching methods, adapted materials, and engaging activities within the classroom environment to optimize learners' attentiveness.

Research Question Four: What are the needed resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District?

The essence of this research question was to identify the available resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District. There were nine (9) items for the teachers to rate their availability of these resources using a four-point Likert scale, where "Always

University of Education,Winneba http://ir.uew.edu.gh

Available (AV)", "Often Available (OV)," "Rarely Available (RV)", and "Never Available (NV)". The data were analysed using frequency and percentages. Table 4.7 shows the results.

Table 4.7: Available resources for the creation of classroom learning environment towards learners' attentiveness

Statements	**Frequency N (%)**				
	N	AV	OV	RV	NV
Technological resources (e.g., TV, computers, tablets, projectors, MP3s).	122	12 (10)	9 (7)	18 (15)	83 (68)
Age-appropriate books (readers, big books, etc)	122	25 (20)	42 (35)	2 (2)	53 (43)
Visual aids (Charts, posters, diagrams, and flashcards, etc.).	122	77 (63)	29 (24)	10 (8)	6 (5)
Digital learning platforms or educational software	122	9 (8)	4 (3)	16 (13)	93 (76)
Writing materials (pencils, crayons, markers, sharpener, etc.)	122	98 (80)	21 (18)	3 (2)	0 (0)
Resource room or center	122	31 (25)	12 (10)	8 (7)	71 (58)
Manipulative (blocks, shapes, toys, puzzles, etc.)	122	0 (0)	7 (6)	17 (14)	98 (80)
Sensory materials (sand and water tables, play dough, etc.)	122	0 (0)	5 (4)	3 (2)	114 (94)
More than one teacher in my class	122	46 (38)	22 (18)	4 (3)	50 (41)

Key: Always Available (AV), Often Available (OV), Rarely Available (RV), Not Available (NA)

Source: Field Data (2024)

University of Education,Winneba http://ir.uew.edu.gh

The data presented in Table 4.7 indicates that for technological resources such as TVs, computers, and tablets, only 12 (10%) of teachers reported these as always available, 9 (7%) as often available, 18 (15%) as rarely available, and 83 (68%) indicated they are not available. This suggests that majority of teachers (68%) perceive technological resources as not available. For age-appropriate books, 25 (20%) of teachers reported them as always available, 42 (35%) as often available, 2 (2%) as rarely available, and 53 (43%) indicated they are not available. This shows that while some teachers have access to age-appropriate books, a notable 43% feel that these resources are lacking. Regarding visual aids, a significant 77 (63%) of teachers reported these as always available, 29 (24%) as often available, 10 (8%) as rarely available, and only 6 (5%) indicated they are not available. This indicates that visual aids are widely available.

In terms of digital learning platforms, only 9 (8%) of teachers reported these as always available, 4 (3%) as often available, 16 (13%) as rarely available, and 93 (76%) indicated they are not available. This points to a major shortage of access to digital resources in the district. When it comes to writing materials, a substantial 98 (80%) of teachers reported these as always available, while 21 (18%) indicated they are often available, 3 (2%) as rarely available, and none (0%) reported these as not available. This means that teachers perceived writing materials as available in the classrooms. Regarding the resource room or center, 31 (25%) of teachers reported it as always available, 12 (10%) as often available, 8 (7%) as rarely available, and 71 (58%) indicated it is not available. This indicates a lack of access to supplementary resources.

For manipulative resources, 0 (0%) of teachers reported these as always available, 7 (6%) as often available, 17 (14%) as rarely available, and a significant 98

University of Education,Winneba http://ir.uew.edu.gh

(80%) indicated they are not available. This suggests a lack of manipulative resources. Similarly, for sensory materials, none (0%) of teachers reported these as always available, 5 (4%) as often available, 3 (2%) as rarely available, and an overwhelming 114 (94%) indicated they are not available. This highlights a lack of sensory materials. Finally, concerning the presence of more than one teacher in the class, 46 (38%) of teachers indicated this arrangement is always available, 22 (18%) as often available, 4 (3%) as rarely available, and 50 (41%) indicated it is not available. While some teachers reported having additional teachers in their class, others reported none.

Based on the survey data, resources for creating an attentive classroom environment in the Asuogyaman District are limited. Key resources that were reported as widely available included visual aids (63%) and basic writing materials (80%). However, resources such as technological tools (68% not available), digital learning platforms (76% not available), age-appropriate books (43% not available), resource rooms or centers (58% not available), manipulative (80% not available), and sensory materials (94% not available) were reported as lacking.

Excerpts from the analysis of the interview data further confirmed that teachers lack resources for creating an attentive classroom environment. They attributed to these to several factors including theft by community members. These formed the sub-themes as follows:

Theme 1: Availability and Condition of Resources to create attentive learning environment

Reflecting on the availability and condition of materials, one teacher noted:

> *We do not have teaching materials and the few are also old". "We don't have materials pasted on the walls because people from the community come to remove them in our absence (Field data, 2024)*

University of Education,Winneba http://ir.uew.edu.gh

In contrast, another teacher highlighted:

> *I do not have lots of teaching and learning materials – I made some and I have to buy most of them (Field data, 2024).*

Another teacher lamented:

> *We don't have much materials because it is stolen by the people from the community before we came back from vacation (Field data, 2024).*

Similarly, another teacher observed:

> *The community members also remove our materials when they see it" (Field data, 2024).*

Theme 2: Teachers' training on the use of needed resources to create attentive learning environment.

When teachers were asked if they had received any specific training or support on how to use available resources to improve classroom attentiveness, one teacher stated:

> *We do have some training on these materials, but those who came to train us didn't even bring any materials at all. They just come and talk, talk and go (Field data, 2024).*

Another teacher shared:

> *They taught us about sensory activities, but without materials, and it is very difficult to actually apply those ideas in the classroom. (Field data, 2024)*

Additionally, a teacher noted:

> *We don't really have any workshops that is focus on classroom resources. It feels like there is nothing of that sort, but we really need it" (Field data, 2024).*

Lastly, another teacher remarked:

> *I have had some training in the past, but it's not about resources. Sometimes I feel like I'm left on my own to figure out how to engage my learners. (Field data, 2024).*

University of Education,Winneba http://ir.uew.edu.gh

The data suggest that many of the ECE teachers highlighted a lack of regular training opportunities on the use of available resources to create attentive learning environment.

Theme 3: Strategies to overcome the resource constraint in creating attentive learning environment

The interview data revealed that teachers advocated for additional support and resources from government and donor agencies, improved classroom infrastructure and design through consultation with experts, and increased collaboration with parents and stakeholders to enhance the learning environment. Three sub-themes emerged as follows:

Sub-theme 1: Advocacy for Resources Support

One of the teachers remarked:

> *"We will continue to improvise but parents have to come on board to help the learners at home. I will be glad if government or donor agencies will support us with TLM (Field data, 2024)*

Additionally, another teacher proposed:

> *The government and other stakeholders of education should help with the financing of the materials. The moneys should be released on time (Field data, 2024)*

Lastly, a teacher appealed:

> *Non-Profit organizations should come to our aid (Field data, 2024)*

The responses revealed that teachers emphasized the need for parental involvement in supporting learners at home and urge government and donor agencies to provide timely support for teaching and learning materials.

Sub-theme 2: Infrastructure and Classroom Design

One teacher emphasized:

> *Children want to explore a lot, we need the government to help us, I*

University of Education,Winneba http://ir.uew.edu.gh

> *need a projector so that lessons can be projected for the learners... classrooms should be restructured, it should be spacious especially the new buildings they are putting up (Field data, 2024)*

Moreover, another teacher pointed out:

> *Early childhood classrooms should have a big classroom space so that the teacher and learners can perform activities freely. So, the authorities and stakeholders that help put up school buildings should take note" (Field data, 2024)*

Furthermore, a teacher suggested:

> *I want to suggest that before building a KG classroom, Early childhood expects should be consulted... when the school environment is welcoming and comfortable, when learners are at home they would like to run to school (Field data, 2024)*

The responses indicated that infrastructure and classroom design improvements are advocated for by teachers to enhance learning environments, emphasizing the need for spacious classrooms, better facilities like projectors, and consultations with early childhood experts during school construction.

Sub-theme 3: Collaboration and Advocacy with Stakeholders

According to one of the teachers:

> *We have reported the theft to the opinion leaders; currently volunteers are watching the school (Field data, 2024)*

Furthermore, a teacher suggested:

> *Parents should be committed towards their wards education. We are hoping parents will collaborate with us. We do call the parents attention to this during PTA meeting. We also call the parents to follow up on the children (Field data, 2024)*

It was revealed through this theme that teachers called for collaboration with stakeholders for increased teacher-to-pupil ratios and parental involvement, alongside efforts to address theft and ensure school safety through community engagement.

From the lessons observed, the following data as shown on Table 4.8 were gathered on the availability of resources for the creation of classroom learning

University of Education,Winneba http://ir.uew.edu.gh

environment towards learners' attentiveness.

Table 4.8: Observation Data on Availability and Use of Instructional Materials

Observation Criteria	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	Overall quality
1. Describe the availability and use of instructional materials											
Age-appropriate books	In storeroom	All in place	All in place	All in place	All in place	None	In All in place	Few	None	All in place	Adequate (7/10)
Writing Materials (pencils, crayons, markers, sharpener, etc.)	All in place	All in place	All in place	All in place	All in place	All in place	All in place	All in place	All in place	All in place	Adequate (10/10)
Manipulative (blocks, shapes, toys, puzzles, etc.)	None	No blocks	No shapes/ blocks	All in place	None	None	No toys/ blocks	None	Only puzzles	All in Resource rom	Lacking (3/10)

University of Education,Winneba http://ir.uew.edu.gh

Sensory Materials (sand and water tables, playdough, etc.)	Only Sand tray	All in place	None	Only Sand tray	None	None	Only Sand tray	None	All in Resource room	Lacking (2/10)
Visual Aids (Charts, posters, diagrams, and flashcards, etc.)	Few	All in place	Few	All in place	In place	In storeroom	Few	None	Few	Adequate (5/10)
Technological access- TV sets, tablets, white boards	Only teacher's phone	Only teacher's phone	teacher's phone music box	Tv but damaged	Only teacher's phone	Only m teacher's Phone	Only TV	Only teacher's phone	Only TV	Lacking (2/10)

Source: Field Data (2024)

The data in Table 4.8 revealed that in 60% of classrooms (T2, T3, T4, T5, T7, and T10), all age-appropriate books are readily available. However, 40% of classrooms face challenges in this area: 10% (T1) have books stored away and not

University of Education,Winneba http://ir.uew.edu.gh

easily accessible, 10% (T8) have only a few books available, and 20% (T6 and T9) have no books at all.

With regards to writing materials, they are fully available in all 10 classrooms (T1 to T10), representing 100% coverage. This shows a strong emphasis on providing essential tools for writing and drawing activities, which are critical for early childhood development. Supporting classroom pictures are provided in Figure 13 and 14.

Picture of Available Books and Writing Materials

Fig.13: Sample textbooks for learners **Fig.14: Sample of books and writing materials**

The availability of manipulative is, however, a concern, with only 10% of classrooms (T4) having a full set of these materials. In contrast, 90% of classrooms have limited or no access to manipulative: 40% (T1, T5, T6, T8) have none, 30% (T2, T3, T7) lack specific types such as blocks or toys, 10% (T9) have only puzzles, and another 10% (T10) keep manipulative in the resource room, not in the classroom. Sample writing materials are shown in Figure 16 and 17.

University of Education,Winneba http://ir.uew.edu.gh

Picture of Manipulative Materials

Fig.15: Class with lots of manipulative **Fig.16: Class with few Manipulative**

Also, sensory materials are available in only 10% of classrooms (T2). The majority, 80%, either have limited sensory materials, like only sand trays (40% in T1, T4, T7, and T9), or none (40% in T3, T5, T6, and T8). Additionally, 10% (T10) have sensory materials located in the resource room, not readily accessible to learners.

A sample picture is shown in Figure 15.

Fig.17: Class with a sand tray

Again, visual aids are fully in place in 30% of classrooms (T2, T4, and T5), enhancing the visual learning environment. However, 40% of classrooms (T1, T3, T7, and T9) have only a few visual aids, 10% (T8) have none, and another 10% (T6) keep

University of Education,Winneba http://ir.uew.edu.gh

them in storage. Additionally, 10% (T10) have visual aids hanged on the walls. Finally, technological access is notably limited, with 70% of classrooms (T1, T2, T3, T5, T6, T8, and T10) relying solely on the teacher's phone. Only 20% (T7 and T9) have access to a TV, and even then, the TVs are sometimes not fully functional. One classroom (T4) has a damaged TV.

In conclusion, this data shows that while 100% of classrooms have writing materials, only 10% have all manipulatives and sensory materials, 30% have all visual aids, 60% have all age-appropriate books, and 70% rely on the teacher's phone for technological access.

Discussion of Findings

Research Question One: The State of the Classroom Environment in Early Childhood Education Settings in The Asuogyaman District

The findings of the study indicated the state of the classroom environment in early childhood education settings in the Asuogyaman District is characterized by a varied landscape of conditions and resources. In the survey data, teachers generally perceive their classrooms positively, citing good physical design, maintenance, lighting, ventilation, child-friendliness, and adequate working space. However, there are concerns regarding classroom décor and the display of materials, which receive mixed responses. Interview data further reveals a spectrum of classroom conditions, ranging from well-equipped and stimulating environments with ample teaching materials and learning centers to spaces constrained by theft of resources, inadequate ventilation, broken windows, and insufficient lighting. The observation data highlights strengths in organization and print-rich environments but deficiencies in critical areas needing improvement such as classroom décor, rest areas, space

University of Education,Winneba http://ir.uew.edu.gh

flexibility, and learning center provision. Classroom environments primarily rely on natural light, though maintenance for damaged bulbs is required in some instances. Temperature control presents challenges, with half of the classrooms noted as warm or uncomfortably hot, and ventilation adequate in only half of them. Seating arrangements predominantly feature round tables, fostering interaction. Access to instructional materials varies widely, with all classrooms having writing materials, but only a minority having all necessary manipulatives, sensory items, visual aids, and age-appropriate books, while technological access primarily relies on teachers' phones.

In summary, the findings from surveys, interviews, and observations converge on several key points regarding the state of early childhood classroom environments in the Asuogyaman District. These include positive perceptions of classroom conditions tempered by concerns over décor and resource provision, variability in environmental quality, the critical role of instructional materials, the importance of learner interaction, challenges with technological access and environmental control, and a strong emphasis on child-centered practices.

These findings underscore the essential elements required for early childhood classroom environments to function effectively. Berti, Cigala, and Sharmahd (2019) conceptualize the learning environment as encompassing comprehensive design features such as size, density, privacy, activity settings, technical attributes, and outdoor play spaces. Similarly, Kostelnik et al. (2019), advocate for purposefully crafted environments that support independent exploration and learning through clearly labeled activity centers and a diverse array of materials.

The current study's findings, which highlight well-organized and print-rich environments, thoughtful physical design, and child-friendly spaces, are consistent

University of Education,Winneba http://ir.uew.edu.gh

with existing literature. Hamre & Pianta (2018) emphasize the profound impact of warm, responsive teacher-learner relationships in fostering a sense of safety, trust, and belonging among children, crucial for their social and emotional development.

However, concerns regarding classroom décor, the availability of instructional materials, rest areas, space flexibility, and learning center provision reflect broader issues identified in contemporary research. Fridkin (2018) underscores the critical role of physical environment factors like classroom layout, lighting, temperature, and noise levels in shaping children's ability to focus and engage. Similarly, Siraj-Blatchford (2003) underscores the importance of age-appropriate learning materials, interactive technology, diverse literature, and sensory materials in facilitating hands-on learning experiences and promoting holistic child development.

The compromised state of early childhood classrooms in Ghana has been documented in previous studies. Baafi (2021), Asamoah et al. (2020), and Kissi-Abrokwah et al. (2021) highlight insufficient resources as a significant barrier to effective learning in Ghanaian educational settings, particularly at the Early Childhood Education (ECE) level. These studies reveal challenges such as large class sizes, inadequate seating, high teacher-to-learner ratios, irregular testing schedules, and limited teacher attention, all contributing to behavioural issues among preschoolers.

Amissah-Essel et al. (2020) focused on Early Childhood Care and Development (ECCD) centers in Cape Coast, noting challenges in both private and public centers related to compromised physical environments. They recommend collaborative efforts among stakeholders to improve infrastructure, provide financial support for essential equipment, and offer in-service training for educators to enhance

University of Education,Winneba http://ir.uew.edu.gh

their understanding of the significance of physical environments in children's development.

Similarly, Oppong Frimpong's (2019) study in the Ga-West Municipality highlighted issues such as inappropriate furniture, under-resourced learning centers, and overcrowded classrooms in ECE centers, which hinder effective teaching practices and limit the potential of classroom environments to facilitate learning. Recommendations include infrastructure upgrades, optimal arrangement of classroom spaces to facilitate movement, and provision of appropriately sized furniture and resources to enrich learning experiences.

It is evident that the findings from this study show the critical elements necessary for creating effective early childhood classroom environments in the Asuogyaman District and similar settings. The research aligns with existing literature emphasizing the importance of well-organized spaces, thoughtful physical design, and child-friendly atmospheres to support learning and development. Positive teacher-learner interactions emerge as pivotal, fostering a sense of security and trust crucial for social-emotional growth. Addressing these challenges requires collaborative efforts among stakeholders to improve infrastructure, enhance teacher training, and ensure equitable access to educational resources.

Research Question Two: Early Childhood Teachers' Knowledge about the Classroom Environmental Factors That Influence Learners' Attentiveness in The Asuogyaman District of Ghana?

The findings revealed that early childhood teachers in the Asuogyaman District perceived various classroom environmental factors as crucial for learners' attentiveness. These included the importance of instructional materials, environmental quality (including ventilation and lighting), teacher-learner interactions, and the role

University of Education,Winneba http://ir.uew.edu.gh

of engaging activities and stimuli in enhancing attentiveness. The survey data indicated that they prioritize instructional materials (M=3.53), good ventilation (M=3.47), teacher-learner interactions (M=3.45), proper lighting and class temperature (M=3.32), furniture quality (M=3.21), teaching approaches (M=3.19), learner-learner interactions (M=3.15), and class size (M=3.04) as influential factors. Conversely, other factors such as classroom décor and technological access were less emphasized. Analysis of interview data further supports these perceptions, indicating that, teachers in the Asuogyaman District value child-centered, resource-rich, and playful learning environments with small class sizes and engaging activities. They emphasize the importance of good ventilation, adequate lighting, and the presence of visual and auditory stimuli like colourful pictures, interactive tools such as TVs, and real objects to enhance learner engagement and attentiveness in the classroom.

The significance of instructional materials, as evidenced in this study, aligns closely with Neuman & Dickinson's report (2010), emphasizing their crucial role in enhancing learners' attentiveness and overall learning experiences. Access to appropriate learning materials not only fosters attentiveness, participation, and engagement but also stimulates curiosity and supports various learning styles through age-appropriate educational resources and technological tools. Regarding environmental quality, studies by Barrett et al. (2013) and Tanner (2009) underscore the importance of classroom design, though acknowledging divergent views suggesting the impact may vary depending on individual learner characteristics and teaching methodologies.

Findings on teacher-learner interactions resonate with Hamre & Pianta (2001), highlighting their pivotal role in cultivating strong relationships that positively influence attentiveness. Additional research by Smith et al. (2016) and Bashar and

University of Education,Winneba http://ir.uew.edu.gh

Ahmad (2018) further substantiate the link between frequent, meaningful interactions and heightened motivation, attentiveness, and academic achievement among learners, emphasizing the benefits of warmth, support, and clear communication in fostering a secure learning environment. This responsive behaviour from teachers nurtures a sense of security and trust among young learners, promoting their social and emotional development, which correlates closely with attentiveness (Rimm-Kaufman et al., 2000). In African contexts, where teachers often serve as mentors and role models (Anamuah-Mensah, 2003; Brouwers et al., 2018), these interactions hold particular significance.

Furthermore, the role of engaging activities and environmental stimuli in enhancing attentiveness aligns with Dong et al. (2021), who found that factors such as lighting, acoustics, colour, temperature, and seating arrangements significantly influence teacher and learner behaviours, thereby impacting attentiveness positively. Kaplan et al. (2022) also highlight the shift toward a child-centered approach in early childhood education, which has been associated with improved attentiveness and active engagement by focusing on individual learner needs and interests (Scheirlinck et al., 2023). Additionally, the integration of technology, such as TVs, supports these findings, as noted by Kay (2006), who explored how digital tools can enhance learner engagement and attentiveness beyond traditional classroom attributes.

These findings suggest the multifaceted approach required to create effective classroom environments that optimize attentiveness among early childhood learners, integrating instructional materials, supportive interactions, environmental considerations, and technological innovations to foster comprehensive educational experiences.

University of Education,Winneba http://ir.uew.edu.gh

Research Question Three: in what manner do Early Childhood Teachers in the Asuogyaman District utilize the classroom environment in dealing with learners' attentiveness?

The findings of the study indicated that Early childhood teachers in the Asuogyaman District employ various strategies including play-based and active learning strategies, visual aids, instructional resources, and personalized attention to enhance learners' attentiveness, as indicated by both survey and interview data. The survey findings highlight strategies such as setting clear behavioural expectations, using visual aids, implementing classroom reward systems, incorporating regular movement breaks, offering a variety of sensory materials, and providing individualized support as widely utilized methods to engage learners effectively. The interview data further reveals that teachers sustain learners' attention through thoughtful preparation and adaptation of teaching materials, employing play-based and active learning strategies both indoors and outdoors, integrating songs, rhymes, and chants to enhance engagement, and fostering personalized attention and peer interactions.

These findings illustrate that teachers employ diverse strategies to foster attentiveness and active engagement among learners, a perspective also affirmed by Redeș et al. (2023). The emphasis on play-based and active learning strategies aligns with İnan's (2020) study, which highlights that child-centered approaches, such as play, enhance comprehension and performance by nurturing learners' interests and autonomy. Similarly, Sakai et al. (2019) emphasize that child-centered practices meet developmental needs and individual abilities, promoting greater attentiveness in classrooms.

University of Education,Winneba http://ir.uew.edu.gh

Setting clear behavioural expectations, as highlighted by Kenari (2018), is crucial for ensuring learner attention and output. This finding is consistent with the study's emphasis on creating environments that effectively communicate expectations to learners. Moreover, the use of visual aids to enhance attentiveness resonates with Garcia and Weiss (2019), who emphasize the role of colourful and interactive elements in sustaining attention. Both studies underscore the importance of integrating visually stimulating materials thoughtfully, considering design and interactivity, to create positive and engaging learning environments.

Additionally, the strategic use of instructional resources to enhance attentiveness aligns with Smith and Johnson's (2017) findings, demonstrating increased learner engagement and focus through visually stimulating materials. Their study, supported by surveys and assessments, shows significant improvements in attentiveness among learners exposed to such materials, corroborated qualitatively through classroom observations and interviews where learners exhibit heightened interest and participation.

Furthermore, the practice of providing personalized attention to enhance attentiveness echoes Nair et al. (2017) and Smith et al. (2016), who emphasize the positive impact of frequent, meaningful interactions between teachers and learners. Bashar and Ahmad's (2018) research further explores how positive teacher-learner interactions, characterized by warmth, support, and clear communication, enhance intrinsic motivation and academic achievement. Balter et al. (2022) and Mubiar et al. (2020) also highlight the need for flexible routines in early childhood centers to accommodate sustained interactions that facilitate deep learning, whether with teachers or peers.

University of Education,Winneba http://ir.uew.edu.gh

Research Question Four: The Needed resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District.

The study found that a limited resources available for creating an attentive classroom environment in the Asuogyaman District. Basic resources, such as writing materials and some visual aids, are accessible to teachers to an extent. Survey data show that 80% of classrooms have writing materials, and 63% have access to visual aids. This finding aligns with observation data, which confirms that writing materials are universally available across classrooms. However, only 30% of classrooms possess all necessary visual aids, indicating a partial but insufficient resource base. Interview responses further affirm these findings, with teachers acknowledging the availability of basic materials but stressing that they are inadequate for fostering deeper engagement and sustained attention.

More advanced resources, such as technological tools, digital learning platforms, manipulatives, sensory materials, and age-appropriate books, are markedly lacking across classrooms. According to survey data, 68% of classrooms lack technological tools, and 76% are without digital platforms, while 94% are missing sensory materials altogether. Observation data support these numbers, showing only 10% of classrooms have manipulatives or sensory aids, and a significant 70% rely solely on teachers' personal phones for any form of technological support. The interviews underscore this shortage, with teachers expressing frustration over the scarcity of resources needed for interactive and multi-sensory learning, and they attribute these limitations partly to external issues, including theft from classrooms and insufficient funding.

Together, these findings illustrate that while some foundational resources are available, the lack of diverse and specialized tools poses a significant challenge to

University of Education,Winneba http://ir.uew.edu.gh

creating an environment that fully supports learner attentiveness. Teachers find themselves reliant on basic materials, which, while helpful, do not provide the interactive, technology-enhanced experiences that could better support focused and active learning. The interviews reveal that the resource constraints not only limit teaching strategies but also impact teachers' efforts to sustain learners' attention, as the absence of tools like manipulatives and sensory aids reduces opportunities for engaging, hands-on learning experiences. This alignment across data sources underscores a crucial need for investment in more comprehensive resources to enable teachers to create learning environments that can actively engage learners and maintain their attentiveness effectively.

The survey, interview, and observation data collectively reveal that, while basic resources like writing materials are widely available in Asuogyaman District classrooms, essential tools for enhancing attentiveness, such as technology, manipulatives, and sensory materials—are largely absent. Survey data report shortages in technological tools (68% not available) and sensory materials (94% not available), which is echoed by observation data, showing that only 10% of classrooms have manipulatives and most rely on teachers' phones for tech access. Interviews confirm these gaps, with teachers citing external issues like theft and funding shortages as reasons for inadequate resource availability. This shortage limits teachers' ability to create fully engaging environments, underscoring the need for investment in varied and advanced learning materials.

The findings align well with existing literature that highlights the importance of diverse resources in fostering attentive classroom environments. Research shows that basic materials, like writing tools, can support learning but often fall short of maintaining sustained engagement without additional, interactive resources (Adeyemi

University of Education,Winneba http://ir.uew.edu.gh

& Olaleye, 2010). This is consistent with the data from Asuogyaman District, where writing materials are widely available but insufficient for creating an optimal environment for attentiveness.

In previous studies by Oppong Frimpong (2021) and Adu-Larbi (2018), challenges such as inappropriate furniture, under-resourced learning centers, and overcrowded classrooms in ECE centers within the Ga-West Municipality were identified, highlighting persistent issues in educational infrastructure. These findings align with UNESCO's (2015) report, which underscores the ongoing challenges in accessing adequate learning materials across parts of Africa, thereby limiting opportunities for active engagement and learning. Borquaye et al. (2018) further argue that disparities in the availability of books, educational technology, and age-appropriate materials significantly impact attentiveness and the foundational skills development of young learners. Epstein (2018) suggests that educators can mitigate these challenges through proactive measures such as seeking alternative resources, leveraging available technology, and fostering collaborations with community organizations.

Similarly, Kissi-Abrokwah et at., (2021) study on the impact of large class sizes and teacher-to-learner ratios in Ghanaian ECE centers revealed issues such as inadequate seating, high learner-teacher ratios, irregular testing schedules, and limited teacher attention, all of which adversely affect classroom management and learner attentiveness. Fisher (2017) corroborates these findings, identifying constraints such as limited space, inadequate resources, and overcrowding as major impediments to effective teaching and learning environments.

Also, the lack of technological tools and manipulatives in Asuogyaman aligns with studies that emphasize the role of technology in enhancing engagement. Digital

University of Education,Winneba http://ir.uew.edu.gh

resources and manipulatives provide varied, interactive experiences that promote attention, particularly when traditional materials are limited (Higgins, Xiao, & Katsipataki, 2012). Research by Blatchford et al. (2012) also supports that the integration of tools like sensory aids and manipulatives significantly benefits younger learners, enhancing their cognitive and sensory engagement—resources notably absent in the district classrooms.

Furthermore, teachers in As uogyaman mention resource shortages tied to factors such as theft and funding. This is echoed in broader research that cites insufficient funding as a common obstacle to providing comprehensive educational resources, particularly in under-resourced areas (UNESCO, 2017). These findings reflect global challenges where limited budgets and external constraints hinder the effective implementation of engaging classroom materials, underscoring the need for enhanced support and resource allocation in similar educational contexts.

To address this, Vitiello et al. (2020) recommend incorporating interactive and hands-on learning experiences that capture learners' interest and curiosity, thereby promoting sustained attentiveness and active participation in the learning process.

University of Education,Winneba http://ir.uew.edu.gh

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Overview

This chapter presents the findings, conclusions, recommendations, and suggestions for future studies.

5.1 Summary of the Study

The study aimed to investigate the influence of early childhood classroom environment on learners' attentiveness in the Asuogyaman District of Ghana. Framed by the Uri Bronfenbrenner's Ecological System Theory (1977) and Lev Vygotsky's Sociocultural Theory (1978), the research was driven by four research questions. Employing a sequential explanatory mixed-method design, the study adopted both quantitative and qualitative approaches, with data collection occurring in two distinct phases: quantitative followed by qualitative. A total of 122 early childhood teachers participated in the study, providing data through a structured questionnaire, a semi-structured observation, and semi-structured interviews. For the quantitative phase, descriptive statistics, including mean, standard deviation, and percentages, were employed to analyze the data. Meanwhile, the qualitative data underwent thematic analysis to address these research questions:

1. What is the state of the classroom environment in early childhood education settings in the Asuogyaman District?
2. What knowledge do early childhood teachers possess about the classroom environmental factors that influence learners' attentiveness in the Asuogyaman District of Ghana?

University of Education,Winneba http://ir.uew.edu.gh

3. In what manner do early childhood teachers in the Asuogyaman District utilize the classroom environment in dealing with learners' attentiveness?
4. What are the needed resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District?

5.2 Key Findings

Four key findings emerged from the study;

1. The findings indicated the state of the classroom environment in early childhood settings in the Asuogyaman District is characterized by a varied landscape of conditions and resources. The study revealed discrepancy between quantitative and qualitative data regarding classroom environments. While quantitative data showed that most of the respondents were satisfied with aspects like physical design, child-friendliness, lighting and workspace interview responses contradicted this in terms of infrastructure and maintenance – theft of resources, inadequate ventilation, broken windows, and insufficient lighting.
2. Also, early childhood teachers in the Asuogyaman District perceive various classroom environmental factors as crucial for learners' attentiveness. These included the importance of instructional materials, environmental quality (including ventilation and lighting), teacher-learner interactions, and the role of engaging activities and stimuli in enhancing attentiveness but are constraint with the needed resources to implement the needed measure towards attentiveness.
3. Again, the study revealed that learners attentiveness in early childhood classroom in the Asuogyaman District in influences by various teacher strategies including the use of clear expectations, rewards systems play-based

University of Education,Winneba http://ir.uew.edu.gh

and active learning strategies, visual aids, movement breaks, instructional resources, songs and rhymes and providing personalized attention to enhance learners' attentiveness.

4. Lastly, the study reveals a significant lack of resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District. While some basic resources like visual aids (63%) and writing materials (80%) are relatively available, crucial resources such as technological tools, digital learning platforms, age-appropriate books, resource rooms, learning centers, manipulative, and sensory materials are largely absent.

5.3 Conclusion

The study concludes that a diverse range of classroom conditions exist in early childhood settings across the Asuogyaman District, varying from well-equipped and stimulating environments to spaces grappling with challenges such as resource theft, inadequate ventilation, broken infrastructure, and insufficient lighting, and poor maintenance culture.

It is also concluded that early childhood teachers in the Asuogyaman District possess knowledge about environmental factors that influence learners' attentiveness, including the availability of instructional materials, environmental quality encompassing ventilation and lighting, positive teacher-learner interactions, and the effective use of engaging activities and stimuli but are constraints by the needed resources to implement this measure.

Furthermore, the study concludes that early childhood teachers in the Asuogyaman District are adept at fostering attentiveness by employing various strategies such as play-based and active learning methods, visual aids, appropriate

University of Education,Winneba http://ir.uew.edu.gh

instructional resources, and personalized attention to create engaging and supportive classroom environments which highlight the resourcefulness of teachers. The study conclude that teachers are proactive in using various strategies to engage learners, but there may be varying levels of emphasis on different approaches that needs to be explored.

Finally, resources available for fostering attentiveness in classrooms in the Asuogyaman District are largely limited to basic items, such as writing materials. While these foundational resources are useful, the lack of essential tools like technology, manipulatives, and sensory materials hinders the ability of teachers to create fully engaging and attentive classroom environments.

5.4 Recommendations

Based on the study's findings, these recommendations are made:

1. Based on the observed state of early childhood classrooms, there is the need for the Asuogyaman District Education Directorate to liase with NGOs to supply early childhood schools with adequate resources. They should also enhance security measures to mitigate resource theft and improve maintenance protocols to address issues like inadequate ventilation, broken infrastructure, and insufficient lighting in early childhood classrooms across the district
2. To further enhance teachers' knowledge of the influential factors of classroom attentiveness, the education officers and administrators in the Asuogyaman District should continue to expand their ongoing professional development opportunities for early childhood teachers in the district. Targeted topics should focus on optimizing instructional practices, fostering positive teacher-learner interactions, and effectively using engaging activities and stimuli to enhance learners' attentiveness.

University of Education,Winneba http://ir.uew.edu.gh

3. Heads of Schools and School Improvement Support Officers (SISOs) are advised to monitor and encourage the systematic implementation of play-based and active learning strategies, integration of visual aids, availability of appropriate instructional resources, and promotion of personalized attention as standard practices in early childhood classrooms throughout the Asuogyaman District.
4. Due to the limited resources available to ECE teachers in creating attentive classroom, teachers, school heads, education officers within the Asuogyaman District should also advocate for increased governmental support and funding aimed at ensuring adequate resources to facilitate the creation and maintenance of effective classroom environments conducive to learner attentiveness in the district.

5.5 Suggestions for further research

The study recommends these for future researchers:

1. It is suggested for future researchers to replicate the study in other early childhood settings across different districts of the Eastern Region of Ghana. This will provide a broader perspective on the state of early childhood centers and their impact on attentiveness of learners in the region.
2. There should also be comparative study between urban and rural early childhood settings in the Asuogyaman District to offer valuable insights into how environmental factors differ and their distinct impacts on attentiveness and learning outcomes.
3. A study should be conducted to explore the views of heads of schools and administrators on the state of early childhood centers and their impact on attentiveness of learners in the district.

University of Education,Winneba http://ir.uew.edu.gh

4. An experimental study should specifically investigate the impact of specific environmental factors such as instructional materials, environmental quality (including ventilation and lighting), teacher-learner interactions, and the role of engaging activities and stimuli in enhancing attentiveness of learners.

University of Education,Winneba http://ir.uew.edu.gh

REFERENCES

Abidoye, F. O., & Adeyemi, A. D. (2024). Analysis of secondary school learners' performance in biology and chemistry in Nigeria: influence of ICT. *Journal of Engineering, Management and Information Technology*, *2*(1), 06.

Adediwura, A. A. & Tayo, B. (2007). Perception of teacher's knowledge, attitude and teaching skills as predictor of academic performance in Nigerian secondary schools. *Educational Research and Review*, 2(7),165-171. Retrieved form http://www.academic journals.org/ERR.291.

Adeyemi, T. O., & Olaleye, F. O. (2010). School climate and learner achievement in secondary schools. *Asian Social Science*, 6(8), 234-241.

Adjei, A. (2023). Child-centered learning and attentiveness in early childhood classrooms in Ghana. *Ghana Journal of Education and Development*, 10(2), 55–68.

Adjei, D W. (2023, February 15). Promotion of Creative Development of Early Childhood Learners: *ECE Teachers' Perspective on How in Atebubu Amantin Municipal*. https://scite.ai/reports/10.37745/bje.2013/vol11n2112

Adlerstein, C., & Cortazar, A. (2022). In Bendini, M., & Devercelli, A. E. (Eds.), *Quality Early Learning: Nurturing Children's Potential. Human Development Perspectives*. Washington, DC: World Bank.

Adnan, A., Dilshad, M., & Khan, M. Y. (2016). Effectiveness of Early Childhood Education Program in Govt. Schools of Punjab: A Situational Analysis. *Development*, *6*(17), 40-46.

Adu-Gyamfi, K., Hammond, m. o. Loh, v. & Guo, Y. (2020). Changes in classroom quality Predict Ghanaian preschoolers' Gains in Academic and Social-Emotional Skills. *Early Childhood Research Quarterly*, 57, 192-203.

Adu-Larbi, W. (2018). Early Childhood Education in Ghana: Teachers' understanding and Enactment of Inclusion in Ghana: *Teachers' International Journal of Inclusive Education*, 22(10), 986-1002.

Ajiboye, S. K., Adebayo, O., & Abubakar, M. (2020). Learners' attentiveness and classroom engagement: Implications for early childhood education. *Journal of Educational Research and Practice*, 12(3), 44–58.

Amissah-Essel, S., Hagan Jr, J. E., & Schack, T. (2020). Assessing the quality of physical environments of early childhood schools within the Cape Coast metropolis in Ghana using a sequential explanatory mixed-methods design. *European Journal of Investigation in Health, Psychology and Education*, *10*(4), 1158-1175.

University of Education,Winneba http://ir.uew.edu.gh

Ampadu, S., & Opoku-Asare, N. (2023). Teachers' awareness of environmental factors affecting effective teaching and learning in Ghanaian ECE centres. *African Journal of Early Childhood Education*, 11(1), 47–61.

Anamuah-Mensah, J. (2003). Teacher education in Ghana: A historical overview. *International Journal of Educational Development*, 23(3), 227-242.

Antwi, E., Boateng, A. A., & Nyarko, P. (2023). Traditional and modern teaching aids in Ghanaian early childhood education: Bridging rural-urban disparities. *Journal of Education and Development in Africa, 15*(3), 112-126.

Ardilla, T., Setiasih, O., & Mariyana, R. (2021). The relationship of welfare levels with pedagogic competence of early childhood teachers in Solokanjeruk Bandung. In *Proceedings of the 5th International Conference on Early Childhood Education (ICECE 2020)* (pp. 310–315).

Asamoah, D., Sundeme, B., Quainoo, E. A., Adom-Fynn, D., Yalley, C. E., & Afrane, R. (2020). School-environment, teacher-related and learner-related factors: Critical causes of low academic performance of senior high school learners in core mathematics in the Kumasi Metropolis of Ghana. *Journal of Educational and Psychological Research*, *2*(1), 3–15. https://doi.org/10.33140/jepr.02.01.02

Aslam, H. D., Ali, A., Iqbal, F., Rahim, K., Saeed, D., & Abbasi, Z. A. (2012). Analyzing factors affecting learning environment of universities in Pakistan: A case of public sector university of Pakistan. *Journal of American Science*, *8*(9), 58-65.

Baafi, R. K. A. (2021). The impact of school learning environment on learners' academic performance in senior high schools in the Greater Accra Region, Ghana.

Babbie, E. R. (2020). *The practice of social research*. Cengage AU.

Baffoe, M. (2013). Stigma, Discrimination & Marginalization: Gateways to Oppression of Persons with Disabilities in Ghana, West Africa. *Journal of Educational and Social Research*,3(1), 187 198

Baidoo-Anu, D. (2018). Perceived school environmental, home conditions and academic performance of junior high school learners in Asikuma-Odoben-Brakwa District, Ghana. *Journal of Education, Society and Behavioural Science*, *24*(2), 1–7. https://doi.org/10.9734/JESBS/2018/39617

Balter, A. S., van Rhijn, T., Davies, A. W. J., & Morton, T. (2022). Quality in early childhood education centres: A systematic review. *Journal of Early Childhood Research*, *20*(2), 128–144.

Banbury, S., & Berry, D. C. (1998). Disruption of office-related tasks by speech and office noise. *British Journal of Psychology*, *89*(3), 499–517.

University of Education,Winneba http://ir.uew.edu.gh

Bandura, A. (1986). Social foundations of thought and action. A social constructivists theory. *Englewood Cliffs, NJ*, *1986*(23-28), 2.

Barrett, P., Davies, F., Zhang, Y., & Barrett, L. (2015). The impact of classroom design on pupils' learning: Final results of a holistic, multi-level analysis. Building and Environment, 89, 118-133.

Barrett, P., Zhang, Y., Moffat, J., & Kobbacy, K. (2013). A holistic, multi-level analysis identifying the impact of classroom design on pupils' learning. *Building and Environment, 59*, 678–689.

Bashar, M., & Ahmad, I. (2018). Positive teacher-learner interactions and their impact on student achievement. *Journal of Educational Psychology, 110*(2), 123–135.

Beeland, W. D. (2002). "Learner engagement, visual learning and technology: Can interactive whiteboards help?" *Information Technology in Childhood Education Annual*, 2002(1), 1-16.

Bekaiye, O. (2019). Resource Availability and Utilization in Nigerian Primary Schools: Challenges and Opportunities. *African Journal of Educational Management*, 13(2), 87-101.

Bergen, D. (2015). The Role of the Physical Environment in Fostering Creativity. Early Childhood Education Journal, 43(3), 155-158.

Berti, S., Cigala, A., & Sharmahd, N. (2019). Early childhood education and care physical environment and child development: State of the art and reflections on future orientations and methodologies. *Educational Psychology Review*, *31*(4), 991-1021.

Blair, C., & Raver, C. C. (2015). School Readiness and Self-Regulation: A Developmental Psychobiological Approach. *Annual Review of Psychology*, 66, 711–731.

Boese, E. (2022). Young children's attention span and engagement during guided play. Early Years Research Quarterly, 39(2), 120–134.

Bogna, F., Raineri, A., & Dell, G. (2020). Critical realism and constructivism: merging research paradigms for a deeper qualitative study. *Qualitative Research in Organizations and Management: An International Journal*, *15*(4), 461-484.

Borquaye, M., Tutu, K. A., & Siaw, L. (2018). Availability and use of learning resources in basic schools in Ghana. Education and Information Technologies, 23(6), 2877-2891.

Bouchard, K. L., & Smith, J. D. (2017). Teacher–learner relationship quality and children's bullying experiences with peers: Reflecting on the mesosystem.

University of Education,Winneba http://ir.uew.edu.gh

Educational Forum, *81*(1), 108–125. https://doi.org/10.1080/00131725.2016.1243182

Bowlby, J. (1988). *A secure base: Parent–child attachment and healthy human development*. New York, NY: Basic Books.

Bradbury, N. A. (2016). Attention span during lectures: 8 seconds, 10 minutes, or more? *Adv. Physiol Education*, *40*, 509–513. https://doi.org/10.1152/advan.00109.2016

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American psychologist*, *32*(7), 513.

Brophy, J. E. (1984). *Teacher behavior and student achievement* (No. 73). Institute for Research on Teaching, Michigan State University. Handbook of Research on Teaching, 328-375.

Brouwers, A., Gregoric, C., & Harris, T. (2018). Teacher motivation and well-being: The influence of professional identity and instructional attributes. Educational Psychology, 38(7), 851-868.

Brown, M., & Davis, N. (2018). The relationship between textbook design and learner attentiveness in secondary education. *Educational Research and Reviews, 13*(6), 234–245.

Brown, S., & Johnson, L. (2016). Active Learning: Creating Excitement in the Classroom. Routledge.

Bryman, A. (2016). *Social research methods*. Oxford University Press.

Bunce, D. M., Flens, E. A., & Neiles, K. Y. (2010). How long can learners pay attention in class? A study of learner attention decline using clickers. *Journal of Chemical Education*, *87*(12), 1438–1443. https://doi.org/10.1021/ed100409p

Byers, T., Imms, W., & Hartnell-Young, E. (2018). Comparative analysis of the impact of traditional versus innovative learning environment on learner attitudes and learning outcomes. *Studies in Educational Evaluation, 58*, 167-177.

Carbonneau, K. J., Marley, S. C., & Selig, J. P. (2013). "A meta-analysis of the efficacy of teaching with concrete manipulatives." *Journal of Educational Psychology*, 105(2), 380.

Casteel, A., & Bridier, N. L. (2021). Describing populations and samples in doctoral learner research. *International Journal of Doctoral Studies, 16*(1).

Cattaruzza, E. (2018, January 1). Exploring children's agency in a designed atelier: A socio-material perspective. https://scite.ai/reports/10.2298/psi171106021c

University of Education,Winneba http://ir.uew.edu.gh

Charmaz, K., & Henwood, K. (2017). Grounded theory methods for qualitative psychology. *The SAGE handbook of qualitative research in psychology*, *2*, 238e256.

Churchill, D. (2014). *Effective design principles for activity-based learning: The crucial role of attentiveness*. Springer.

Clark, R. C. (2015). *Multimedia learning in education: Production and assessment*. Academic Press.

Cohen, L., Manion, L., & Morrison, K. (2017). Mixed methods research. In *Research methods in education* (pp. 31-50). Routledge.

Cook, D. A., Castillo, R. M., Gas, B., & Artino Jr, A. R. (2017). Measuring achievement goal motivation, mindsets and cognitive load: Validation of three instruments' scores. *Medical education*, *51*(10), 1061-1074.

Copple, C., & Bredekamp, S. (2009). *Developmentally appropriate practice in early childhood programs serving children from birth through age 8*. National Association for the Education of Young Children. 1313 L Street NW Suite 500, Washington, DC 22205-4101.

Creswell, J. W. & Poth, C. (2018). *Qualitative inquiry and research design: Choosing among five approaches* (4th ed). Sage.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Creswell, J. W. (2013). Steps in conducting a scholarly mixed methods study.

Cummings, H. A., Neyers, K., & Molitor, S. (2017). Measuring learners' attention in the second language classroom. *Language Teaching Research*, 1–19. https://doi.org/10.1177/1362168817713766

Darling-Hammond, L., Hyler, M. E., & Gardner, M. (2017). *Effective teacher professional development*. Palo Alto, CA: Learning Policy Institute.

Dawadi, S., Shrestha, S., & Giri, R. A. (2021). Mixed-methods research: A discussion on its types, challenges, and criticisms. *Journal of Practical Studies in Education*, *2*(2), 25-36.

Deci, E. L., & Ryan, R. M. (2000). Intrinsic motivation and self-determination in human behaviour. Plenum.

Deku, H. D. (2018). *Preschool teachers' perceptions of early childhood educational best practices in the Cape Coast metropolis in Ghana* (Doctoral dissertation, University of Cape Coast).

Deutsch, M. (1949). A theory of cooperation and competition. *Human Relations*, *2*(2), 129–152.

University of Education,Winneba http://ir.uew.edu.gh

Diamond, A., & Ling, D. S. (2016). Conclusions about interventions, programs, and approaches for improving executive functions that appear justified and those that, despite much hype, do not. *Developmental Cognitive Neuroscience*, 18, 34–48.

Dong, Z., Liu, H., & Zheng, X. (2021, January 7). The influence of teacher-learner proximity, teacher feedback, and near-seated peer groups on classroom engagement: An agent-based modeling approach. https://scite.ai/reports/10.1371/journal.pone.0244935

Doyle, W. (2006). Ecological approaches to classroom management. In C. M. Evertson & C. S. Weinstein (Eds.), *Handbook of classroom management: Research, practice, and contemporary issues* (pp. 97–125). Mahwah, NJ: Lawrence Erlbaum Associates.

Emmer, E. T., & Sabornie, E. J. (2015). *Handbook of classroom management: Research, practice, and contemporary issues*. Routledge.

Emmer, E. T., & Stough, L. M. (2001). Classroom Management: A Critical Part of Educational Psychology, With Implications for Teacher Education. *Educational Psychologist*, 36(2), 103-112.

Epstein, A. S. (2018). What is developmentally appropriate practice? In Handbook of Research on the Education of Young Children (3rd ed., pp. 19-38). Routledge.

Epstein, J. L. (2018). School, family, and community partnerships in teachers' professional work. *Journal of Education for Teaching*, *44*(3), 397-406.

Etikan, I., Musa, S. A., & Alkassim, R. S. (2016). Comparison of convenience sampling and purposive sampling. *American journal of theoretical and applied statistics*, *5*(1), 1-4.

Evertson, C. M., Emmer, E. T., & Worsham, M. E. (2006). *Classroom management for elementary teachers* (7th ed.). Boston, MA: Pearson/Allyn & Bacon.

Fardlillah, Q., & Suryono, Y. (2019, April). Physical environment classroom: Principles and design elements of classroom in early childhood education. In *International Conference on Special and Inclusive Education (ICSIE 2018)*, 120-127.

Finnish National Agency for Education. (2022). *National core curriculum for early childhood education and care* (Varhaiskasvatussuunnitelman perusteet 2022). Helsinki: Finnish National Agency for Education.

Fisher, A. V., Godwin, K. E., & Seltman, H. (2014). Visual environment, attention allocation, and learning in young children: When too much of a good thing may be bad. *Psychological Science*, 25(7), 1362-1370.

Fisher, C. W., Berliner, D. C., Filby, N. N., Marliave, R., Cahen, L. S., & Dishaw, M. M. (1980). Teaching behaviors, academic learning time, and student

University of Education,Winneba http://ir.uew.edu.gh

achievement: An overview. *The Journal of Classroom Interaction, 15*(1), 2–15.

Fisher, D. (2017). *Effective teaching strategies that accommodate diverse learners*. Pearson.

Fraser, B. (1986). *Classroom environment*. New York: Croom Helm, 51 Washington Street.

Fraser, B. J., & Hebert, H. J. (1991). *Educational environments: evaluation, antecedents and consequences.* Britain: Per Gamon Press Oxford (UK).

Fridkin, E. (2018). The effects of classroom environment on learner learning. *Journal of Instructional Pedagogies*, 20, 1-10.

Garcia, E., & Weiss, E. (2019). The teacher shortage is real, large and growing, and worse than we thought. *Economic Policy Institute Report*.

Ghana Education Service (GES). (2019). Kindergarten Curriculum (KG). Accra, Ghana: GES.

Gore, J. M., Smith, M., Lloyd, A., Bowe, J. U. L. I. E., Ellis, H. Y. W. E. L., Taggart, W. E. N. D. Y., & Lubans, D. A. V. I. D. (2016). The impact of Quality Teaching Rounds: Report on the results of a randomised controlled trial. *Teachers and Teaching Research Center: University of Newcastle*.

Hamre, B. K., & Pianta, R. C. (2001). Early teacher-child relationships and the trajectory of children's school outcomes through eighth grade. *Child Development*, 72(2), 625-638

Hardicre, J. (2014). Valid informed consent in research: An introduction. *British Journal of Nursing*, *23*(11), 564-567.

Harrison, L. J., Clarke, L., & Ungerer, J. A. (2013). Where does the classroom social environment fit in models of child development? *Journal of School Psychology*, 51(6), 735-752.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of educational research*, *77*(1), 81-112.

Henson, R. K. (2017). Understanding internal consistency reliability estimates: A conceptual primer on coefficient alpha. *Measurement and Evaluation in Counseling and Development*, 47(1), 86-92.

Higgins, S., Xiao, Z., & Katsipataki, M. (2012). The impact of digital technology on learning: A summary for the Education Endowment Foundation. *Education Endowment Foundation*.

Holubec, E. J. (1998). *The new circles of learning: Cooperation in the classroom and school*. Association for Supervision and Curriculum Development.

University of Education,Winneba http://ir.uew.edu.gh

Howes, C., Burchinal, M., Pianta, R., Bryant, D., Early, D., Clifford, R., & Barbarin, O. (2015). Ready to learn? Children's pre-academic achievement in pre-kindergarten programs. *Early Childhood Research Quarterly,* 23(1), 27-50.

Hygge, S., Evans, G. W., & Bullinger, M. (2002). A prospective study of some effects of aircraft noise on cognitive performance in schoolchildren. *Psychological Science*, 13(5), 469-474.

Iaquinto, B. L. (2016). Strengths and weaknesses of using mixed methods to detect the sustainable practices of backpackers: A reflexive account. *Journal of Cleaner Production*, *111*, 479-486.

İnan, H Z. (2020, November 29). Challenges of Distance/Online and Face-to-Face Education in the New Normal: *Experiences of Reggio Emilia-Inspired Early Childhood Educators in Turkey*. https://scite.ai/reports/10.29333/pr/9304

Inan, H. Z. (2021). Challenges of Distance/Online and Face-to-Face Education in the New Normal: Experiences of Reggio Emilia-Inspired Early Childhood Educators in Turkey. *Pedagogical Research*, *6*(1).

Iruka, I. U., DeKraai, M., Walther, J., Sheridan, S. M., & Abdel-Monem, T. (2020). Examining how rural ecological contexts influence children's early learning opportunities. *Early Childhood Research Quarterly*, *52*, 15–29. https://doi.org/10.1016/j.ecresq.2019.09.005

Iwoh, F.J. (2018) *Assessing the Effectiveness of Instructional Resources in Rural Schools.* Retrieved on June 6, 2024 from https://iresearchng.com/education/effect-of-instructional-materials-on-learners-academic-performnce/index.html

Jin, S., & Peng, L. (2022). Classroom perception in higher education: The impact of spatial factors on learner satisfaction in lecture versus active learning classrooms. *Frontiers in Psychology*, *13*, 941285.

Johnson, D. W., & Johnson, R. T. (1989). *Cooperation and competition: Theory and research*. Interaction Book Company.

Johnson, D. W., & Johnson, R. T. (1994). Learning together and alone: Cooperative, competitive, and individualistic learning (3rd ed.). Prentice-Hall.

Johnson, E., & Smith, A. (2017). Effects of seating arrangements on learner participation. *The Journal of Classroom Interaction*, 52(2), 6-15.

Johnson, L. (2016). Potential drawbacks of textbooks in modern classrooms. *Education Review Quarterly*, *29*(4), 56–67.

Johnson, L., Brown, S., & Thompson, R.. (2018). The impact of learner-learner interaction on attentiveness in the classroom.

University of Education,Winneba http://ir.uew.edu.gh

Jones, V. F., & Jones, L. S. (2013). *Comprehensive classroom management: Creating communities of support and solving problems* (10th ed.). Pearson.

Kalilo, K., Mumba, P., & Chansa, C. (2016). *The impact of play-based learning on early childhood development in Zambia*. *African Journal of Early Childhood Education*, 4(2), 45–58.

Kaplan, G., Mart, S., & Diken, İ. H. (2022). Transition to school process of children with disadvantages: A literature review. *Journal of Childhood, Education & Society*, *3*(1), 28-47.

Kay, R. H. (2006). Developing a comprehensive metric for assessing discussion board effectiveness. *British Journal of Educational Technology*, *37*(5), 761-783.

Kaymak, Ö. S., & Demir, Ö. (2012). İlköğretim öğrencilerinin dikkat toplama sürecine ilişkin görüşlerinin incelenmesi. *Ç.Ü. Sosyal Bilimler Enstitüsü Dergisi, 21*(1), 135–154.

Kaymak Özmen, S., & Demir, Ö. (2012). An examination of elementary students' views on the attention-gathering process]. *Çukurova Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 21*(1), 135–153.

Kenari, M. A. (2018). Correlates of early reading skills among pre-school children in Iran. *Int Phys Med Rehab J*, *3*(6), 500-503.

Khotimah, N., & Reza, M. (2022, July 31). Digital Literacy to Improve Pedagogical and Professional Competence of Early Childhood Teacher. https://scite.ai/reports/10.17977/um031v9i22022p117

Kibriya, S., & Jones, G. (2020). The impact of a safe learning environment in schools on learners' learning outcomes: Evidence from Tanzania. *Quality Assurance in Education*, *29*(1), 15–28. https://doi.org/10.1108/QAE-11-2019-0124

Kissi-Abrokwah, B., Krog, S., Bedu-Addo, P. K. A., & Aboyom, A. I. (2021). Effect of large class size and teacher-learner ratio on classroom management in early childhood educational centers in Ghana. *Unpublished Doctor of Philosophy Degree in Education submitted to South of South Africa*.

Kivunja, C., & Kuyini, A. B. (2017). Understanding and applying research paradigms in educational contexts. *International Journal of higher education*, *6*(5), 26-41.

Kostelnik, M. J., Soderman, A. K., & Whiren, A. P. (2019). *Developmentally Appropriate Curriculum:* Best Practices in Early Childhood Education. Pearson.

Krajcik, J., Blumenfeld, P. C., Marx, R. W., Bass, K. M., Fredricks, J., & Soloway, E. (2014). Inquiry in project-based science classrooms: Initial attempts by middle school learners. In *Learning Through Problem Solving* (pp. 313-350). Psychology Press.

University of Education,Winneba http://ir.uew.edu.gh

Kucirkova, N., & Littleton, K. (2016). The digital reading habits of children. *A National Survey of parents' perceptions of and practices in relation to children's reading for pleasure with print and digital books*, 1-72.

Kurniawati, L. A., & Malasari, S. (2022). Local wisdom in designing ESP for community-based tourism practitioners: A study of needs analysis. *SAGA: Journal of English Language Teaching and Applied Linguistics*, *3*(2), 147-162.

Kurvers, J., Custers, R., & Reijntjes, A. (2010). Peer victimization and internalizing problems in children: A meta-analysis of longitudinal studies. *Child Abuse & Neglect, 34*(4), 244–252.

Kusi, H. (2012). Doing qualitative research, a guide for researchers. Emmpong Press, Accra-Newtown.

Kwallek, N., Lewis, C. M., Lin-Hsiao, J. W. D., & Woodson, H. (1996). Effects of nine monochromatic office interior colors on clerical tasks and worker mood. *Color Research & Application*, *21*(6), 448-458.

Lau, J., & Ng, K.-M. (2014). Conceptualizing the counseling training environment using Bronfenbrenner's ecological theory. *International Journal for the Advancement of Counselling*, *36*(4), 423–439. https://doi.org/10.1007/s10447-014-9220-5

LeBlanc, S. (2020). *Natural [Re] connection: Facilitating the Development of Preschool Children Through Nature Rich Environments* (Doctoral dissertation).

Lehrer, J., Van Laere, K., Hadley, F., & Rouse, E. (2022). Introduction: Why we need to move beyond instrumentalization when discussing families and early childhood education and care. In *Relationships with Families in Early Childhood Education and Care* (pp. 1-13). Routledge.

Li, J., & Wang, X. (2021). *The effects of teacher-student interaction on academic achievement: A meta-analysis*. Educational Research Review, 33, 100389.

Li, Y., Bao, C., & Liu, M. (2022, July 30). The Integration of Legal Education and Mental Health Education of College Learners in the Contemporary Network Environment Facing the Cultivation of Civic Awareness. https://scite.ai/reports/10.1155/2022/4858156

Liu, Y., Na, Y., & Yu, L. (2021, January 1). Can Story-Making and Role-Playing Pedagogy Arise Young Learners' Interest and Efficiency of Vocabulary Learning in English Class?. https://scite.ai/reports/10.2991/assehr.k.211220.299

University of Education,Winneba http://ir.uew.edu.gh

Maarouf, H. (2019). Pragmatism as a supportive paradigm for the mixed research approach: Conceptualizing the ontological, epistemological, and axiological stances of pragmatism. *International Business Research, 12*(9), 1-12.

Malik, S., & Rizvi, A. A. (2018). *Impact of teacher-student interaction on student motivation and achievement*. Journal of Education and Educational Development, 5(2), 234–246.

Manzoor, A. (2020). Designs of mixed method research. In *Cognitive Analytics: Concepts, Methodologies, Tools, and Applications* (pp. 95-121). IGI Global.

Marzano, R. J., & Marzano, J. S. (2003). The key to classroom management. Educational Leadership, 61(1), 6-13.

Marzano, R. J., Pickering, D., & Pollock, J. E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Ascd.

Mayer, R. E. (2001). *Multimedia learning*. Cambridge University Press.

McClelland, M. M., Cameron, C. E., Connor, C. M., Farris, C. L., Jewkes, A. M., & Morrison, F. J. (2019). Links Between Behavioural Regulation and Preschoolers' Literacy, Vocabulary, and Math Skills. *Developmental Psychology*, 55(10), 2216–2230.

Ministry of Education, Ghana. (2019). *Education Sector Performance Report 2018*. Accra, Ghana: Ministry of Education, Ghana.

Mohammed, A. S. (2022). *Early childhood education in Ghana: teachers' understanding and enactment of inclusion* (Doctoral dissertation).

Mubiar, M., Hasan, M., & Rahman, F. (2020). *Interactions with teachers and peers: Routines in early childhood centers*. Journal of Early Childhood Education Research, 12(3), 324–338.

Mukama, E., & Katabaro, J. K. (2016). Improving early childhood education in Ghana: Policies and programs for teacher training and curriculum development. *African Journal of Early Childhood Education*, 7(1), 45-59.

Myers, C. Y. (2015). *Children, among other things: Entangled cartographies of the more-than-human kindergarten classroom*. Kent State University.

Nair, P., Fielding, R., & Lackney, J. A. (2017). *The language of school design: Design patterns for 21st century schools* (2nd ed.). DesignShare.

Nall, R. (2018). *What to know about ADHD*. Retrieved 30 January 2020 from https://www.medicalnewstoday.com/articles/323667

National Core Curriculum for Early Childhood Education and Care (NACCE). (2018). Helsinki, Finland: Finnish National Agency of Education.

University of Education,Winneba http://ir.uew.edu.gh

Nawaz, A., Ashraf, I., & Siddique, A. (2021). Impact of effectiveness of early childhood education on learners learning outcomes in Pakistan. *Interdisciplinary Journal of Education Research*, *3*(2), 32-39.

Neuman, S. B., & Dickinson, D. K. (2010). Handbook of early literacy research (Vol. 3). Guilford Press.

Neuman, S. B., & Dickinson, D. K. (Eds.). (2010). *Handbook of early literacy research* (Vol. 3). New York, NY: Guilford Press.

Neville, H. J., Stevens, C., Pakulak, E., Bell, T. A., Fanning, J., Klein, S., & Isbell, E. (2021). Family-Based Training Program Improves Brain Function, Cognition, and Behaviour in Lower Socioeconomic Status Preschoolers. *Proceedings of the National Academy of Sciences*, 118(2), e2017066118.

Novak, A. (2014). Anonymity, confidentiality, privacy, and identity: The ties that bind and break in communication research. *Review of communication*, *14*(1), 36-48.

Nowell, L. S., Norris, J. M., White, D. E., & Moules, N. J. (2017). Thematic analysis: Striving to meet the trustworthiness criteria. *International journal of qualitative methods*, *16*(1), 1609406917733847.

Nwuke, T. J., & Nwanguma, T. K. (2024). Provision and Utilization of Physical Resources for Effective Teaching and Learning Effectiveness in Public Universities in Rivers State.

O'Connor, E. E., Dearing, E., & Collins, B. A. (2011). Teacher-child relationship and behavior problem trajectories in elementary school. *American educational research journal*, *48*(1), 120-162.

Opoku-Asare, N. A. A., & Siaw, A. O. (2015). Rural–Urban Disparity in Learners' Academic Performance in Visual Arts Education: Evidence From Six Senior High Schools in Kumasi, Ghana. *SAGE Open*, 1–14. https://doi.org/10.1177/2158244015612523

Oppong Frimpong, S. (2021). The Influence of Perception on the Provision of Early Childhood Education in the Kumasi Metropolis of Ghana. *African Educational Research Journal*, *9*(1), 179-188.

Oppong Frimpong, S. (2021). The Role of Teaching and Learning Materials and Interaction as a Tool to Quality Early Childhood Education in Agona East District of the Central Region of Ghana. *African Educational Research Journal*, *9*(1), 168-178.

Oppong Frimpong, S. O. (2019). The Classroom Physical Environment as a 'Third Teacher' For an Early Childhood Education Provision in the Ga-West Municipality of Ghana. *PEOPLE: International Journal of Social Sciences*, *4*(3), 1339-1360.

University of Education,Winneba http://ir.uew.edu.gh

Organisation for Economic Cooperation and Development (OECD, 2018a). Developing schools as learning organisations in Wales, Implementing Education Policies. Paris, France: Author. https://doi.org/10.1787/9789264307193-en

Pallant, J. (2018). 8.6 Reporting Quantitative Results. *Business Research Methods for Chinese Learners: A Practical Guide to Your Research Project*, 36.

Pandey, P., & Pandey, M. M. (2021). *Research methodology tools and techniques*. Bridge Center.

Park, H. (2021). Reliability using Cronbach alpha in sample survey. *The Korean Journal of Applied Statistics*, *34*(1), 1-8.

Perry, R. (2013). *Teaching practice for early childhood: A guide for learners*. Routledge.

Petters, J. S., Asuquo, P. N., & Eyo, M. (2015). Psychosocial variables in occupational aspirations of secondary school learners in Calabar, Nigeria. *Advances in Social Sciences Research Journal*, *2*(7).

Pianta, R. C., & Hamre, B. K. (2009). Conceptualization, Measurement, and Improvement of Classroom Processes: Standardized Observation Can Leverage Capacity. Educational Researcher, 38(2), 109-119.

Pianta, R. C., Hamre, B. K., & Stuhlman, M. (2003). Relationships between teachers and children. In Handbook of psychology: Educational psychology (Vol. 7, pp. 199-234).

Pianta, R. C., La Paro, K. M., & Hamre, B. K. (2016). *Classroom assessment scoring system*. Baltimore, MD: Paul H. Brookes Publishing Co.

Piaw, C. Y. (2014). Effects of gender and thinking style on learner's creative thinking ability. *Procedia - Social and Behavioural Sciences*, *116*, 5135–5139. https://doi.org/10.1016/j.sbspro.2014.01.1087

Pobbi, M. A., Kor, J., & Opare, J. K. (2018). The impact of school climate on academic performance: A case of Ghanaian schools. *Journal of Education and Practice*, *9*(22), 83–93

Ponterotto, J. G., & Ruckdeschel, D. E. (2007). An overview of coefficient alpha and a reliability matrix for estimating adequacy of internal consistency coefficients with psychological research measures. *Perceptual and Motor Skills*, 105(3), 997-1014.

Prakash, J. (2015). *What is the importance of attention in learning?* Retrieved from http://www.preservearticles.com/201105206854/importance-of-attention-in-learning.html

University of Education,Winneba http://ir.uew.edu.gh

Rahman, M. H., Rahman, A. M., & Rahman, M. M. (2018). Impact of Classroom Environment on English Education: A Study at the Primary Level in Bangladesh.

Redeș, D. A., & Roman, A. F. A. (2023). Qualitative Research For Improving Preschool Teachers Teaching Practices–Using Teach Ro. *European Proceedings of Educational Sciences*.

Rimm-Kaufman, S. E., & Hamre, B. K. (2010). Developmental and contextual considerations in social and emotional learning interventions. *Advances in Child Development and Behaviour, 40*, 129–161.

Rimm-Kaufman, S. E., Pianta, R. C., & Cox, M. J. (2000). Teachers' judgments of problems in the transition to kindergarten. Early Childhood Research Quarterly, 15(2), 147-166.

Rodriguez, A. (2017). *Inattentiveness Affects Later Academic Performance of Children With ADHD*. Retrieved 25 January 2020 from https://www.ajmc.com/view/inattentivenessaffects-later-academic-performance-of-children-with-adhd

Rubie-Davies, C. (2014). *Becoming a high expectation teacher: Raising the bar*. Routledge.

Rudasill, K. M., Snyder, K. E., Levinson, H., & Adelson, J. L. (2018). Systems view of school climate: A theoretical framework for research. *Educational Psychology Review*, *30*(1), 35–60. https://doi.org/10.1007/s10648-017-9401-y

Rusticus, S. (2024). Content validity. In *Encyclopedia of quality of life and well-being research* (pp. 1384-1385). Cham: Springer International Publishing.

Sakai, T., Okado, K., & Akai, H. (2019). Development the Scale of Ability of Preschool Teachers to Promote Children's Mathematical Thinking, and Situational Analysis of Japanese Preschool Teachers. *Psychology*, *10*(12), 1726.

Save the Children. (2019). *The Lost in Transition: Policy and Practice Briefing on Early Childhood Transitions in Ghana*. Save the Children Ghana.

Scheirlinckx, J., Van Raemdonck, L., Abrahams, L., Teixeira, K. C., Alves, G., Primi, R., ... & De Fruyt, F. (2023, April). Social–emotional skills of teachers: mapping the content space and defining taxonomy requirements. In *Frontiers in Education* (Vol. 8, p. 1094888). Frontiers Media SA.

Schunk, D. H. (2016). *Learning theories: An educational perspective* (P. Smith & M. Buchholz (eds.); 6th ed.). Pearson Education, Inc.

Seginer, R. (2006). Parents' educational involvement: A developmental ecology perspective. *Parenting: Science and Practice*, *6*(1), 1–48. https://doi.org/10.1207/s15327922par0601_1

University of Education,Winneba http://ir.uew.edu.gh

Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for information*, *22*(2), 63-75.

Shibata, K., & Suzuki, K. (2021). *Effects of classroom acoustics on children's listening and learning: A review*. Acoustical Science and Technology, 42(1), 12–22.

Siraj-Blatchford, I. (2003). Quality teaching in the early years: What research tells us. *Young Children*, 58(1), 12-14.

Skinner, B. F. (1953). *Science and human behavior*. Macmillan.

Slavin, R. E. (2015). *Synthesis of research on cooperative learning*. Educational Leadership, 48(5), 71–82.

Smith, A. L. (2020). *The impact of digital media on student engagement in the classroom*. Journal of Educational Technology Systems, 48(2), 255–270.

Smith, J. (2017). *Creating Optimal Learning Environments: A Step-by-Step Guide*. Routledge.

Smith, J. A., & Johnson, L. M. (2017). *The role of teacher expectations in student achievement in early childhood education*. *Journal of Research in Childhood Education*, 31(3), 345–356.

Smith, J. D., Brown, K. L., & Lee, T. R. (2016). *The effects of cooperative learning on student engagement and achievement*. Journal of Educational Research, 109(5), 523–530.

Stöppler, M. C. (2010). *Inattention: Symptoms & Signs*. Retrieved 20 January 2020 from https://www.medicinenet.com/inattention/symptoms.htm

Subedi, D. (2016). Explanatory sequential mixed method design as the third research community of knowledge claim. *American Journal of Educational Research*, *4*(7), 570-577.

Sule, P. (2023). Developing the Early childhood Learning Environment. (Degree in Early Childhood Education, Laurea University of Applied Sciences)

Syahrir, S., & Hartina, S. (2021). The Analysis of Short Story Translation Errors (A Case Study of Types and Causes). *IDEAS: Journal on English Language Teaching and Learning, Linguistics and Literature*, *9*(1).

Tackie-Ofosu, V., Mahama, S., Vandyck, E. S. T. D., Kumador, D. K., & Toku, N. A. A. (2015). Mother Tongue Usage in Ghanaian Pre-Schools: Perceptions of Parents and Teachers. *Journal of Education and Practice*, *6*(34), 81-87.

Taguchi, N. (2018). Contexts and pragmatics learning: Problems and opportunities of study abroad research. *Language Teaching*, *51*(1), 124-137.

University of Education,Winneba http://ir.uew.edu.gh

Tanner, C. K. (2009). The influence of classroom spatial design on learning. Journal of Environmental Psychology, 29(4), 485-493.

Taylor, R. D., & Gebre, A. (2016). Teacher-learner relationships and personalized learning: Implications of person and contextual variables. In M. Murphy, S. Redding, & J. Twyman (Eds.), *Handbook on personalized learning for states, districts, and schools*. Temple University, Center on Innovations in Learning. www.centeril.orgwww.centeril.org

Thein, A., Smith, J., & Carter, M. (2020). The impact of classroom environment on learner engagement and outcomes. *Journal of Early Childhood Education*, 45(2), 123-138.

Tjosvold, D. (1998). *Cooperative and competitive goal approaches to conflict: Accomplishments and challenges*. Applied Psychology, 47(3), 285–313.

Tsikata, D. S., & Arhinful, K. (2013). The influence of perception on the provision of early childhood education in the Kumasi Metropolis of Ghana. *International Journal of Educational Development Using Information and Communication Technology (IJEDICT*), 7(2), 181-190.

UNESCO. (2021). *Early childhood care and education*. [Online]. https://en.unesco.org/themes/early-childhood-care-and-education.

UNESCO. (2019). *Global education monitoring report 2019: Migration, displacement and education – Building bridges, not walls*. UNESCO Publishing.

UNESCO. (2018). ICT Transforming Education in Africa. *UNESCO-KFIT Project Update*, 1–10. https://unesdoc.unesco.org/ark:/48223/pf0000265441

UNESCO. (2017). *Global education monitoring report*.

UNESCO. (2015). World trends in education issues and trends in education for sustainable development. In A. Leicht, J. Heiss, & W. J. Byun (Eds.), *Education on the Move*. UNESCO Publishing. https://doi.org/10.3726/978-3-653-04538-3

Vandenbroeck, M., Lenaerts, K., & Beblavy, M. (2018). Benefits of early childhood education and care and the conditions for obtaining them. *Benefits of Early Childhood Education and Care and the conditions for obtaining them*.

Vitiello, V. E., Booren, L. M., Downer, J. T., & Williford, A. P. (2020). *Variation in children's classroom engagement throughout a day in preschool: Relations to classroom and child factors*. *Early Childhood Research Quarterly*, 50, 64–74.

Vygotsky, L. S. (1986). *Thought and language.* Cambridge, MA: MIT Press (original work published in 1934).

University of Education,Winneba http://ir.uew.edu.gh

Wahyuni, D. (2012). The research design maze: Understanding paradigms, cases, methods and methodologies. *Journal of applied management accounting research, 10*(1), 69-80.

Walberg, H. (1974). Evaluating educational environments. Beralay, CA, McCutcha.

Wang, W. (2015). Factors affecting learners' attention to teacher talk in nine ESL classrooms. *Teaching English as a Second or Foreign Language*, *19*(1), 1–20.

Webb, N. M. (2019). *Collaborative group work and student assessment*. Theory Into Practice, 58(1), 41–51.

Weimer, M. (2014). *Learners and attention: An interesting analysis*. Retrieved from https://www.facultyfocus.com/articles/teaching-and-learning/learners-attention-interesting-analysis

Weinstein, C. E., Husman, J., & Dierking, D. R. (2000). *Self-regulation interventions with a focus on learning strategies*. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), *Handbook of self-regulation* (pp. 727–747). Academic Press.

Williams, P. (2021). *The role of technology in early childhood education: A critical review*. Early Childhood Education Journal, 49(3), 357–368.

Wilson, S. M., Peterson, P. L., & Ball, D. L. (2018). *The teacher education challenge: A focus on mathematics and science*. Journal of Teacher Education, 69(5), 473–484.

Wu, M. (2022, July 5). A Music Teaching Resource Management Model Based on Fuzzy Clustering Algorithm. https://scite.ai/reports/10.1155/2022/3469869

Zenner, C., Herrnleben-Kurz, S., & Walach, H. (2014). "Mindfulness-based interventions in schools—a systematic review and meta-analysis." *Frontiers in Psychology*, 5, 603.

Zimmerman, B. J. (2002). Attaining Self-regulation: A Social Cognitive Perspective. In M. Boekaerts, P. R. Pintrich, & M. Zeidner (Eds.), Handbook of Self-regulation (pp. 13-39). Academic Press.

University of Education,Winneba http://ir.uew.edu.gh

APPENDIX A

QUESTIONNAIRE FOR TEACHERS

I am Rebecca Tetteh, a learner pursuing an MPhil in Early Childhood Education at the University of Education, Winneba. As part of my academic journey, I am conducting a research focused on the "*Early Childhood Classroom Environment and Learners' Attentiveness"* in the Asuogyaman District of Ghana. This questionnaire serves as a vital instrument in collecting your valuable opinions, observations, and reflections. By participating in this study, you are actively contributing to the advancement of knowledge in the field of early childhood education. Your responses will remain confidential and anonymous. Additionally, the data collected from this questionnaire will be used solely for research purposes and will be treated with the utmost confidentiality.

Thank you for your anticipated interest in participating in this study.

Consent:

Please tick (√) the appropriate answer to consent to taking part of the study.

I consent to be part of this study. Yes ( ) No ( )

Signature: ……

Date: ……

University of Education,Winneba http://ir.uew.edu.gh

Part 1: Demographic Information.

Please tick (√) the response that applies to you:

1. Sex:

Male ( )

Female ( )

2. Age Group:

18 - 23 ( )

24 -29 ( )

30 - 35 ( )

36 - 41 ( )

42 – 47 ( )

48 – 53 ( )

54 and above ( )

3. Education Level:

SHS / TVET ( )

Diploma ( )

Bachelor's Degree ( )

Master's Degree ( )

Doctoral Degree ( )

4. Years of Teaching Experience in Kindergarten:

Less than 1 year ( )

1 - 5 years ( )

6-10 years ( )

University of Education,Winneba http://ir.uew.edu.gh

11-15 years ( )

16 years and above ( )

5. Grade Level:

KG1 ( )

KG2 ( )

Part 2: Research Questions

Choose the level of agreement or disagreement based on your perceptions and experiences, tick (√) in the respective box. "Strongly Disagree (SD)", "Disagree (D)," "Agree (A)" and "Strongly Agree (SA)".

The status of early childhood classroom environment

Choose the level of agreement or disagreement based on your perceptions and experiences, tick (√) in the respective box. "Strongly Disagree (SD)", "Disagree (D)," "Agree (A)" and "Strongly Agree (SA)".

S/N	The state of the classroom Environment	SA	A	D	SD
1	The physical design and infrastructure of my classroom promote learning.				
2	Learning materials and resources are readily available and easily accessible in my classroom.				
3	The physical condition of my classrooms is well-maintained.				
4	There is good lighting and ventilation in my classroom.				

University of Education,Winneba http://ir.uew.edu.gh

5	There is a child-friendly and stimulating learning environment in my classroom.				
6	My classroom has a working space for the learner and teacher to actively participate varied activities.				
7	My classroom has good décor and lots of displays of materials and play equipment.				

Teacher Knowledge of early childhood classroom environmental factors that influence learners' attentiveness

Choose the level of agreement or disagreement based on your perceptions and experiences, tick (√) in the respective box. "Strongly Disagree (SD)", "Disagree (D)," "Agree (A)" and "Strongly Agree (SA)".

S/N	ITEM	SD	D	A	SA
8	The furniture in the classroom contributes to learners' attentiveness.				
9	Adequate lighting, classroom temperature control and sound absorbing materials contribute to learners focus.				
10	Classroom layout disrupt learners' attentiveness.				
11	Sitting arrangements disrupts learners' attentiveness.				
12	Classroom Colours disrupt attentiveness.				
13	Large class size disrupts learners' attentions.				
14	Good ventilation in the classroom promotes learner's attentiveness.				
15	Teaching and learning materials help learners to be attentive				

University of Education,Winneba http://ir.uew.edu.gh

	during lessons.				
16	Teaching approaches affects learners' attentiveness in class.				
17	Teacher-learner interaction promote learners' attentiveness.				
18	Learner-learner interaction contributes to learners' attentiveness in the classroom.				

How teachers utilize classroom environment to influence learners' attentiveness

Choose the level of agreement or disagreement based on your perceptions and experiences, tick (√) in the respective box. "Strongly Disagree (SD)", "Disagree (D)," "Agree (A)" and "Strongly Agree (SA)".

S/N	Teachers' use of the classroom Environment	SA	A	D	SD
19	I use a visually stimulating classroom design with organized learning centers to capture learners' attention.				
20	I create a calm and inviting atmosphere by using soft lighting and soothing colours to promote learners focus during lesson				
21	I provide a variety of sensory materials, such as toys or concrete objects, to engage learners 'to enhance their attentiveness.				
22	I establish clear expectations for behaviour and classroom rules to encourage attentiveness and minimize disruptions.				
23	I use visual aids, such as charts and posters, to help learners stay focused and remember important information.				
24	I include regular movement breaks and physical activities to				

University of Education,Winneba http://ir.uew.edu.gh

	increase alertness and attention span.				
25	I offer individualized support and differentiate instruction to cater to the unique needs and interests of each child.				
26	I create a print-rich environment by displaying words and labels throughout the classroom to promote literacy and language development.				
27	I use classroom reward system or positive reinforcement strategy to motivate learners and promote attentiveness.				
28	I use technology and multimedia resources, such as educational apps, to engage learners and enhance their attentiveness.				

Available resources for the creation of classroom learning environment towards learners' attentiveness in Asuogyaman District

Choose the level of availability of these resources for the creation of classroom learning environment towards learners' attentiveness in your class. Please, tick (√) in the respective box. "Always Available (AV)", "Often Available (OV)," "Rarely Available (SV)", and "Never Available (NV),"

S/N	Resources	AV	OV	RV	NV
29	Technological resources (e.g., TV, computers, tablets, projectors, MP3s)				
30	Age-appropriate books (readers, big books, etc)				
31	Visual aids (Charts, posters, diagrams, and flashcards, etc.)				

University of Education,Winneba http://ir.uew.edu.gh

32	Digital learning platforms or educational software				
33	Writing materials (pencils, crayons, markers, sharpener, etc.)				
34	Resource room or center				
35	Manipulative (blocks, shapes, toys, puzzles, etc.)				
36	Sensory materials (sand and water tables, playdough, etc.)				
37	More than one teacher in the class				

THE END

THANK YOU FOR YOUR TIME

University of Education,Winneba http://ir.uew.edu.gh

APPENDIX B

CLASSROOM OBSERVATION GUIDE

CLASSROOM OBSERVATIONAL GUIDE ON ENVIRONMENTS THAT SUPPORTS ATTENTIVENESS IN EARLY CHILDHOOD EDUCATION

I am Rebecca Tetteh, a learner pursuing an MPhil in Early Childhood Education at the University of Education, Winneba. As part of my academic journey, I am conducting research focused on the " *Early childhood classroom environment and learners' attentiveness in the Asuogyaman District of Ghana"*. This observational Rating Scale, aim to investigate the classroom environmental factors and how it contribute to the learners attentiveness. By participating in this study, you are actively contributing to the advancement of knowledge in the field of early childhood education.

RQ 2: The status of early childhood classroom environment

1. Select the appropriate response to describe the setup of the classroom

Items	Rating criteria
Class décor	Well decorated [ ] Too old [ ] not decorated [ ]
Organization of materials	Well-arranged [ ] in store room [ ] not organized [ ]
Print –rich environment	Smiley walls [ ] few [ ] none [ ]
Rest area	Available [ ] in the classroom [ ] none [ ]
Flexibility of space	spacious [ ] crowded [ ] quiet spacious [ ]
Learning centers	4 and more [ ] 3 [ ] 2[ ] 1[ ] none [ ]

University of Education,Winneba http://ir.uew.edu.gh

2. Select the appropriate response to describe the status of the environment

Items	Rating criteria
Lighting:	Good [ ] spoilt/damaged [ ] natural [ ]
Temperature	cool [ ] warm [ ] hot [ ]
Ventilation	Airy [ ] ventilated [ ] Poorly ventilated [ ]
Seating arrangement	Round tables [ ] rectangular [ ] dual-desk [ ]

3. Select the appropriate to describe the availability and use of instructional materials in the classroom:

Items	Rating criteria
Age-appropriate books	All in place [ ] Few [ ] In store room [ ] None [ ]
Writing Materials (pencils, crayons, markers, sharpener, etc.)	All in place [ ] Few [ ] In store room [ ] None [ ]
manipulative (blocks, shapes, toys, puzzles, etc.)	All in place [ ] Few [ ] In store room [ ] None [ ]
Sensory Materials (sand and water tables, playdough, etc.)	All in place [ ] Few [ ] In store room [ ] None [ ]
Visual Aids (Charts, posters, diagrams, and flashcards, etc.)	All in place [ ] Few [ ] In store room [ ] None [ ]
Technological access- TV sets, tablets, white boards	Tv [ ] Phone [ ] Tablet/Laptop [ ] Music box [ ] Projector [ ] None [ ]

THE END

University of Education,Winneba http://ir.uew.edu.gh

APPENDIX C

SEMI-STRUCTURED INTERVIEW GUIDE FOR EARLY CHILDHOOD TEACHERS

Hello,

Thank you for participating in this research interview. Your insights are incredibly valuable. My name is Rebecca Tetteh, MPhil Learner of University of Education, Winneba. I am a researcher working on "*Early childhood classroom environment and learners' attentiveness in the Asuogyaman District of Ghana"*. Your participation is voluntary, and all information provided will be kept strictly confidential. The interview will take about 15 minutes. Your name and any identifying details will be anonymized in the final report. Do you have any concerns or questions before we start?

Part 1: The status of early childhood classroom environment

1. How would you describe the state of your KG classroom?

Part 2: Teacher Knowledge of early childhood classroom environmental factors that influence learners' attentiveness

1. What is your understanding about the nature of early childhood classroom environment?
2. What are the key elements or features of the early childhood classroom environment?
3. Which classroom environmental factors contribute to learners' attentiveness?
4. How do the factors you have mentioned contribute to learners' attentiveness?

University of Education,Winneba http://ir.uew.edu.gh

Part 3: How teachers utilize classroom environment to influence attentiveness

5. How do you make your classroom learning environment conducive to sustain attention of your learners?
6. What teaching strategies do you use to refocus attention of your learners, when you notice they are distracted?

Part 4: Available resources for the creation of classroom learning environment towards learners' attentiveness

7. What resources in your classroom help you to gain the attention of your learners when teaching?
8. Do you receive any specific training or support on how to use available resources to improve classroom attentiveness? If so, how helpful is it?
9. What challenges do you face in using the available resources to create an engaging learning environment?
10. What kind of support do you deem necessary to overcome the resource constraint in order to create a more attentive learning environment?

Closing: Thank you for sharing your insights and experiences. If you have any further comments or questions, please feel free to share them. If not, then we will end our interview here. Thank you again for your time.

University of Education,Winneba http://ir.uew.edu.gh

APPENDIX D

INTRODUCTORY LETTER FROM THE DEPARTMENT OF EARLY CHILDHOOD EDUCATION, UEW

FABSE/DECE/I.1

13th February, 2024

The Director
Ghana Education Service
Asuogyaman District
Akosombo

Dear Sir/ Madam,

INTRODUCTORY LETTER

I kindly write to introduce to you **Ms. Rebecca Tetteh** with index number:**8321900022** who is an M.PHIL. student at the Department of Early Childhood Care and Development, University of Education, Winneba. She is in his final year and has to embark on her thesis on the topic: ***"Influence of Early Childhood Classroom Environment on Learner's Attentiveness".***

Ms. Rebecca Tetteh is to collect data for her thesis, and I would be most grateful if she could be given the needed assistance.

Thank you.

Yours faithfully,

DR. MICHAEL SUBBEY
HEAD OF DEPARTMENT

University of Education,Winneba http://ir.uew.edu.gh

APPENDIX E

PERMISSION LETTER FROM ASUOGYAMAN DISTRICT EDUCATION OFFICE

GHANA EDUCATION SERVICE

IN CASE OF REPLY THE NUMBER AND DATE OF THIS LETTER SHOULD BE QUOTED.

Our Ref. NO.GES/ER/ADO/
Your Ref. No.: .....

REPUBLIC OF GHANA

ASUOGYAMAN DISTRICT
EDUCATION OFFICE
POST OFFICE BOX 5
SENCHI - FERRY E/R

14TH MARCH, 2024

THE HEAD OF THE DEPARTMENT
DEPARTMENT OF EARLY
CHILDHOOD CARE AND DEVELOPMENT
UNIVERSITY OF EDUCATION, WINNEBA

LETTER OF INTRODUCTION

We acknowledge receipt of your letter dated the 13th of February, 2024 seeking permission for your student, Ms. Rebecca Tetteh to conduct research on *"Influence of Early Childhood Classroom Environment on Learner's Attentiveness"* in the District.

Permission is hereby granted to the research student, and duly advised to ensure that the research activities do not disrupt teaching and learning in the schools.

Headteachers are to assist the research student in gathering the relevant data for successful research while ensuring that all ethics of the teaching profession are respected during the period.

Ruby Jemima Ohene-Adutwum

HRMD

Asuogyaman DEO

CC:
All SISOs
All Headteachers
Ms. Rebecca Tetteh
Department of ECCD
UEW