

**QUALITY KINDERGARTEN EDUCATION IN THE TAMALE  
METROPOLIS: A STUDY OF PUBLIC AND PRIVATE SCHOOLS**

**THIS THESIS IS SUBMITTED TO THE UNIVERSITY OF GHANA,  
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SCIENCE DEGREE**

**BY**

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**DECLARATION**

I, Fauzia Yarim Laar, hereby declare that with the exception of cited references, all other information in this document is a presentation of my original research work which was supervised by Dr Vivian Tackie-Oforu and Dr Sheriffa Mahama at the Department of Family and Consumer Sciences, University of Ghana, Legon. This thesis has never been presented in part or in whole to any institution for the award of any degree.

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## ABSTRACT

Access to kindergarten education has increased in Ghana currently, however, due to poor monitoring and evaluation systems, standards are often compromised. This study sought to assess quality kindergarten education using one hundred and two (102) public (52) and private (63) kindergartens in the Tamale Metropolis, of Ghana. A cross-sectional design with mixed method approach was used to sample one hundred and twenty (120) teachers and ten (10) head teachers from the sampled schools. The selected respondents were given questionnaire to fill out and some interviewed face-to-face, alongside classroom and environment observations. Data collected were analysed quantitatively using the Predictive Analytic Software (PASW version 22) and qualitatively by extracting themes and subthemes. The findings showed that all the respondents (both public and private schools) used the Ghana Education Service curriculum as a guide for teaching. Again, the findings showed that all the respondents practiced the whole class alongside small group instructional and assessment methods in their classrooms however, the respondents in the public schools used more whole class instructional and assessment methods than their counterparts in the private schools due to the large class sizes. The findings again show that the respondents had various understanding of quality which guides their teaching and assessment. It was concluded that, the respondents (heads of schools and teachers) have a wealth of knowledge which could be harnessed and implemented to achieve the desired quality in kindergarten education. The study therefore recommends that early childhood education programmes should provide kindergarteners with opportunities to be assessed with varying informal techniques and tools within children's natural learning settings to enable teachers provide relevant support in their development and learning. Again, it is further recommended that more infrastructural development should be

established to suit children's developmental needs. The findings of this study could serve as a basis for training for kindergarten teachers, and could also form the basis for policy and future research.

## **DEDICATION**

This thesis is dedicated to my mother, Salamatu Lardi Moro and father Laar Nameng of blessed memory. I also dedicate it to my sisters for their support, encouragement and believing in my academic pursuit.

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## LIST OF ABBREVIATIONS

DAP	Developmentally Appropriate Practices
ECCE	Early Childhood Care and Education
ECE	Early Childhood Education
EMIS	Education Management Information System
FCUBE	Free Compulsory Basic Education
GES	Ghana Education Service
GPE	Global Partnership for Education
KG	Kindergarten
MDGs	Millennium Development Goals
NAEYC	National Association of the Education of Young Children
NGO	Non-Governmental Organization
OECD	Organization of Economic Co-operation and Development
PASW	Predictive Analytic Software
SCAA	Schuyler Centre for Analysis and Advocacy
TLMs	Teaching and Learning Materials
TMA	Tamale Metropolitan Assembly
UN	United Nations
UNCRC	United Nations Convention on the Rights of the Child
	United Nations Educational, Scientific and Cultural
UNESCO	Organization
UNICEF	United Nations International Children's Fund
US	United States
WASSCE	West African Senior Secondary Certificate Examination

## **CHAPTER ONE**

### **1.0 INTRODUCTION**

#### **1.1 Background**

The early years is critical for a child as he/she begins to engage with the surroundings and develops holistically (Global Partnership for Education, 2017). The experiences they acquire affect their physical, cognitive, emotional and social development. It is argued that children develop the healthiest when they are provided environments in which they can explore, play with peers, and learn to speak and listen to colleagues and teachers (Hertzman, 2010). Such environment ensures early brain development and also affects the way they learn later in life. Anything deficient of the above can likely impact negatively on the learning in the future (Mustard, 2010). Therefore, the need for quality early childhood care and education cannot be overemphasized.

Quality kindergarten education is one which provides a safe nurturing environment, with curriculum that informs instruction, and have qualified staff to cater for young children's needs using healthy interactions that promote their holistic development (Ishimine & Bennett, 2010; Ishimine & Tayler, 2014; Pianta, Downer, Hamre, & Harare, 2016).

Research (e.g. Burger, 2010; Ceglowski & Bacigalupa, 2002; Kamerman, 2006) has therefore, shown that quality kindergarten education should be a priority to ensure children acquire the best foundation for their subsequent future learning. However with the increasing demand for the growth of early childhood centers around the world (Ghana inclusive), not much is known about the levels of quality they present.

There is therefore the need to investigate quality issues in the kindergartens especially those outside of the major cities and capitals in Ghana.

### **Kindergarten Education**

Kindergarten education is the provision of formal education and childcare outside the home (Lemaire, Amoah, Ntsiful, Micah, & Bonney, 2013). This form of education does not only contribute to cognitive stimulation, socialization, child development, and early education but also lends an essential service to employed and busy parents. KG education has therefore become a haven that has provided parents especially mothers the opportunity to be employed while their children are catered for in child care centres (Miller & Bogatova, 2009; van Belle, 2016). This need has increased the quality expectations of parents regarding child outcomes, safety and the physical environment and types of instructional methods practiced in early childcare schools (Barros & Leal, 2015; Ceglowski & Bacigalupa, 2002; La Paro, Thomason, Lower, Kintner-Duffy, & Cassidy, 2012).

To measure quality in kindergarten education is to measure child's progress, through the assessment and instructional activities and daily teaching decisions employed by teachers as these influence the holistic development of the young child (Epstein, Schweinhart, Debruin-parecki, & Robin, 2004; Ghana Education Service (GES), 2012). All these characteristics are heavily dependent on the training and understanding of the teachers at these levels of education. Interestingly, trained preschool teachers in Ghana are few as a result of very limited institutions for formal training (United Nations Children's Fund (UNICEF), 2011) and the Ghana

2014/2015 national statistics showed that, 5.1% of private kindergarten teachers were trained compared to 61.7% of the public kindergarten teachers (Education Management Information System (EMIS), 2015). This, coupled with the no clear cut quality standards in early childhood education makes it difficult to evaluate quality (UNICEF, 2011) at the kindergarten level in Ghana. To worsen the plight of the kindergarten education in Ghana is adding it to the mainline education stream, which is already bedevilled with challenges such as inadequate teaching and learning materials, inadequate trained teachers and basic amenities (UNICEF, 2011; Nyarko & Addo, 2013), high teacher-pupil ratio leading to poor teacher-pupil interactions (Pianta *et al.*, 2016). All these compromise quality at the early childhood education level. High-quality early childhood education according to Thompson (2018) is having teachers who are well trained and have insights into assessment practices that are related with children's nature and how they learn.

There is therefore the need to investigate quality kindergarten education especially in schools outside of the capital, Accra.

## **1.2 Statement of the problem**

The Early Childhood Care and Education (ECCE) sector in Ghana has evolved over the years and has become lucrative especially for private service providers. It is easy to have access to ECCE these days but, quality is perceived to be low in both public and private schools. There are guidelines and standards for checking and measuring quality in Early Childhood Education in public schools. However, due to poor monitoring and evaluation systems, standards are often compromised. Although

certain private schools have poorer standards probably because there is no universally accepted guideline for private ECCE providers in Ghana, most private schools have individual standards and guidelines that make them competitive and perceived to have better quality standards compared to the public schools. The Tamale Metropolis is experiencing an increase in population and consequently, an outburst of private ECCE institutions to cater for young children who are not enrolled in the public kindergartens. This study therefore sought to assess quality in ECCE by comparing the types of kindergarten education services provided in public and private kindergartens in the Tamale Metropolis.

### **1.3 Aim of Study**

The aim of this study was to assess the quality of early childhood education and care in public and private kindergartens in the Tamale Metropolis.

### **1.4 Specific Objectives**

The specific objectives of this study were to:

1. Find out the different curriculum, instructional methods and child assessment practices used in the selected public and private kindergartens
2. Examine the school environment in the selected public and private kindergartens
  - i. Find out the facilities and equipment available in the school environment

3. Analyze the teachers' perceptions of quality in the selected public and private kindergartens

### **1.5 Hypotheses**

Ho<sub>1</sub>: There is no significant relationship between teachers' characteristics (age, gender, education kindergarten teaching experience) and instructional methods.

Ho<sub>2</sub>: There is no significant relationship between class size and instructional methods.

### **1.6 Significance of the Study**

The disparities in the provision of ECCE in Ghana are immeasurable due to the current undefined quality standards for public and private schools. However, the potential and contribution of ECCE to building the human capital for the nation has necessitated the need for this study to be carried out. This research is therefore essential as it contains a wealth of knowledge to guide stakeholders in policy making and child care service providers with the existing differences in service delivery and its implications and probably some guidelines for interventions to achieve higher quality to the benefit of the society.

Findings of this study were important because:

1. This study added knowledge to the Early Childhood Education sector especially for potential early childhood care and development establishments.

2. It contributed to literature on quality early childhood education and as a resource to researchers in academia which could serve as a foundation for further studies in early childhood education in other parts of the country.
3. The findings of the study would help inform policy makers, public and private childcare providers and other stakeholders in early childhood education in decision making towards achieving quality kindergarten education
4. The findings of this study would serve as resource for planning interventions in the early childhood education and development sector in a bid to improve quality education.

### **1.7 Operational Definition of Terms**

- **Early Childhood Care and Education:** Refers to services involving both physical care and education for children between the ages of four and six years.
- **Quality:** refers to practices in early childhood education that use a standard curriculum to inform a variety of instructional methods to assess children's development in a safe and stimulating school environment using appropriate interactions with the help of qualified staff to guide children's learning and development.
- **Curriculum:** A curriculum is a document which contains experiences, and inputs of a learning institution which focuses on the learner, the teacher, teaching and learning methodologies to achieve positive outcomes.
- **Kindergarten:** A class for approximately, four to six year old children which serves as an introduction to school.

- **Public school:** An educational facility (school) that is government operated, funded or subsidized.
- **Private school:** An educational facility (school) that is privately owned, operated and fee-paying.

### **1.8. Delimitations of the Study**

The early childhood education sector is very broad and varied in nature. This study was therefore limited to what pertains to quality kindergarten education in relation to curriculum, instructional methods and assessment practices, the school environment, and teachers' perceptions of quality. The study was also confined to teachers and a select of head teachers in some selected public and private kindergartens in the Tamale Metropolis in the Northern region of Ghana.

### **1.9 Limitations of the Study**

Limitations that were encountered during the study were;

- Data were gathered from kindergarten head teachers and teachers the private and public schools under the Metropolitan Education Directorate of Tamale. Therefore, this research results cannot be generalized directly to all heads and teachers of kindergartens all over Ghana. These findings would however serve as insights and opinions from the specific population of this study.
- Most of the data collected were derived from the teachers' self- reported practices. Although, these data were supported through interviews and observations of some teachers, the findings of this study might not reflect what actually happens in the

classroom every day because observation, focus group discussion, data analysis would have to be done continuously to draw conclusions.

- Although there were challenges with non-responses and retrieving questionnaire because some questionnaire were either not completed or returned, the quality of data collected for this study was not compromised.

### **1.10 Organization of Study**

- The study was organized in five chapters including, chapter one where the introduction, background, statement of the problem, the aim, specific objectives and significance and limitations of the study as well as the operational definition of terms were presented.
- Chapter two highlights on the review of related literature. Sections include a review of child development and various educational theories, history of kindergarten education, developmentally appropriate practices in child care programs, the nature of kindergarten education in Ghana and the different dimensions of quality kindergarten education. The perceptions of teachers and head teachers regarding quality kindergarten education were also presented.
- Chapter three presents the methodology used in the selection process of study participants and data collection from the respondents. It includes the following sections: the sample, sample size, sampling procedure, data collection tools used, and the various data analysis techniques.
- Chapter four includes the presentation of results and discussion of the study findings.

- Chapter five presents highlights a summary of the research findings, conclusions made and recommendations.

## **CHAPTER TWO**

### **2.0 LITERATURE REVIEW**

#### **2.1 Introduction**

Chapter two comprises a review of literature of the various aspects of a kindergarten programme. Sections delved into the various dimensions of quality in early learning such as the early childhood curriculum, the different approaches to instruction and child assessment practices of educators. The different perspectives of quality education for young children have also been discussed and conclusions were drawn based on the arguments made.

#### **2.2 Early Childhood Curriculum**

Every institution or profession have their own standard laid down guidelines which govern their practice. Likewise the teaching profession has established standard guidelines that govern how they teach and assess their pupils or students and this by the use of the curriculum. The curriculum, as stated by Nan-Zhao (2004) is a vital component affecting educational quality and learning success. The curriculum is the totality of experiences which are planned for children and young people through their education. Children learn best by being actively involved in activities physically, cognitively, socially, and artistically through exploration and thinking (Kagan & Kauerz, 2012).

The curriculum according, to the New Jersey State Department of Education (2014), is an educational doctrine set to achieve desired educational outcomes through

various processes and demonstrations of an organized scope and succession of activities with a description of appropriate instructional materials. A doctrine is referred to as a body of teachings or instructions which forms the basis of an institutional teaching (Merriam Webster Dictionary, n.d.). The doctrine could either be written or not written and in this case inherent in the implementer. This implies that an educational doctrine as seen in the above definition of a curriculum is the instructions that guide educators to achieve specific outcomes. This interpretation of an educational doctrine could imply that the implementers of the curriculum with time develop a belief system which stems from the regular practice of the instructions laid out in the curriculum. And with the set of outcomes that are expected to be achieved, the belief that adhering to the guidelines of the curriculum could be realized encourages its use. Hence this belief causes the implementers to follow it religiously as it will result in the achievement of the institutions' set outcomes. It is therefore not surprising that in most of the educational settings worldwide, policy makers and managers of various educational settings have developed different kinds of models for teaching as their doctrinal practices. For instance, some pioneers of curriculum for young children which are widely practiced worldwide include, Friedrich Froebel (1782–1852), Maria Montessori (1870-1952), and Reggio Emilia curriculum. In Ghana the commonest curriculum used is the Ghana Education Service syllabus for kindergartens especially among public schools and some private schools.

Although an educational doctrine could be written, it comes alongside certain procedural processes or steps that teachers who enact this doctrine which are sometimes laid down need to follow or sometimes these processes are not written.

So as per the teacher who is the enactor of these approaches that are inherent in him/her uses his/her own prerogative. However, if the teacher is trained, inherent in these educational doctrines are that the trained teacher is taught how to enact these doctrines as part of their training. But by implication if this teacher is not trained he/she will use his/her own understanding or under the tutelage of a knowledgeable person or professional in the school by using the guidelines.

Regardless of the teachers' training that is whether they are trained or not, they are expected to produce certain outcomes.

Marsh & Willis (2007) on the other hand regarded curriculum as all the “experiences in the classroom which are planned and enacted by the teacher, and also learned by the students” (Alvior, 2014). This means that children’s experiences are planned and taught by the teacher and the children are expected to learn. Their view of the curriculum takes the emphasis away from the system unto the teacher as an individual. It can therefore be assumed that the teacher plans these experiences he/she wants the children to have at a particular time. It could also be implied that these experiences have been planned for the teacher and the teacher’s role is to implement it. Regardless of this, the teacher remains the key implementer of the curriculum since whatever learning outcomes the students achieve is so dependent on the teacher and his/her characteristics including his/her education and experience.

### **Gender of Respondents**

More women have been found to constitute a great proportion of teachers in the kindergarten through to the lower primary schools (Rich, 2014). Research has

attributed this to women's care-giving roles in their homes. It was asserted that, women were attracted to the teaching profession more because their schedules at work were not very different from that of home. Men, on other hand, were less inclined in teaching younger children but preferred teaching older children beyond the upper primary (Haile & Mohammed, 2017; Sherani, 2014).

This therefore places more emphasis on the teacher's characteristics. This means that, teachers who are trained and have long years of experience are likely to be better implementers of planned experiences compared to those who are new in the teaching profession.

### **Teachers' Training, Education and Teaching Experience**

The teacher's qualification has been linked to positive child outcomes (Early *et al.*, 2007). The teacher's level of education, experience and training have been shown to be of more importance to obtaining quality similar or even more than observed classroom quality. A study conducted revealed that, teachers who had training in child-related education interacted with children more which encouraged the children to exhibit co-operation and significant task persistence (Vandell & Wolfe, 2000).

Other studies have, however, reported that, most teachers have no training in the early childhood education field (Haile & Mohammed, 2017). Manning, Garvis, Fleming, & Wong (2017) stated studies where relationships between teachers' higher education and training in ECE and classroom quality were found. For instance, teachers with Bachelors' degrees were associated with higher classroom quality. In contrast, a previous research conducted by Lee, Myers, & Kim (2009) found that, majority of the studied kindergarten teachers specialized in early

childhood education. Early *et al.* (2007), asserted that professionals in child care settings should at least have a Bachelor's degree with a specialization in early childhood education as this has potential to improve classroom quality.

An evaluation of a teacher training programme in Ghana by Aber, Wolft, & Behrman (2016) showed an improvement in the quality of teacher-child interactions in the classroom. Particularly, the programme improved teachers' support in students' expression (such as, reasoning and problem solving skills, considering students' ideas), emotional support and behaviour management (like, positive climate, consistent routine). Iowa Department of Education (2007) added that, teacher education is associated with high quality kindergarten education which results in long-term educational, social and economic gains because they are more responsive to children and provide more language and cognitive rich experiences for children.

Furthermore, teachers who are trained impact positively on teaching and learning resulting in improving quality kindergarten education nationally. However, a teacher's training does not necessarily improve on practice in some cases. Instead, general perception plays significant role in decision making, to choose or adopt a particular teaching and learning approach over the other. Arguably, teachers' understanding is a major contributory factor in determining what the teacher learns and its influence on his/her instructional practices. Researchers found public schools offering early childhood education services had teachers with higher education and training and paid higher were more stable at post as compared to those in the private sector. Lang, Mouzourou, Jeon, Buettner, & Hur (2017) found that, teachers with associate degrees were more likely to respond negatively to children's emotional

displays. However, taking child development or early education coursework was associated with less negative social guidance (Lindenberger, 2018).

Lindenberger (2018) stated that, teachers with less than four (4) years teaching experience were higher in private schools compared to those in private schools. Lee *et al.* (2009) indicated in their study that, private kindergarten teachers were paid lower compared to those in public kindergartens coupled with insecure positions. Therefore ambitious teachers preferred teaching positions where they were afforded better job conditions. Germino-hausken, Walston, & Rathbun (2004) reported that public school teachers had a high average KG teaching experience more than teachers in the private schools.

Caswell & Campbell (1935) in Alvior (2014) viewed curriculum as “all experiences children have under the guidance of teachers”. Here, the curriculum is expected to contain all the experiences children need to learn and the teacher is supposed to serve or act as only a facilitator of the learning process. In this case, the teacher and the child become the main actors of the curriculum. By implication, the children are at liberty to come up with their own choices of learning experiences and the teachers’ roles are just to guide their learning. This therefore places more emphasis on the child with the teacher acting as a guide. By this implication, teachers’ are expected to have some training, education and experience regarding the kindergarten curriculum to be able to guide or facilitate children’s learning.

### **Teachers’ Relationships with Children, Parents and Families**

Another quality of teachers is their ability to establish and maintain cordial relationships with the children, parents and families of children in their care. Positive

bonds between teachers and students create the opportunity for the classroom to become supportive spaces in which children can participate in academic and social creative ways (Gallagher, 2013). Positive teacher-student relationships include the presence of closeness, warmth, and positivity (Burchinal *et al.*, 2008; Gallagher, 2013). Students with secured relationships with their teachers are able to explore the classroom and school setting, take on academic challenges and work on social-emotional development (Gallagher, 2013).

Positive teacher-student relationships have been found in some studies to improve students' motivation (Gallagher, 2013; Koca, 2016). A possible reason for the association between academic improvement and positive teacher-student relationships is students' motivation and desire to learn (Gallagher, 2013; Koca, 2016).

Contacts between children's family-school provide opportunities for parents and teachers to have a better understanding of what occurs at home and in school. Through multiple contacts with parents, teachers learn more about the children's needs and habits. This helps the teachers to identify the children's unique characters and daily life. Pirchio, Tritrini, Passiatore, & Taeschner (2013) study findings showed that parents were more collaborative when the school involved them in their educational decisions and activities. Research suggests that, good parent-teacher relationships increase children's educational wellbeing which generates conversations and reciprocal understanding among caregivers (Pirchio *et al.*, 2013).

Abdulai (2017) defined curriculum as a document which comprises the learning experiences children encounter in school. In this regard, a curriculum refers to

children's documented experiences in school. This implies that every encounter children go through in the school is guided by the curriculum. Here the students' interests are the most important considered as a child-centred approach to learning. This also considers the school or educational setting as a major enforcer of the curriculum. This implies that, depending on the type of outcomes the school or program requires, that becomes the determinant of the experiences children would encounter.

Comparing these definitions, it is realized that the curriculum as an educational doctrine is planned and documented by an individual or a group of people to be enacted by individuals or groups of people. Marsh and Willis definition makes the teacher the sole professional and most important person in curriculum and its implementation. However, Caswell and Campbell place the child at the central enactor of the curriculum under the teachers' guidance. Also, Abdulai's view of the curriculum could also be aimed at a child-centred setting since it is the child's experiences in the school that are emphasized. In view of these, it can be stated that an educational unit or settings' choice of a curriculum is dependent on the type of outcome desired and the learning institutions' focus.

This study defines curriculum to comprise of all experiences planned or unplanned for children in an educational setting geared towards achieving certain outcomes demonstrated through various processes using suitable materials for learning with or without the guidance of a teacher within a safe environment. Some early childhood learning pioneers advocated for a child-centred approach to learning as a way of bringing to the fore children's needs and interests (Asare, 2015).

Also, lesson delivery is expected to be in an integrated manner through the curriculum's daily routines, activities, and interactions. It was stated in the Hong Kong Yearbook (published in the year of 2006) that the curriculum is positive in nature. This implies that, it enables children to achieve the objective of propelling learning, increase knowledge and abilities and the development of positive values in young learners (June, 2013). These elements could help students achieve development in its totality.

Kelly (1999) in June (2013; p3-4) described the nature of curriculum in three forms as “planned curriculum, received curriculum and hidden curriculum. Planned curriculum means what is laid down in the syllabus. Received curriculum refers to the reality of students' experiences. Hidden curriculum is the implicit knowledge students learn in school”.

The Ghana Education Service kindergarten syllabus is a guide which contains different aspects of child developmental needs with which teachers support children acquire basic skills for an overall development. It is divided into 6 core areas: Language, Literacy and communication skills, Creative development including music, dance and drama, Mathematical skills, Environmental Studies, Physical Development and psychosocial skills (GES, 2016). It is required of teachers to engage children in play as a means of helping to develop listening and expressive skills, and reading and writing while exploring the environment (GES, 2012).

All public schools which are owned by the Government are mandated to use the GES syllabus for Literacy and Language for teaching and learning. However, when it comes to private institutions relative to what kind of curriculum is to be used, there

is not a single standardized type of curriculum (Abdulai, 2017). A study conducted by Osei-poku & Gyekye-Ampofo (2017) in the Ashanti Region in Ghana among some selected public school teachers revealed that, some teachers could not identify the type of curriculum used for teaching.

All the underlying definitions of curriculum rely on some learning processes to achieve the set outcomes. Thus, be it educational doctrines, planned experiences by the teacher or child chosen experiences facilitated by the teacher, key processes should be clearly established to achieve the desired learning outcomes. The key determinants of the processes are instructional methods and assessment practices.

Before these outcomes can be achieved, there should be certain systematic laid down guidelines to be followed. With the educational doctrines, because there is a procedural complement, it will be easy for the implementer to use the educational doctrines to carry out these methods. If the curriculum is planned, there are also certain steps or laid out procedures guiding instruction. Also, if the teacher is guided, there may not necessarily be established guidelines available to the teacher. However, there are particular experiences expected to be achieved and so this will determine the kind of guidance that would be given which is an instructional method on its own.

With all these definitions, it is realized that it is very easy to outline the methods to follow if the curriculum is planned or an educational doctrine or an established document but a little difficulty will be with regards to situations where the children choose their own experiences with the teachers' guidance. Unless the teacher has a

clear understanding of the experiences he/she wants the children to have then, this could be followed to achieve the set outcomes if not it would be very difficult to even establish the processes.

There could be situations where the same outcomes are desired for all the outlined types of curriculum but the methods followed to instruct the child would be different because of the differences in the teachers' or children's characteristics. Hence, because of the variations in the emphasis placed on the teachers' characteristics and the children's experiences followed could be different as well as the implementation of the instructional methods are likely to be different.

### **2.3 Instructional Methods**

Instructional methods comprise of the whole class method, small group method and the individual child methods. Instruction refers to the methods teachers use to teach a curriculum (Kizlik, 2018). Instruction takes place when teaching is intentional to meet young children's needs. Similarly, instructional methods also known as teaching methods are a range of strategies teachers use to engage children in learning (Ipatenco, 2018). This implies that teachers plan and enact the curriculum for children to participate in learning. Hence the instructional methods are the means through which teachers present the planned or unplanned experiences in the form of daily activities and routines and the students in turn become active participants who learn using these strategies. Teachers in kindergarten classrooms use several teaching methods to ensure that each student is learning what she needs to know.

The same teaching methods are designed to help students who excel remain challenged, as well as to help students who are lagging behind catch up, because they incorporate a wide range of instructional strategies (Ipatenco, 2018). For the purpose of this study, instructional methods refer to the approaches used to engage children in particular activities either in small groups, with individual children or the whole class and the teacher plays the role of the curriculum enactor or facilitator whilst the students are the active learners. Three main types of instruction methods exist namely; the whole class, small groups and the individual child instruction.

### **1.5.2 2.3.1 Whole Class Instruction**

Teaching is carried out for all children in the classroom at the same time. In a whole class instruction classroom, children are expected to take turns in carrying out activities such as responding to the teachers' questions, waiting for them to be called-on to answer questions while seated or occupying their individual space. Some activities include but are not limited to the following; reading, phonics, vocabulary, writing, number and word recognition and counting. Others are rote practices, singing and reciting rhymes (Cross, 2010).

In the kindergarten classroom, the whole class activities approach is usually teacher-initiated and can cover a variety of activities such as story time, singing songs, and classroom interactions that engage all students in the specific activities. Prior studies revealed that teachers often view large group settings as time for academic instruction (Cabell, DeCoster, LoCasale-Crouch, Hamre, & Pianta, 2013; Early *et al.*, 2010). Meador (2018) posited that, planning for a whole class instruction is one

plan for the entire class hence it cuts down the preparation time for teachers. Raftery (2016) indicated that whole group activities for some parts of the school day can improve children's development and small group learning supports scaffolding in children. Further, during whole class activities where children read aloud or tell stories in the classroom their social skills are promoted.

### **1.5.3 2.3.2 Small Groups Instruction**

Children are grouped and engaged in activities with their peers. The small group instruction enables teachers support children to gain specific skills needed for their learning process. The small groups entail teaching students in groups about what they need to know while keeping them engaged and motivated to promote enquiry and critical thinking (Ipatenco, 2018; Wilson, Nabors, Berg, Simpson, & Timme, 2012). Teachers who use this strategy interact with the students more closely and guide them through practical lessons such as reading (Wilson *et al.*, 2012). Small groups also afford children with enough social interactions which help in developing their socio-emotional and cognitive abilities.

Children are engaged and encouraged through reading to enhance their critical thinking skills. Also, children's cognitive abilities are improved with benefits such as meeting their needs at their developmental level while responding effectively to children's reading. Through conversation and discussions, teachers are required to support children in self-expression.

Further, small group instruction can be used to reinforce specific skills and ideas of children who are challenged as well as provide teachers an accurate opportunity to carry out assessment during the learning process. Lev Vygotsky, who propounded the socio-cultural theory, attributed learning as an inherent social context and that children make sense of several school activities by actively participating, observing and engaging in social interaction with other students and teachers (Wilson *et al.*, 2012).

Contrary to the whole class activity, teacher-directed small group activities where the teacher generally interacts with a few children, enables the teacher have a chance to be forthcoming regarding the individual needs of the children and also for the children to be more engaged in the classroom (Ansari & Purtell, 2017). Research however suggests that, when whole class and small group activities are practiced together, academic benefits are realized (Meador, 2018). A teacher-directed individualized activity is where children work independently performing tasks whilst the teacher periodically assists the children separately. When children spend more time in individual activities enabling them to work at their own stride, they can achieve academic competence (Chien, Howes, Burchinal, Ritchie & Bryant, 2010).

#### **1.5.4 2.3.3 Individual Child Method**

The individual child instruction refers to teaching a student one-on-one. This is beneficial to children especially because not all of them learn at the same pace or have challenges with understanding specific concepts. When teachers focus on them, they are able to help these children catch up with their peers (Ipatenco, 2018). One

child is engaged in an activity with a teacher's guidance. The individual child instruction which is also known as differentiated instruction is a teaching philosophy based on the principle that teachers ought to adjust instruction to meet children's needs. Instead of adhering strictly to the curriculum, teachers should change their instruction to meet the pupils' varying readiness levels, learning preferences, and interests (Willis & Mann, 2000). Therefore, teachers are required to make accommodations for the varying needs of children's learning.

Annobil & Thompson (2018) buttressed the need for child care professionals to be well informed with children's unique nature and how to tailor in the appropriate instructional strategies effectively to promote child development. They went on to indicate the significance of the teaching and learning process in the kindergarten and how the teachers' insight could guide its facilitation. Wilson (2011) suggested that children need to be outside to explore their environment while having fun through teacher-directed and child-initiated or free choice activities (Annobil & Thompson, 2018) as a way of connecting children to their lived experiences inside and outside the classroom. Findings from Annobil & Thompson (2018) showed that, teachers used various methods (such as playing outside) to teach concepts that helped children experience learning naturally within the school environment.

The importance of learning outcomes has been clearly established in these definitions. With these outcomes, it could be determined when certain kinds of assessment procedures are in place to find out whether the desired outcomes are achieved within the curriculum. In reference to the definitions, it means that the educational doctrines may have clearly stated outcomes to be achieved and hence a clear cut assessment processes that teachers or an implementer of the curriculum

need to use. Likewise if the planned experiences are inherent in the teacher these planned experiences become the modes of assessment of the desired outcomes. However, once learning is child-centered with regards to Caswell and Campbell's view of the curriculum, technically every outcome is dependent on what the children need and that would be difficult to assess compared to that which are educational doctrines and planned experiences. Regardless, the teacher would have to come up with his/her own mode of assessment. Therefore the varied steps to ensure outcomes are achieved depend on assessment which has been established in the curriculum. This makes assessment an important aspect of the curriculum. Hence, the next section discusses assessment.

#### **2.4 Early Childhood Assessment**

Assessment is an on-going process of identifying and evaluating children's learning in order to make decisions on their development and to inform and plan teachers' instructional strategies (Epstein, Schweinhart, Debruin-parecki, & Robin, 2004; GES, 2012). This implies that assessment is always carried out as long as children are engaged in daily activities at school. When teachers identify children's strengths and weaknesses regarding their learning and development, it informs their choices of instructional methods and tasks that would support the students' development. Assessment should always inform instruction (Asare, 2015; Wren, 2004). The researcher defines assessment as an on-going process where teachers identify, collect and evaluate children's learning capabilities and experiences which informs

instructional plans and approaches through daily schedules, routines and activities using informal strategies within the learning environment.

Asare (2015) asserted that, the need for early childhood educators to provide proof of students' learning has resulted in subjecting children to various kinds of tests which deviates from the true purpose of assessment. Hence, assessing children needs not to be rigid and strictly dependent on result-oriented teaching but teachers or educators need to consider children's development as a crucial aspect during assessment. However, children's learning, growth and development are supposed to be assessed to track their progress but tests scores are rather used as benchmark to judge achievement in school. Therefore, instead of testing children's abilities to produce correct answers to tests, educators should assess their development from what they know to mastering new tasks. Assessment therefore can be formal or informal.

Formal assessment pertains to the use of standardised tests where a child's performance is tested in the different developmental domains which are then transformed into a score that is compared with either the performance of other children with the same features or with certain standards or instructional objectives (Brown & Rolfe, 2005). Simply put, formal assessment is giving children tests to reproduce what has been taught. These results are then used to compare with children of similar characteristics and are required to meet some specific standards of test scores.

Formal assessment tools are required to have and meet acceptable level of measurement for validity and reliability (Brown & Rolfe, 2005; Epstein, Schweinhart, Debruin-Parecki & Robin, 2004; Winton & Buysse, 2015). Validity

here means that children's assessment should be able to measure their abilities and development to produce genuine results that can actually be a true representation of a particular milestone or outcome. For instance, if a child is able to recite all the alphabets then that student is intelligent. Reliability on the other hand refers to when an assessment tool is able to produce the exact test scores or results when used to assess different groups of children of similar characteristics. This makes formal assessment too rigorous in assessing children's development.

Informal assessment on the other hand is usually done through observation, use of anecdotal records, portfolios, teachers' and parent ratings and face-to-face interaction with the children (Brown & Rolfe, 2005; Epstein *et al.*, 2004). This is usually carried out during daily routines and normal classroom experiences where children are engaged in various activities on their own in groups or with the peers. Informal assessment methods offer different approaches to assessment.

These engage and evaluate children on tasks that are personally meaningful, that is, activities children tend to enjoy, actually performed in real life contexts, and naturally occur during instructional activities. This allows the teacher to assess the students' learning whilst evaluating their motivation, achievement, and attitudes (Epstein *et al.*, 2004). It is therefore required of child care settings to have consistent assessment goals that are in tune with their program focus, curriculum, and instructional practices of the classroom.

The curriculum planners of the Ghana Education Service have emphasized on the need for teachers to effectively implement the curriculum to guide and support

instruction and concurrently assessing children (Asare, 2015). The recommendations of the Ghana Education Service is that, children be assessed “by observing play, analysing work done, discussing the children’s ideas and interacting with them one-on-one and in groups” in all kindergartens (GES, 2012). Informal assessment is usually carried out through formative and summative methods.

**Formative Assessment** refers to an integral part of the teaching process. When formative assessment is practiced well, the information presented helps in making adjustments during planning and delivery of teaching and learning. This can be carried out by way of observations and questioning children during lessons delivery (Garrison & Ehringhaus, 2013). Formative assessment takes place every day during instructional process, early childhood teachers periodically gather data about what young children know and are able to do, how they process information and solve problems, and their relationship with other children and adults. This information helps to monitor young learners’ developmental progress including determining extra or different teaching or behavioural supports to accommodate individual learning objectives (Winton & Buysse, 2015). To report conclusively on children’s progress, summative assessment is carried out.

**Summative Assessment**, according to Nafa (2018), is adding up a student’s learning at a certain point in time to identify achievement and measure progress. In effect, summative assessment is a cumulative from of assessment of children’s overall progress in activities which is a combination of more than one assessment method. Usually, tests or examinations are used to report progress to teachers, parents and children. Summative assessment is carried out at the middle of the term, end-of-unit

or chapter tests and an end-of-term exam to sum up children's learning (Garrison & Ehringhaus, 2013).

GES (2012) asserts that, formative assessment should be used to informally discover children's interests, learning style and progress towards their development. However, summative assessment should be carried out to provide a summary of children's learning during the school year. This serves as a way of presenting a picture of children's overall progress to inform children, their parents and teachers (Darling-Churchill & Lippman, 2016; Garrison & Ehringhaus, 2013).

#### **1.5.5 2.4.1 Cognitive Development and Assessment**

Cognitive development is the continuous and uninterrupted growth of understanding, memory, imagination, creation, judgement and reason linked to an individual's biological adjustment to the environment. It involves mental tasks of understanding information and processes of gaining, coordinating, memorizing or recalling and using knowledge (Bartolotta & Shulman, 2010). Put simply, cognitive development means how children think, explore and reason (Help Me Grow, 2018).

Education Challenge Ghana (2015) stated in a report that 80% of all life's learning is acquired by age 8. This is because it is in such years that brain connections are established and the brain is still developing. This is a critical period where educators are to ensure that children in early years receive the right method of teaching and learning that enhances their cognitive development to ensure their success in later years (Education Challenge Ghana, 2015). Ampiah (2011) stated that quality exists when students demonstrate knowledge. This implies that measurement of quality

depends on the ability of children to excel in tests or tasks. He added that, the Ghanaian educational system is very focused on cognitive outcomes and so students are subjected to forms of examinations and test which they are required to pass in order to move up to the educational level. Therefore, assessment of learners' progress using cognitive tests provides an indication of how well children learn and understand concepts.

Gibson, Jones, & Patrick (2010) indicated that, to assess children's thinking and learning skills their problem solving skills, understanding of basic concepts, ability to answer questions and counting skills should be considered. Research shows that, healthy cognitive development in memory, attention control and understanding occurs at a vital period of early childhood and hence there is a crucial need for children to be engaged in such activities to boost cognition (Welsh, Nix, Blair, Bierman, & Nelson, 2010; Zeng *et al.*, 2017).

#### **1.5.6 2.4.2 Socio-Emotional Development and Assessment**

According to Yates *et al.* (2008) social-emotional development is “the developing capacity of the child from birth through 5 years of age to form close and secure adult and peer relationships; experience, regulate, and express emotions in socially and culturally appropriate ways; and explore the environment and learn—all in the context of family, community, and culture”. This means the 5 year old should be able to have some attachment with an adult and children with whom he/she can relate with. The child should have the opportunity to express his/her feelings (such as being sad, happy, upset) and be capable to communicate these in suitable ways

conforming to the social and cultural norms. Some fundamental socio-emotional skills consistently emerging in literature are children's ability to express emotions and its management, consider others' perspective, empathy, confidence, and the development, sustenance and building supportive relationships with others (Darling-Churchill & Lippman, 2016).

The core characteristics of emotional development are; the ability to identify and understand one's own feelings, to appropriately read and perceive emotional states in others, to deal with strong emotions and their expression in a positive manner, to regulate one's own behaviour, to develop empathy for others, and to establish and maintain relationships (California Department of Education, 2018).

Experiences which promote socio-emotional development of children with care-givers and interactions with peers during the early years enhance academic and personal effects later in life. It is also beneficial as children gain self-confidence and competence required to build relationships, problem solving skills and emotion regulation. Also, their academic achievements are promoted when positive socio-emotional development occurs since children become more prepared to learn effectively and comfortably. On the contrary, negative socio-emotional development may hinder children's functioning abilities at home, in school and the community at large. This may result in the inability of children to communicate or manage their emotions as well as develop healthy relationships in adolescence through to their adult life (Darling-Churchill & Lippman, 2016).

### **1.5.7 2.4.3 Motor Skills Development and Assessment**

Motor skills development is the continuous change in motor skills behaviour (Ministry of Education, Singapore, 2013). Shenouda, Gabel, & Timmons (2011) refer to motor skills as children's ability to control their body in movement and how they interact with the environment. Children improve majority of their motor skills during their kindergarten years. When children's motor skills are enhanced through task performance their confidence increases. There are two types of motor skills namely; gross motor skills and fine motor skills. Gross motor skills involve using the arms, legs and body for movement. Some gross motor activities are running, walking, jumping, throwing, kicking, and catching among others (Ministry of Education, Singapore, 2013).

Fine motor skills, on the other hand, refer to "the coordination and control of the wrists, fingers and hands in carrying out a specific task with precision" (Ministry of Education, Singapore, 2013). Examples of such activities include writing, drawing, painting and self-help skills like shoe lacing, toileting, cutting with scissors. Qi, Tan, Sui, & Wang (2018) defined fine motor skills as using the fingers, hands and arms for manipulation and control using tools and materials. Hand-eye coordination occurs when children use their vision to control movements and actions of their small muscles. Predictors of numeracy, literacy and self-help skill development are determined by fine motor skills (Trawick-Smith, 2014).

Motor skills development has been strongly associated with motor play as a way learning in early childhood occurs. Fine motor skills have been found to be a strong

predictor of retention in the kindergarten (Cameron *et al.*, 2013). Zeng *et al.* (2017) indicated that children's early development years are critical periods where physical activity or movement develops their emotional, motor, social and cognitive abilities and hence there is a need for them to be naturally involved in physical activity to promote and maintain healthy and active lives.

Children who are engaged in regular physical activity to promote their motor skills can be associated with many health outcomes like adiposity, self-esteem and cognition. When children are engaged in activities, their motor development is stimulated (Mathisen, 2016). Therefore, regular assessments with different tasks could inform teachers in areas children are constrained. When children play or learn using their motor skills, it contributes immensely to their self-motivation, satisfaction, social interaction and building relationships with their peers. However, children who develop poor motor skills are likely to engage in less social interaction and display detachment and restrain behaviour during play activities (Trawick-Smith, 2014). This could subsequently lead to motor impairment due to inactivity (Mathisen, 2016).

Motor play enhances children's attention, memory, self-regulation and academic accomplishment in early years of young learners. Play in its own capacity is required for learning to take place since motor development has been found to be a strong precursor of cognitive abilities (Trawick-Smith, 2014). Communication between children occurs for most part of play than any other classroom tasks leading to their language development. Also, motor play of children contributes immensely to their self-motivation, satisfaction, social interaction and building relationships with their peers. Contrary to the positive benefits derived from motor play, children who

develop poor motor skills are likely to engage in less social interaction and display detachment and restrain behaviour during play activities (Trawick-Smith, 2014).

#### **1.5.8 2.4.4 Reading Skills Development and Assessment**

Chelimo (2014) described reading as a pleasant and meaningful activity which involves an intellectual response from the reader. To learn and develop pre-reading skills, children use their senses, repetition, trial and error method and instructional materials. Reading has been strongly associated with language development especially during the early years of children.

Reading proficiency forms the bases for successful aspects of life. Strong reading comprehension skills have implications for academic achievement in various fields of study, such as social studies, science and math. The ability to read and understand is a precursor for job success in the workforce. Therefore, children with lower reading comprehension skills are at a greater risk for unemployment later in life. Also, good reading skills promote better integration into society and encourage children to engage in activities which prevent them from alienating themselves from society ("Research and Practice in the Field of Early Literacy Learning", 2013).

Research evidence has revealed that young children should be taught consistently, directly, and explicitly in reading (phonics decoding), fluent sight-word vocabulary, and comprehension skills. Some research have also shown that direct instruction with an emphasis on phonics and skills in visual perception of vocabulary improves

reading performance through which the child's reading achievement is realized (Chelimo, 2014).

According to Chelimo (2014; p. 26) who cited Anderson (2002) stated that children need to be immersed in language rich environments in order to develop phonological awareness because it would be difficult to master the ABCs without lots of exposure to the alphabet. Knowledge of the ABCs and phonological awareness do not usually happen from exposure for most children unless it is teachers intentionally taught. Research has shown that teaching children to associate and blend words with sounds and helping them to identify and pronounce the alphabets and words improves their reading (Chelimo, 2014).

#### **1.5.9 2.4.5 Language Development and Assessment**

Ghana Education Service curriculum places a lot of emphasis on the need to support children's language skills in the kindergarten (GES, 2012). Also, through the use of storytelling, songs and rhythms, sounds and word pronunciation to carry out classroom activities as well as the daily interactions with teachers and peers coupled with play activities children are engaged in help developing their language skills (Kennedy *et al.*, 2012). The GES syllabus requires that, kindergarten children should be taught in the Ghanaian language (child's mother tongue) where the school is located for most (90 minutes) parts of the school day. This is to enable the child easily transition from the home where the local language is the means of communication into the school system. Even though this could be beneficial to the child's learning, fluency in the English language for use later in life for public

school children becomes a challenge compared to their peers in the private schools whose language of instruction is basically the English language (Okota-Wilson, 2017).

Justice, Yeomans-maldonado, Gonzalez, Bengochea, & McCormick (2018) found in their study that teachers used spoken vocabulary to increase children's language development. Music and songs, materials with words and storytelling were some of the strategies which teachers used repeatedly to support students' language. Research has presented evidence on the link between spoken language and cognitive development in the early years. When children observe the use of language among their teachers and peers and how it is spoken through listening, they are able to describe and make sense of their experiences during task performance (Open Resource Bank for Interactive Teaching (ORBIT), 2012).

#### **1.5.10 2.4.6 Math/Counting skills Development and Assessment**

Children develop mathematics concepts and understandings in interesting ways every now and then without adults' help. This includes different topics such as space, shape, pattern, number, and operation which comprise several important characteristics like: interest, concrete and abstract thinking and understanding and misconceptions (Presser, Clements, Ginsburg & Ertle, 2015). Children's maths progress has been linked to the education provided in their early years (Presser *et al.*, 2015). Research also indicates the importance of language in promoting children's numeracy skills as this is used to express their thinking in words and also as a predictor of future academic achievement (Reid, 2016).

Okota-Wilson (2017) indicated that, the GES kindergarten curriculum for public schools revealed that, children in their first year of kindergarten are expected to learn the numerals up to ten (10). This is because it assumed that the KG1 is the child's first encounter in formal education. Although the private schools use the GES curriculum as well, students are thought more complex maths skills (Okota-Wilson, 2017).

However any educational doctrine, planned experiences or child-centred programs of the curriculum are implemented within a particular context in this case, an environment. In an educational setting, there are certain laid down environments that are deemed as appropriate if a desired outcome is to be achieved.

## **2.5 Kindergarten School Environment**

A supportive kindergarten learning environment is one which promotes children's development such as their critical thinking skills. The environment should nurture children's capacity to participate immensely in individual and group activities. Such environments are created through interactions with indoor and outdoor that offer opportunities for students to plan their learning and carry out tasks while acquiring new knowledge and skills through purposeful play (New Jersey State Department of Education, 2014). According to Van Heerden (2016) the physical environment of a school is very beneficial to the needs of children at the kindergarten level.

### **1.5.11**

### 1.5.12 2.5.1 Elements of the Kindergarten School Environment

An appropriate educational environment according to Shaari & Ahmad, (2016) comprise the social environment (the students, the teachers, and the curriculum or programs) and the physical environment (building and infrastructure). It encompasses the outdoor environment, classroom environment and other elements which are set-up to support children's learning. The environment should foster the following stimuli; movement, competence, control and comfort stimuli (Pedük, Yildizbaş, & Aygün, 2014). Sriklaub, Wongwanich, & Wiratchai (2015) posited that the school environment helps stimulate children's development in all domains such as cognitive, social, emotional and physical development. Whereas Ata, Deniz, & Akman (2012) described the environment beyond the available physical space and included the time factored into structure, as well as the planned expected roles people are required to play. It therefore encompasses how one feels, thinks and subsequently behave to influence the quality of life. Hence, it supports or negatively impacts lives. On the other hand, Børve & Børve (2017) stated that three elements of structure are pertained in a school's physical environment: physical localization such as buildings, the classroom's layout and the physical conditions in the classroom including furniture, equipment, design and decoration.

Whilst Shaari & Ahmad (2016) and Ata *et al.* (2012) defined the environment including the social aspect that is, the individuals involved and the physical components, Sriklaub *et al.* (2015) considered it as stimulating children's development holistically whereas Børve & Børve (2017) regarded the physical structure detailing the school buildings, layout of the classroom and the general

physical conditions. It can be realized that the physical infrastructure is a necessary element which has been highlighted in all the stated definitions and should be present in any educational setting. However, disparities in what is considered apart from the physical structure of a school exist. Whilst the first definition takes into consideration the curriculum and its enactors as comprising of a social element, implying that the curriculum or program focus should guide teachers to engage children in learning in an interactive social context, the second definition involved stimulating development in all domains. This means that, the set-up of the school environment influences children's overall development. However, Ata *et al.* (2012) indicated that individuals involved in the environment are required to play certain roles in the school aside carefully planning the environment to support these roles. Regardless of these different points of view of what a school environment is or should be, the most important elements are the desired outcomes within the curriculum.

The school environment in the context of this study refers to a well-structured physical space (both classroom and outdoor layout) intentionally planned for social interactions (between teachers and children), factored into structure to stimulate child development holistically through play and exploration which is carefully designed, equipped and an apportioned play area safe for both teachers and students.

In kindergartens, indoor environments are usually divided into varying social sections. These include guidelines indicating intended activities to be carried out and

what is inappropriate to do in the space. Teaching and learning in the kindergarten comprise of personnel, a well-designed building, and equipment which support learning and play. Tekmen (2014) indicated results from a study conducted where it was found that, some schools were detached and single floor buildings while others were found in joined apartments.

The structure of a school building has an influence on the teaching and learning process. Many researchers have indicated the need for school building design to be taken into consideration for the sake of its influence on children's learning (Higgins, Hall, Woolner, Wall, & Mccaughey, 2005). Some studies have shown that ease of movement in schools averts the feeling of overcrowding. This suggests that, well-designed buildings have the potential of contributing to student's success as it affects the mood and behaviour of learners (Børve & Børve, 2017; Farooqi, Farooq, Saleem, Akhtar, & Akram, 2015; Higgins *et al.*, 2005).

Therefore, to ensure children's safety, these items must be properly and carefully arranged to ensure ease of use (Mohidin, Ismail, & Ramli, 2015). This allows the children to actively participate in their learning for an overall development. Pedük *et al.* (2014) posited that the school environment helps stimulate children's development in cognitive, social, emotional and physical development domains. The social aspect relates to interaction between the students, teachers and the nature of the school programme and the physical refers to the overall infrastructure. Workman & Ullrich (2017) indicated that children need a physical setting where they can play, explore and learn safely. The learning environment needs to include engaging and

developmentally appropriate materials which are properly arranged to promote independence and exploration based on the children's varied stages of development.

While inadequate school buildings cause health problems, lower student concentration and contribute to poor student performance, adequate and beautiful school structure has shown to increase student performance. Consequently, poorly designed and organized school structure reduces the quality of the programme (Rentzou, 2014).

### **1.5.13**

#### **1.5.14 2.5.2 Importance of the School Environment**

The physical environment of ECCE settings is an important structural factor that enables good quality development. Indoor and outdoor spaces, equipment and learning materials, which are appropriate, stimulating, safe and protective, impact on children's learning opportunities, physical activity, and health and safety. As kindergarten children manipulate objects in more different ways and situations, materials allow for them to play in character and helps in developing their language skills. There should be large spaces for children to explore. Materials should be stored. Also, the arrangement of the learning areas should engage them to learn while playing (Lefa, 2014).

Moon & Reifel (2008) reported teacher's view on children's play as concrete, manipulative, hands-on activities for children's learning. This was stated as relevant for children because they have short attention spans. Sharif (2014) indicated that school play time was the most active part of children's day. The playground

therefore allows children to have fun and relax and helps promote good health and wellbeing. Playgrounds in schools therefore play an important role in children's daily lives for fulfilling their interest, development and learning needs. The presence of playgrounds in schools was stated as a criterion for kindergarten children's school readiness (Sharif, 2014).

Erdem (2018) found that teachers believed outdoor activities enriched their students' learning in their natural settings, helped develop their spatial perceptions, and improved their psycho-motor and language development. The surroundings of a school make up the framework that builds children's play (Børve & Børve, 2017). A school environment that is structured to engage children in play builds their competence in social skills, language skills, have great imaginative abilities and high levels of thinking. This is because children translate all they learn into practice through play as a way of learning (Miller & Almon, 2009). Hence, giving children the opportunity to play and engage in hands-on experiential tasks helps them internalize new information in addition to what they already know. They also get the chance to interact with their friends and teachers which allows them to solve problems on their own (Brown, 2017).

The kindergarten physical environment has been stated to have direct impact on children's social and cognitive competency and development. Hence, shortcomings in the physical learning environment hinder children's development. This is because it creates undesired behavioural obstacles and causes withdrawal and lack of

integration with their surroundings (Shaari & Ahmad, 2016). The physical learning environment has also been found to influence children's behaviour, attitudes and school readiness (Shaari & Ahmad, 2016; Sharif, 2014).

Access to fresh, clean potable drinking water in schools is very essential to maintaining good health of children. Water should be stored in covered tanks instead of open pans (Farooqi *et al.*, 2015; Higgins *et al.*, 2005). Higgins *et al.* (2005) indicated that it is very necessary for children to have a canteen or a place dedicated for a variety of meals to be eaten. Schools therefore have a role in providing meals and snacks for children during the school day (Farooqi *et al.*, 2015). Research shows that, physical facilities such as available potable water and toilets among others have their own influence on student's performances (Farooq Shah, Ullah, Khan, & Khan, 2013; Farooqi *et al.*, 2015).

Rentzou (2014) found that indoor spaces in private schools were adequate compared to public school settings. In contrast to this study's findings some private schools' classrooms were more crowded than some public schools even though the private schools' situation was better. Sensory stimulation refers to making learning effective through the senses (seeing, hearing, smelling, touching and tasting) (Brown, Morrison, & Stagnitti, 2010). Day lighting, according to Higgins *et al.* (2005), has been considered to produce the most effective and appropriate for students achievement as it has biological effects on the body. Also, noise and ventilation in the classroom have been associated with students' mood and behaviour (Farooqi *et al.*, 2015).

Furniture is important in a school as it has been linked with comfort, attraction and well-being. The furniture should be comfortable, attractive, child sized and storable (Farooqi *et al.*, 2015). Rentzou (2014) found that, many public schools had inadequate furniture whilst more than half of the private schools' were sufficient. Furnishing in every classroom is of utmost importance and contributes greatly to activities carried out. For kindergarteners, soft child-friendly furnishing is prescribed to increase participation as it has been seen to promote comfort and helps in ease of movement (Higgins *et al.*, 2005). Availability and accessibility of sanitary facilities to students and teachers have been found to prevent absenteeism (Ayele, Melara, Blaustein, Yajalaal, & Abagna, 2015).

#### **1.5.15 2.5.3 The Ghana Education Service School Environmental Requirements of Kindergartens**

The Basic School Division of the Ghana Education Service (GES, 2016) set minimum requirements and guidelines with the following indicators as characteristics of the school environment for public and private KGs:

- Play Area: Playground, sand pit & equipment
- Feeding: Meals provided for children, Eating area
- Teaching and Learning Materials: Black/white board, charts, pictures displayed on walls, display tables

- Furniture: Child-sized chairs per child, tables with smooth edges, bookshelves, cupboard for storage
- Indoor learning environment: Free space for easy movement, free space for teachers to move around and interact in the classroom, seating arrangement, tables are large enough to foster collaborations and ventilation (windows)
- Equipment/TLMs: Black/white boards, charts, pictures or posters, wall clocks, display tables, books and musical instruments, access to children
- Furniture: Child-sized chairs per child, Tables with smooth edges, teachers' desk, bookshelves, cupboard
- Sensory stimulation: Enough sunlight entering the classroom, electricity in the classroom, audible external noise, unpleasant odour inside or from outside the classroom.

Biglan, Flay, Embry, & Sandler (2013) indicated that, environments that foster successful development and prevent children from developing behavioural problems are usefully characterized as nurturing environments. These environments minimize accidents, they teach, promote and reinforce pro-social behaviour including self-regulatory behaviours and all of the skills needed to become productive adult members of society. A suitable environment therefore has its own importance in students' learning. Farooqi *et al.* (2015) asserted that the environment plays a role of a teacher and has no bounds in itself.

#### 1.5.16 2.5.4 Classroom Environment

The classroom environment is a principal factor which keeps children engaged in learning (Sriklaub *et al.*, 2015). According to Sriklaub *et al.* (2015) previous study of Chinese preschool classrooms revealed that, teacher-child interaction have some specific characteristics notably; children have a very structured daily routine in preschools with portions of the school day spent on whole-group teaching. This was as a result of the large class sizes (averaging 30–35 children), thus increasing the student-to-teacher ratio (15–20:1), and preferences with the traditional cultural influence for teacher-directed didactic teaching.

Class size has enormous implications for quality since teachers' work load would be manageable for them to deliver lessons effectively and grant children the opportunity to have a close interaction with them. One might expect some private school classes to be smaller, however, because they are operating for profit, they are more likely to admit more children for financial gains. Sherani (2014) asserted that student-to-teacher ratios in public schools were usually quite higher than in private schools. According to NewsWeek (2018), teacher to student ratios in private schools are almost twice the number in contrast to public schools. This means that private school children get a larger proportion of the teacher's attention which enables the teacher to identify students who might be falling behind. Smaller class sizes allow students ample interactive time with teachers and peers during class activities.

A study investigating preschool teachers' opinions of classroom physical characteristics by Hu, Teo, Nie, & Wu (2017) suggests that as teachers' class sizes increase, the issue with activity planning becomes difficult and burdensome with lack of teaching and learning materials.

Carefully planned instruction, materials, furnishings, and daily routines must be complemented by an extensive range of interpersonal relationships (adults with children, adults with adults, and children with children). In this setting, each child's optimal development across each domain (language, social, physical, cognitive, and social-emotional) will be supported, sustained, extended and enhanced (New Jersey State Department of Education, 2014).

Farooqi *et al.* (2015) stated that children learn from existing materials and not in the abstract form. Wambui (2013) indicated that, teaching and learning materials are the objects that make learning possible as this provides a hands-on experience to learning and encourage classroom participation in activities. Teaching and Learning Materials (TLMs) also stimulate learning whiles making the teaching of concepts easy and more understandable (Tuimur & Chemwei, 2015). For instance, writing boards, charts, pictures, textbooks and wall clocks facilitate good learning and teaching experiences. These are specifically essential to kindergarteners since they learn by practicing/doing. Children also learn when they are able make visual judgements of objects during the learning process (Shabiralyani, Hasan, Hamad, & Iqbal, 2015).

Again, in an educational setting, the main outcome that is desired is the total development of the children which includes cognitive, physical/motor, socio-emotional, language, reading and maths/counting skills. For every developmental domain a particular environmental setting is needed to support children's development. Therefore, for children to achieve total development, an interrelation of activities within a certain kind of environment should occur. For instance, positive motor skills development is important for children to effectively demonstrate their developed cognitive skills (Welsh *et al.*, 2010; Zeng *et al.*, 2017). A well set-up learning environment enables the development and expression of children positively with their caregivers and peers through interactive activities (Darling-Churchill & Lippman, 2016). For motor skill development to occur, the learning environment is structured to encourage movement where children control their bodies actively (Shenouda *et al.*, 2011). Through the routines and activities children perform, their language develops since they observe and imitate the things they see. With this ability children understand and express their experiences. Consequently, their numeracy skills are developed by the ability to use language to convey their thinking either verbally or written form (Presser *et al.*, 2015; Reid, 2016).

Looking at the developmental needs of children, it could be deduced that the environment plays a key role since all the developmental domains demand particular environments to stimulate child development. Similarly, in child-centred programs, the children need a certain kind of environment to support their learning. Likewise, in teacher-centred program settings, the teachers would be required to play key roles

that are not in isolation but rather in a certain type of environment. So, irrespective of the kind of experiences desired, the environmental factor is key.

Judging the importance of the environment, it places a lot of responsibilities on the teacher and child care providers to ensure that the environment is up to standard and that protocol and procedures are followed. This demands constant and continuous supervision and monitoring.

## **2.6 Supervision and Monitoring of Kindergarten Programmes to Achieve Quality**

Ogundele, Sambo, & Bwoi (2014) described supervision as a process an assigned official sees to the activities carried out in the classroom and if those activities are promoting the goals of the programme as well as supporting children's learning. This means that, supervision is an on-going exercise which should be an integral part of any educational unit to ensure that the goals of the curriculum or programme are achieved. In the same vein, whilst this is done to achieve the program goals, the aspect of supporting children's learning is also emphasized. Ibhaze (2016) indicated the potentials of supervision is to help develop teachers' competence and confidence when they are provided with constructive guidance which leads to the betterment of their practices.

Monitoring refers to evaluation and assessment practices. Literature indicates that, assessment is used to decide, collect and make judgments of evidence related to the achievement of children and child care staff (Litjens, 2013). However, evaluation is used for the process of deciding, collecting and making judgments about systems, programmes, materials, procedures and processes (Litjens, 2013).

Ogundele *et al.* (2014) study results revealed a significant relationship between supervision and student achievement implying that, effective supervision practices had an influence on the programme goals and consequently high quality achievement. They indicated that regular supervision and monitoring of schools from education officials guided curriculum implementation and instructional activities through advice.

An educational institution or program might have a very good environment and if no or minimal supervision is done, they cannot achieve the desired outcome. On the other hand, they might not have the desired environment but with constant and continuous supervision, there is the higher likelihood that they might achieve the set outcomes. It is also very important that officials assigned to supervise and monitor these kindergartens should be abreast with the program goals in order to be well informed on features to look out for without being biased because the supervising officer's experiences and expectations may influence the evaluation process. Therefore, this study emphasises that the curriculum, instructional methods,

assessment and supervision are mutually interactive and as such the kindergarten program cannot underestimate the relevance of each one of them.

One fundamental component of the curriculum as per the discussions will be the variations of the desired outcomes because of the differences in program focus. So if a curriculum is child based, judging its quality would be dependent on the laid down outcomes for the student to achieve. Also, if the kindergarten program is teacher-centred, judging quality of the desired outcome would be different because this type of program has its own focus. Therefore, judging the quality of a particular curriculum or program is dependent on the outcomes desired and the focus of the program in general.

## **2.7 Quality Kindergarten Education**

A child's kindergarten years is progressively considered a vital developmental period for determining children's short- and long-term well-being (GES, 2012). Quality in structure, organisation and processes in ECCE programmes affects academic and developmental outcomes for children of all backgrounds, especially the least advantaged (Ansari & Purtell, 2017). The demand for high quality kindergarten education is on the rise as more parents are engaged in economic activities. Similarly, single parent status families are gaining popularity as well as dual-earner parent families hence more families require quality child care services where their wards can be adequately catered for (Van Heerden, 2016).

Li *et al.* (2016) posit that, the increasing demand for ECCE and for that matter a high quality kindergarten education have influenced some changes which led to modifications from the norm of enhancing the natural developmental goal of kindergarten education to playing a crucial role of imparting children academically.

Children have been found to spend a considerable amount of time in school engaging in various activities in the kindergarten classrooms. This has been divided into six domains such as teacher-directed whole class activities, teacher-directed small group activities, teacher-directed individual activities, child-selected activities, meal time, and outdoor time (Ansari & Purtell, 2017).

Quality has been defined in many ways depending on the institutions' context (such as values and philosophies) and hence, there is no one universally accepted definition (Chawla-Duggan, Etsey, & Datta, 2010; Hussain & Juma, 2006; Libent, 2015; Van Heerden, 2016). This goes without saying that quality in child care is defined as indicated by Barros & Leal (2015) as valuable in the eyes of the beholder.

### **1.5.17 2.7.1 Perspectives of Quality Kindergarten Education**

In child care situations, quality is measured with various elements as benchmark. Several perspectives regarding the components that constitute quality in early childhood programmes exist. These stakeholders are mostly recognized as policymakers, staff in education, parents, families and children. To achieve quality, these stakeholders' perspectives must interact with each other (Robinson, 2017).

Whilst some early childhood service providers determine this by the social and cultural context in which they are situated and on the focus of the services they

provide others are based on the child developmental theories. Hence, quality in one context may be different in other programmes.

Vandell & Wolfe, (2000) reviewed Katz's four perspectives (Ceglowski & Bacigalupa, 2002) of quality. The child care staff and children's perspective includes the following components:

(1) Researcher/Professional's perspective (structural, global and process components). Researchers are curious of the influence in the variation of child care on children's development. Discussions have since focused on curriculum, programme philosophy, the physical environment, staff characteristics, teacher-child interactions, group size and others.

(2) Parents' perspective (programme flexibility and staff responsiveness to family needs): The views of parents who are directly involved and participate in children's lives have also become important to researchers. Parents were found to consider their children's health, safety and the personal characteristics of their children's care-givers in selecting child care programmes. They also consider their relationship and communication with the care-giver as relevant to their children's wellbeing in the child care setting.

(3) Staff perspective (administrative, collegial and parental relationships): Child care staff considers similar features as parents (children's health, safety and the personal characteristics of care-givers) with emphasis on their relationship with the children in their care in relation to quality care-giving most especially their warmth and sensitivity towards the children. They also consider their relationship and communication with parents as relevant to their students' wellbeing.

(4) Children's perspective (comfort in learning, acceptance level and engagement in activities): The little research into children's perspective indicates that children prefer childcare settings which are not different from home.

From another point of view, Ishimine, Tayler, & Thorpe (2009) stated seven aspects of quality identified by the Organization for Economic Cooperation and Development (OECD). They included, interaction or process quality, child-outcome quality, standards pertaining to parent/community outreach and involvement, orientation quality, structural quality, educational concept and practice and operational quality. These factors could be regrouped within two types of quality. Broadly from the first three as process quality whilst the rest from (4) to (7) is categorised as structural quality. Some researchers have come to an agreement on structural and process quality as influencers of quality education for young learners (Burchinal, 2010; Ishimine *et al.*, 2009).

Structural quality is described as the measurable elements involving the characteristics of the programme, such as physical environments (buildings, surrounding, materials and equipment), teacher/child ratios, class size, qualifications and motivation of teachers and staff, use of a standard curriculum, level of government financing, and the availability of regulated secondary services which contribute to student success (Hu, Mak, Neitzel, Li, & Fan, 2016; Hu, Zhou, Chen, Fan, & Winsler, 2017; Libent, 2015). For instance, interactions between children and care-givers are observed to give a clear indication of specific activities as they occur such as cognitive stimulation in language and intellectual development known as

process quality (Ansari & Purtell, 2017; Burchinal, Vandergrift, Pianta, & Mashburn, 2010; Ishimine *et al.*, 2009).

Studies have shown that structural quality measures (like teacher-child ratio, teacher qualifications and programme location and length) have an impact on children's developmental outcomes.

Process quality refers to the real experiences that occur in educational settings, such as teacher-child interactions, peer interaction, teacher-parents interaction and teaching or the types of activities in which children and manipulation of learning materials are engaged (Ishimine *et al.*, 2009; Libent, 2015). These measures generally reflect teacher sensitivity and responsiveness, instruction, classroom management and activities available to children (Burchinal, 2010; Libent, 2015). Research indicates that process quality is more crucial and influences significantly on children's social and academic achievement (Libent, 2015; Vandell & Wolfe, 2000).

Structural and process qualities are interrelated to achieve quality. For instance, factors such as a Diploma or Bachelor's degree in ECE, teaching experience and regular workshop training sessions are likely to enhance higher process quality. Also, a small class size, appropriate teacher-student ratio and a standard curriculum may directly influence the quality of interactions children experience in classrooms, which in turn, affects children's development.

Further, Mathers, Singler, & Karemaker (2012) cited Harrist, Thompson, & Norris (2007: p. 306) who described the views of stakeholders on quality as resulting from their functions and drive. This implies that quality in childcare stems from the educators' roles in engaging children and their innate desire to support the children to participate actively in task performance. Most studies on Early Childhood Education programmes are concerned with its effects on children's socio-emotional development with very little on cognitive development. However, kindergarten education rich in quality has been found to be a major determinant of high literacy and numeracy levels in achieving academic outcomes necessary for good performance at the basic school level and beyond in Ghana (Asare, 2012).

#### **1.5.18 2.7.2 Outcomes of Quality Early Childhood Education**

Quality has been found to be used among early childhood professionals to describe their programmes. Empirical studies have shown and recognize that “good child care quality is associated with a variety of positive outcomes for young children” (National Institute of Child Health Development, 2002, p.199 cited in Robinson, 2017) and for society in terms of educational achievements (Mashburn *et al.*, 2008; Robinson, 2017) and growth of social capital (Robinson, 2017).

Quality ECCE services have been linked to long term benefits in intellectual and language development of children (Van Heerden, 2016). A study on the cost, quality and outcomes found that, children's language, social and math abilities as well as

their thinking and problem solving skills were improved through kindergartens with high quality practices (Ceglowski & Bacigalupa, 2002; Van Heerden, 2016).

Also, a study on quality early childhood education and child outcomes in China found that, traditional beliefs were the basis of learning in order to maintain discipline, such as obeying rules, learning basic arts and some academic skills (Vandell & Wolfe, 2000). However, some Western ECE concepts and approaches were adopted and introduced into the Chinese regulations and practices to make teaching and learning more play-based (curriculum) and child-centred (teaching approaches). Poor quality ECE were observed in China by researchers in the 1990s with results indicating lack of age-appropriate materials for learning, limited play-time and personalized interactions with teachers and peers. Teaching was mainly focused on impacting academic skills, discipline and enforcing rules rather than promoting socio-emotional development (Vandell & Wolfe, 2000).

According to Ceglowski & Bacigalupa (2002) studies have indicated that children enrolled in childcare programmes which are involved with high quality interactions (process quality) look bright and have good relationships with their caregivers, express positive support and are responsive to their needs compared to their counterparts (caregivers) who engage children in poor process quality results in increasing behaviour problems in students.

Regardless of the interpretations of quality, linking it to curriculum can pose a difficulty because, looking at the various types of curriculum they all have different focus and therefore judging the quality of a particular curriculum is heavily dependent upon the focus of that curriculum.

If the curriculum or program is child-based, then the elements of quality to assess would be home-like school environments, use of curriculum, supportive teachers and staff who are caring and encourage children's learning, routine activities that are engaging for all students throughout the school day (Ceglowski & Bacigalupa, 2002). Then again, assessing quality of a curriculum or program which is teacher-based take into consideration the teachers' characteristics (qualification, experience, sensitivity and motivation), health and safety of the children, the school environment, materials, a standard curriculum, and relationships (teacher-student and teacher-parent relationships) as described in literature (Ceglowski & Bacigalupa, 2002; Hu, Fan, LoCasale-Crouch, Chen, & Yang, 2016; Hu, Fan, Wu, & Yang, 2017; Ishimine & Tayler, 2014; Libent, 2015). However, assessing quality of both teacher and child based curriculum or program includes the physical structure, teacher characteristics and motivation, physical environments (buildings, surrounding, materials and equipment), teacher/child ratios, class size, a standard curriculum and experiences that are encountered in the child care settings, such as teacher-child interactions, peer interaction, teacher-parents interaction and teaching or the types of activities where children have access to manipulative learning materials (Burchinal *et al.*, 2010; Cabell *et al.*, 2013; Hu, Fan, *et al.*, 2016, 2017;

Ishimine & Tayler, 2014; Ishimine *et al.*, 2009; Libent, 2015; Mashburn *et al.*, 2008; Vandell & Wolfe, 2000; Burchinal, 2010; Ceglowski & Bacigalupa, 2002).

This study therefore defines quality as a play-based program enriched with suitable materials within a safe and nurturing learning environment where teaching and learning is carried out, with the use of an activity-based standard developmentally appropriate curriculum, qualified and experienced ECE teachers who facilitate children's learning using various instructional methods informal assessment approaches which occur through various levels of interactions (between teacher-child, teacher-teacher and teacher-parent/family) to promote children's experiences to achieve desired developmental outcomes.

Hence, as a result of disparities in curriculum focus, desired outcomes differ as well and therefore assessing quality would vary for each type of program or curriculum and its goals. Thus the same scale cannot be used to assess quality for the various types of curriculum and so quality could be assessed based on the key implementers of the curriculum or program. Therefore quality for any specific curriculum should be assessed from the main implementers' perspectives. Research also indicates the relevance of taking into consideration the views of different stakeholders regarding childcare quality (Robinson, 2017).

## **2.8 Summary**

Evidence in research has shown the interest of governments, private entities, educationists and other stakeholders in achieving global quality in early childhood care and education internationally and in some developing countries, especially Ghana. Very few studies have been done in Ghana on quality kindergarten education in public and private schools. To the best of the researcher's knowledge, no study has been conducted in the Tamale Metropolis on quality kindergarten education. This study therefore sought to fill this gap by adding to knowledge on influence dimensions such as the curriculum, instructional methods, assessment practices, the physical school environment and teacher characteristics have on teaching and learning. Finally, head teachers and teachers' perceptions would be used to buttress the meaning of quality kindergarten education.

The forgone discussion therefore implies that, kindergarten programs have different focus and hence different assessments are required in determining quality. And so to understand the quality of a child care setting, the key implementers' views should be considered. This therefore necessitates the need for this research to be conducted.

## **CHAPTER THREE**

### **3.0 METHODOLOGY**

#### **3.1 Introduction**

This chapter presents a detailed approach to the methodology used for this study. It presents and discusses the processes that were used to collect and analyze the data. The study design, location, target population, sample size and sample procedures as well as the data collection tools and procedures for data collection are described. Also, the pretest, data analysis and presentation strategies are indicated in this chapter.

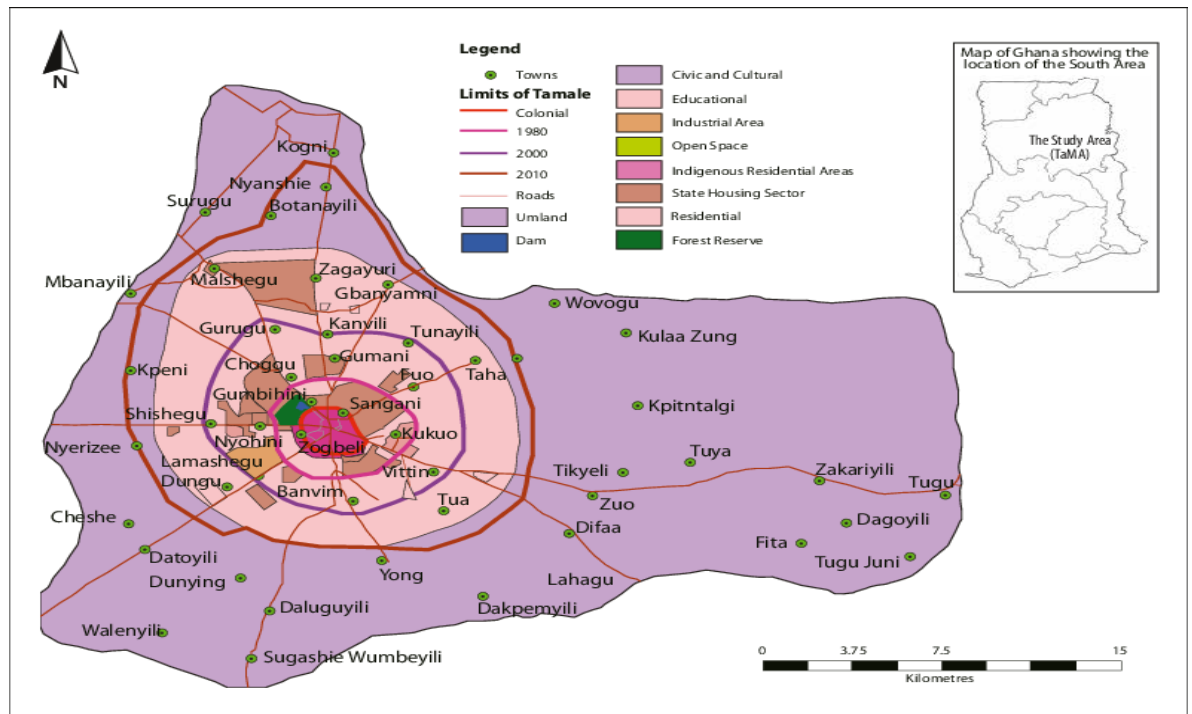
#### **3.1 Study Design**

A cross-sectional research design with a mixed method approach was used for this study. A cross-sectional design was used because data was collected at a defined time to enable the researcher achieve the objectives of the study and also because of its time efficiency (Hall, 2011). This design allows for many variables to be studied creating an in-depth research. However, the cross-sectional design cannot be used to determine cause and effect of a given phenomenon and has the likelihood of yielding a low response rate which may influence the validity of the study results (Thelle & Laake, 2015). The mixed method approach combines both qualitative and quantitative data which is collected at the same time in order to analyze and present the research problem comprehensively (Creswell, 2009). The mixed method approach was used to offset the weaknesses within one method and to draw the strengths with the other. Equal priority was given to both quantitative and qualitative

results of the study. The concurrent triangulation method was used (Bentahar & Cameron, 2015; Creswell, 2009). With the concurrent triangulation method data were collected at the same time, priority between both methods was equal and the findings of the two methods were integrated during the interpretation phases (Creswell, 2009; Raderbauer, 2011; Wisdom & Creswell, 2013). In this study, a self-administered questionnaire, an observation checklist and an interview guide were used.

### **3.2 Study Location**

This study was carried out at the Tamale Metropolis, which is located in the Northern Region of Ghana. The Tamale Metropolis is one of the twenty-six (26) districts in the Northern Region. It is located in the central part of the Region and shares boundaries with Sagnarigu District to the North-West, Mion District to the East, East Gonja to the South and Central Gonja to South-West. Tamale is the Administrative capital of the Metropolis and the only metropolis in the three northern regions with a total of 116 communities (Ghana Statistical Service (GSS), 2014). The communities in the metropolis are made up of urban (35%), peri-urban (13%) and rural (52%) areas. Figure 3.1 below is a picture showing the Tamale metropolis in the Northern region of Ghana. From the figure (3.1) below, the red circle demarcates the Tamale metropolis where this study was conducted.



**Figure 3.1 A Map Showing the Demarcation of the Study Location**

Source: [https://www.researchgate.net/publication/272691152\\_Building\\_Urban\\_Resilience\\_Assessing\\_Urban\\_and\\_Perri-urban\\_Agriculture\\_in\\_Tamale\\_Ghana/figures?lo=1](https://www.researchgate.net/publication/272691152_Building_Urban_Resilience_Assessing_Urban_and_Perri-urban_Agriculture_in_Tamale_Ghana/figures?lo=1)

The strategic location of the Metropolis and its market attracts commercial and agricultural merchants from other districts and regions in the country (Tamale Metropolitan Assembly (TMA, 2017). The 2010 Population and Housing Census indicate the population of the Metropolis as 223, 252 with about 80.8% living in the urban areas whilst 19.1% lives in the rural areas. Children 3 years and above (6.6%) were enrolled in 342 kindergartens (247 public and 95 private schools) (TMA, 2017).

The Tamale metropolis is divided into two sub-metros namely; Tamale South and Tamale Central which was made operational in 2010. All the public basic schools

were distributed among fifteen (15) educational circuits in the metropolis. The school system is run in three terms in an academic year beginning August/September. There were 15 Circuit Supervisors who inspected, supervised and monitored teaching and learning activities within these circuits. However, private schools were grouped into fourteen (14) educational circuits in the metropolis (TMA, 2017).

Reasons for selecting this location were: 1) because of the area's fast developing nature and, 2) the numerous kindergarten services providers available in the district capital leading to an increasing patronage by families. Furthermore, the quality of kindergarten education is under explored in the Metropolis.

### **3.3 Target Population**

The targeted populations were teachers and head teachers in private and public kindergartens in the Tamale Metropolis. Teachers and head teachers were targeted because, they are a key part of the school environment and play a critical role in delivering child care services. The classroom interaction occurs between the teachers and children and so they are the implementers of the curriculum. Head teachers oversee the programme policies to ensure it is run effectively and may be originators and drivers of a schools philosophy.

### 3.4 Sample and Sampling Procedure

#### 1.5.19 3.4.1 Sample

The (Cochran, 2013; 1977) formula for calculating sample size was used:

$$n_0 = \frac{z^2(p)(q)}{e^2}$$

Where:

$n_0$  = sample size

$z$  = selected critical value of desired confidence level (which is 1.96 for a 95% confidence interval).

$p$  = estimated proportion of kindergarten teachers: 8%

$q = 1 - p$  ( $p$ ) ( $q$ ) estimate of variance

$e$  = the desired level of precision: 5% allowable error.

**Therefore:**

$$n_0 = \frac{1.96^2(0.10)(0.9)}{0.05^2}$$

$$n_0 = 138.29$$

Hence, 138.29 = 140 participants.

To compute for an estimated non-response rate, the expression below was used:

$$\text{Final Sample Size} = \frac{\text{Effective Sample Size}}{(1 - \text{non response rate anticipated})}$$

Where:

Final sample size: the number of responses estimated after including the response rate

Effective sample size: the minimum number required

Non response rate anticipated: the percentage of non-response or drop out

So:

$$\begin{aligned} &= \frac{140}{(1 - 0.2)} \\ &= 175 \end{aligned}$$

Therefore, the estimated final sample size = 175 respondents. However, the actual sample size for the study was 140 respondents.

A sample size of 140 (65 and 5 public and private school teachers and head teachers respectively) participants were estimated to be recruited for this study. Non-response rate of 20% (35) was estimated and added to the sample size totaling 175 respondents. However, 130 comprising of 57 and 63 public and private school teachers and 10 head teachers were finally used for analysis in this study. This was because 45 of the respondents were either not completed or not returned.

Notwithstanding, some school head teachers refused for their teachers to be included in the study. The following reasons were given by the head teachers:

1. The teachers could not provide responses to the questions because they could not understand the information required due to their qualifications as Senior High School graduates (for some of the private schools);
2. They were not interested in participating in any exercise that was research related;
3. Some school heads mentioned the tedious work their teachers had and so they were too busy to partake in the survey.

#### **1.5.20**

#### **1.5.21 3.4.2 Sampling Procedure**

The study employed a multistage sampling technique (Onwuegbuzie & Collins, 2007). This sampling technique involves using two or more stages of selecting clusters based on natural classifications according to various criteria in successive levels of structures within a population. Clusters refer to the natural groupings of people such as households and schools. With this technique, different clusters are randomly selected at each stage. Then, in the final stage, participants are again chosen at random within the clusters of the intermediate stage (Sedgwick, 2015). The multistage sampling was used because of the diversity in the targeted population and also to enable the researcher focus resources on the selected sample.

For this study, the first stage involved the classification of the targeted population into strata based on the fifteen (15) educational circuits in the metropolis. The educational circuits were used as the sample frame in order to include all schools within the catchment of the Tamale Metropolis. A simple random sampling was used to select 102 publicly and privately owned basic and kindergarten schools; six

(6) schools from three (3) circuits (=18 schools) and 7 schools from 12 circuits (=84 schools) based on the sample fraction from each stratum. This was done to give each school a chance of being selected.

Further, the purposive sampling technique was used to recruit the teachers for this study because; the school heads were the first point of contact in each school who then introduced the researcher to the kindergarten teachers (participants). The purposive sampling method is a non-probability sampling technique that is used to select respondents based on the characteristics of a population and the also the objectives of the study (Tongco, 2007). This technique was used in order to reach the specific experts (that is, teachers) whose knowledge was essential to this study.

Also, the convenience sampling technique was used to select the head teachers from ten (10) schools who were willing to participate. It was chosen in order to acquire an in-depth understanding of the set research objectives of this study. The convenience sampling is a type of non-probability sampling where the respondents are readily accessible and willing to participate in the study (Onwuegbuzie & Collins, 2007).

Ten (10) schools where the head teachers consented and gave permission for the researcher to carry out observations were recruited during the distribution of the questionnaires for classroom observations. The head teachers were informed of the need for the researcher to carry out observations as part of the data collection process for the study. The researcher explained to their understanding that, there

were not going to be any interruptions in the school days activities by the observer. The observer was seated at the back of the classroom where no attention could be drawn as a way of participating passively from a distance without participating in the classroom activities; this is known as non-participant observation. The observer did not try to influence them or take part in on going the group activities.

Head teacher interviews for the qualitative aspect of the study were also based on school heads who consented to being audio recorded whilst being interviewed. Again, the researcher thoroughly explained that the information collected was purposively for research. Hence, the recorded data were going to be transcribed into a written form. Head teachers who were interested in participating provided their signed consents before interviews were granted.

### **3.5 Data Collection Tools**

#### **3.5.1 Instruments for data collection**

Data were collected using a semi-structured questionnaire (teachers), an interview guide (head teachers), and an observation checklist (school environment checklist). There were some similar components in the questionnaire for teachers and the interview guide for the head teachers whilst the observation checklist had varying contents. Both the head teachers and teachers' instruments contained background information and their perception of quality kindergarten education whereas the observation scale was the teachers' observed classroom practices such as their value of obedience and if they seem critical of the children in the classroom. However, the school environment checklist had embedded in it observable features in the school.

For example, the outdoor play equipment, wash area for teachers and children and the classroom location.

### **The Semi-Structured Questionnaire**

The questionnaire for the teachers was designed by the researcher based on the findings made from reviewing literature on the elements of quality kindergarten education. The semi-structured questionnaire was divided into sections based on the objectives of the study and comprised of open and closed ended questions to gather data on the following:

1. Background information of the respondents. This included gender, age, level of education, teaching experience, and teaching experience in the kindergarten and their current school.
2. Curriculum and instructional methods. Open-ended responses were given for this section.
  - Respondents were required to indicate the type of curriculum used as a guide for lessons delivery. For example, “which curriculum do you use?”
  - Teaching strategies adopted by teachers in their classrooms and reasons for their choice of instructional methods. Examples of questions were; “Do you teach individual children, small groups or the whole class?” “Briefly describe the types of activities for which this/these type(s) of grouping(s) apply”.
3. The school environment.
  - The teachers’ views of their school environment were sought for using open-ended questions. Some examples were; “In your view, is there enough space for the

children to move around freely in the classroom?”, “Does the school have enough space for children’s play (football)?”

4. Child assessment practices.

The respondents’ child assessment practices regarding the students cognitive, physical or motor, reading, language, maths/counting and socio-emotional skills were stated by the activities or tasks carried out. Also, criteria used for assessment, reasons for using it/them and modifications they would like to make to their assessment practices if any. For instance: “How do you assess your students’ cognitive development?”, “How do you assess your students’ motor skills development?”

5. Teachers’ perception of quality kindergarten education.

- Respondents’ views and understanding and what they would describe as quality kindergarten education were sought for. Some questions in this section included; “What would you classify as a quality kindergarten education?”, “In your opinion, is your school a quality kindergarten?” “Please explain why, in your opinion, what should the school do to improve quality?” and “What should the government do achieve quality kindergarten education in Ghana?”. (Refer to Appendix 4 for the Teachers’ questionnaire)

### **The Interview Guide**

The interview guide was used to collect information from the head teachers in both private and public schools. The interview guide was a semi-structured instrument designed by the researcher. Questions were orderly arranged to allow for easy flow

of responses. This was done to solicit an in-depth perspective of the study objectives comprehensively. Interview data were audio recorded with the consent of participants. The interview comprised of different sections including:

2. The background information of the respondents. They are; age, academic qualification, teaching experience, teaching experience as a kindergarten teacher, and years of experience heading the kindergarten (or school). For example, “How old are you?”,
3. School philosophy and structure.
  - An example was, “How is teaching and learning carried out in the classroom?” Teacher-child ratios, teacher recruitment processes, supervision strategies and observations made during supervision were also sought for. For example: “How many teachers are in this school?, How often do you supervise the classrooms?”
  - Child assessment practices and its relevance to the school programme and the children’s development. For example: “How relevant is this to the child’s learning?”
4. Head teachers’ perception of quality.
  - Their opinions and classifications of quality kindergarten education as heads of schools in the public and private kindergartens and components of their schools which needed improvement to achieve quality were investigated. Sample questions were; “Which component in the school in your opinion needs improvement to achieve quality?” (Refer to Appendix 5 for a sample of the Interview Guide)

### **The School Environment Checklist**

A checklist consisting of items recommended by the Basic Education Division of Ghana Education Service as the national minimum guidelines for kindergarten education (GES, 2016) was devised to take an inventory of the items available in the school. Items on the checklist were checked with Yes or No options and a space for comments where other observations were made.

1. The school environment section looked out for the:
  - Schools' hygienic surrounding status. For example; "well-trimmed hedges" and "unattended rubbish dumps";
  - Classroom building. Examples were, "completed or uncompleted classroom structure"; "classroom location", "a detached block or a storey building".
  - Sanitary Facilities. Examples were; "Toilet and Urinals (for boys and girls)", "Wash area for teachers and students", and "Rubbish disposal bins".
  - Play area. For example, "Outdoor space for easy movement", "Dry play area" and "sand pit".
  - Security. Examples of items were; "Fenced school", "Closeness of school to a road" and "availability of security gates".
  
2. The classroom environment components included; "classroom layout for free space and movement", "available furniture", "equipment and cognitive stimulating materials such as educational toys, flash cards, musical instruments" among others.

- Classroom layout. Sample items included; “Does teachers’ location allow pupils to see, hear and participate in activities?” and “free space for children to engage children in other activities (other than listening)”.
- Equipment. Were there for example; “black board”, “white board”, “charts” and “posters on the wall” and “display tables”?
- Furniture. For instance, were there; “child-sized chairs (per child)”, “child-sized tables (with smooth edges)” and “Is the teachers’ desk in the classroom?”.
- Sleep area. For example were there; “Mats” and “Blankets/Cloths”.
- Sensory stimulation. Examples were; “Does enough sunlight enter the classroom?” and “Is there enough light to see and perform activities?”.
- Health. Does the school have for example, “a functional first aid box”, “Soaps” and “Antiseptics?” (Refer to Appendix 6 for a sample of the School Environment Checklist)

### 3.5.2 Pre-test

A pretest of the data collection instruments was carried out in one public basic school and one private school in Tamale outside the study area but with similar characteristics as the selected study location. The pretest was to allow for corrections and modifications of the instruments where necessary and also to check if the questions were easy for respondents to understand.

Some changes were made in the pre-tested instruments. For instance:

- In the semi-structured questionnaire the age of respondents, their teaching experience, kindergarten teaching experience were which initially in range and

required participants to tick their category were changed to an open-ended question to enable them state their raw ages and years of experience.

- An additional section where respondents could provide their background information was included in the interview guide for the head teachers. These were; age, qualification, years of teaching experience, teaching experience in the kindergarten and years of experience working as a kindergarten head teacher.

### **3.5.3 Procedure for Data Collection**

Before the commencement of the data collection process, the researcher visited the public and private basic schools to have their permission in order to include their schools in the study and to also ask for their subsequent support when necessary. After this, an introductory letter from the Department of Family and Consumer Sciences was taken to the head teachers as prove that the research was meant for academic purposes. Details of the research were explained to the head teacher and copies of the data collection instruments were made readily available on request for scrutiny. Also, consent of participation forms were attached to each copy of the instruments for respondents. Due to the busy schedules of the teachers, the questionnaire was self-administered whilst the interview was facilitated by the researcher.

The researcher first met the head teachers of the schools. The purpose of the research was then explained to them. After this was done, the head teachers introduced the teachers (respondents) to the researcher for further discussions and

distribution of the questionnaire. Two teachers (one teacher in some schools and three in others for those who had one or three kindergarten classrooms respectively) were selected by seeking permission from the head teachers and also asking for the main or lead class teacher (as he/she was the one required to partake in the study). However, in situations where the main teacher was absent or declined participating, the head teacher passed it out to the next available class teacher. This was done to prevent the head teachers from selecting specific teachers they thought could provide the best responses.

Dates for classroom observations were scheduled by the head teachers and class teachers at their convenience. Classroom observations for teacher-child interaction as well as the observed school facilities, play area and equipment, classroom layout, furniture, teaching and learning materials, and sensory characteristics of the classroom were all entered appropriately. Data collection began from December, 2017 and ended in February, 2018.

### **3.6 Data Analysis and Presentation**

For this study, quantitative and qualitative data analysis techniques were used. Quantitative data were analyzed to find out the type of curriculum, instructional methods and the child assessment practices of teachers in the selected public and private kindergartens. Qualitative data on the other hand were used to complement the quantitative data.

### **3.6.1 Quantitative Data Analysis**

The Predictive Analytic Software (PASW) version 22 was used to clean and analyze data after hand-coding and editing. Categorical variables were reported as frequencies and percentages whilst continuous variables were in means and standard deviation. Descriptive statistics were presented in tables, charts and graphs. Some results were also presented in cross-tabulated forms to make associations and comparisons between and among variables using the Pearson's chi-square test and *T*-tests.

#### **The Semi-structured Questionnaire**

Closed-ended and some open-ended responses were coded into identical categories to generate frequencies and percentages of variables. However, some open-ended responses were presented as reported by the respondents and captured as quotes to support the results where necessary. The Pearson's Chi-Square test of independence was used to show significant differences or associations between categorical variables. One Sample T-test, Independent Samples T-test and Multinomial Logistic Regression model were used to determine relationships and differences between and among the means of dependent and independent variables. Multiple response analysis was carried out for questions with multiple choices by categorical grouping to determine the number of times responses were selected by research participants.

### **The School Environment Observation Checklist**

Data gathered with the observation checklist were analyzed using the PASW. Codes were generated from the items from the indicators observed in the school environment and entered. Based on the number of items under each indicator, the following anchors were generated:

0 = Lacking, 1 = Inadequate and 2 = Adequate. This meant that, if a school had none of the items for any indicator, they were scored as lacking. An inadequate score implied that, of all the items under each indicator, the school had half based on the observations made. Also, where a school had all the items available in the school environment, it was scored adequate for that indicator.

### **3.6.2 Qualitative Data Analysis**

#### **The Interview Guide**

Recorded interview data were transcribed by the researcher. Thematic analysis of data was conducted and the subject matters were interpreted and grouped into identical and commonly emerging themes, categories, and patterns. Comparisons of differences and similarities were then made with results from head teachers of both public and private kindergartens.

#### **Data Integration**

The data collected from both the quantitative and qualitative approaches were integrated at the results and discussion phase to merge and compare results from

both databases using the side-by-side integration. This is done by first providing quantitative statistical results which is then followed by qualitative quotes that support and validate the quantitative results (Creswell, 2009; Wisdom & Creswell, 2013).

### **3.6.3 Testing of Hypotheses**

The Pearson's chi-square statistic, the independent t-test and the multinomial logistic regression were used to test the hypotheses of this study at 5% level of significance to determine relationships between variables.

### **3.7 Ethical Clearance**

An introductory letter was sought from the Department of Family and Consumer Sciences in October, 2017 to attest that the study was purposively for academic work (Refer to Appendix 2 for the introductory letter). Approval was also sought from the College of Basic and Applied Sciences' Ethics Committee (ECBAS) in October, 2017. Approval was consequently given with reference number: ECBAS 011/17-18 (Refer to Appendix 1 for the ECBAS approval letter). The study participants were informed of the purpose of this research and were also presented with consent of participation forms to agree to partake in the study. They were enlightened that all the information provided would be treated confidentially and that their identities would not be revealed in any report of the results by name or voice (for those who were audio-recorded). The respondents were also told that participation was completely voluntary and so at any point in time they could withdraw from

participating in the study. To duly affirm their consent to participate in the study, their signatures were inscribed on the consent form (Refer to Appendix 3 for a sample of the consent of participation form).

### **3.8 Summary**

This chapter gives a summary of the methodology used to carry out this study. The cross-sectional design with a mixed method approach was used. A questionnaire was used to collect quantitative data whereas an interview guide was used to gather qualitative data. The study was carried out in the Tamale Metropolis in the Northern Region. The multi stage sampling, purposive sampling and the convenience sampling techniques were used to select the research participants.

## **CHAPTER FOUR**

### **4.0 RESULTS AND DISCUSSION**

#### **4.1 Introduction**

This chapter presents the results and interpretation of the data collected for the study. The chapter is made up of four (4) sections. Section A presents the background characteristics of the respondents and Section B, the curriculum, instructional methods and child assessment practices. Section C presents the school environment of the kindergartens while Section D discusses the perceptions of heads of schools and the teachers regarding quality kindergarten education. The chapter concludes with the test of hypotheses and a brief summary of the findings.

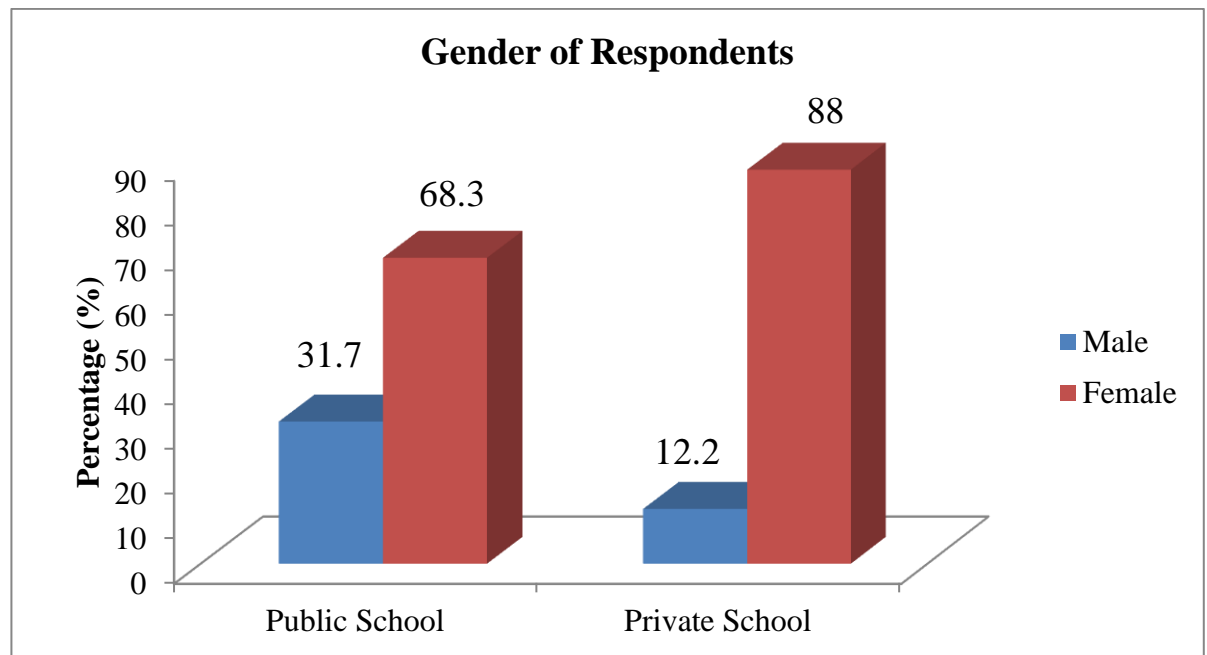
#### **4.2 SECTION A: Background Characteristics of Respondents**

The background characteristics discussed include gender, age, educational level, teaching and kindergarten teaching experiences of the respondents. The findings are presented in tables and charts where necessary.

##### **4.2.1 Gender Distribution of Respondents**

The respondents in this study are made up of one hundred and thirty (130) respondents consisting of approximately 77% females and approximately 23% males. Figure 4.1 shows that, the public schools had more (31.7%) male teachers than the private schools (approximately 12%). There were more (88%) female respondents from the private schools compared to their counterparts (68.3%) in the

public schools. More than three-quarters of all the respondents in this study were found to be women indicating that more women are mostly found at the kindergarten level than their male counterparts (Rich, 2014). It was asserted that, women are attracted to the teaching profession more because their schedules at work are not very different from that of home.



**Figure 4. 1 Gender of Respondents from the Selected Public and Private Kindergartens**

Other studies (Haile & Mohammed, 2017; Sherani, 2014) have affirmed that men are found to be less inclined to teaching younger children but prefer teaching older children beyond the upper primary. The Sample tests conducted on the gender in this study revealed a statistically significant difference in gender for both the public school ( $t=25.600$   $df=56$   $p=0.000$ ) and that of the private school respondents ( $t=22.286$   $df=62$   $p=0.000$ ). This implies that, kindergarten teaching could be classified as gender biased and skewed in favour of females than males.

#### 4.2.2 Age of Respondents

Ages of the respondents ranged from 18 years to 58 years with an average age of 32.5 years ( $SD=11.4$ ,  $p=0.000$ ) (Table 4.1). However, respondents from the private schools were relatively younger compared to those in the public schools. For instance none of the respondents from the private schools was more than 41 years whereas more than half (approximately 58%) of the respondents from the public schools were over 41 years of age. There was a statistical significance between the ages of respondents in the public schools ( $40.85\pm 10.36$ ) and those in the private schools ( $25.20\pm 4.53$ ,  $p<0.001$ ). The ages of the respondents indicated that they were all in their productive years. The private schools in this study can benefit from the youthful exuberance and dynamism of the respondents if these are translated into teaching and learning. The relatively older respondents in the public schools can translate their maturity and experiences into valuable lessons for their pupils. Thus the young respondents in the private sector could potentially amass more experience in their profession which would benefit the children for a long period whilst the public school respondents most of whom have many years of teaching in the kindergarten may have a wealth of experience which could make significant impact on the students.

Several reasons could account for why the private school respondents were relatively younger. One of such reasons could be payment of lower salaries by private school owners which was to the schools' benefit. Another rationale may be that these private schools probably preferred to recruit young teachers who had less experience in teaching and were seeking a mainstay either in cash for survival or experience for a higher position in future. Thus these private schools tend to acquire

cheap labour from the young teachers as they would not require higher conditions of service compared to long serving teachers in the public schools. It is not surprising that more than half (approximately 59%) of the private school respondents had WASSCE certificates at the time of the study. Probably they may not have qualified for tertiary education and so have taken on teaching as a temporary job to engage in for its economic benefits. Sherani (2014) also found in that young teachers' dominated in the private KGs probably because of their proficiency in computer skills.

Some (15%) of the respondents did not disclose their ages probably because they did not want to indicate how old they were (approximately 16% and 14% of the responding public and private school teachers respectively). However, the variation in ages of the respondents in this study makes the respondents dynamic and varied, and therefore information from such diversity of respondents would be valuable in answering the study objectives.

#### **4.2.3 Level of Education of Respondents**

Educational levels of the respondents in this study were varied (Table 4.1). It ranged from West African Senior Secondary Certificate Examination (WASSCE), the teachers' Basic Education Certificate 'A', Diploma in education and other fields of study, Undergraduate degree and Master's degree. More than half (59%) of the respondents who had WASSCE certificate were in the private schools. At the time of the study, approximately 44% of the public KG respondents had attained a Diploma

certificate compared with approximately 29% of the respondents in the private schools.

Undergraduate degree holders were mostly public school teachers (40.4%) with only 3.1% in the private schools. Only one teacher indicated having a master's degree certificate from the public sector. However, 5% of the participants did not provide any response to the highest level of education attained question. The varied nature of the respondents with regards to level of education produced suitable responses which were valuable for answering the study objectives.

A Pearson's Chi-square test showed a significant difference ( $\chi^2=57.008$   $df=5$   $p=0.000$ ) between public and private respondents' level of education. The results show that the least qualification a public school teacher had was a diploma certificate whereas the least qualification for the private school teachers was WASSCE certificate. In Ghana, the basic qualification for recruiting teachers in public schools is the diploma in education certificate A whilst the minimum requirement for private schools is the WASSCE certificate. It is therefore not surprising that teachers in the public schools had higher educational qualifications than their private school counterparts. Slot, Bleses, Justice, Markussen-Brown, & Højen (2018) found that there were associations between teachers with higher education and training in ECE and their classroom quality. For instance, teachers with Bachelors' degrees were associated with higher classroom quality.

However, private schools rely greatly on senior high school leavers who have no training in teaching but are readily available for employment. Haile & Mohammed (2017) found that most of the teachers in their study had no training in early

childhood education. However, the varying educational levels of the responding teachers can bring out different points of view which are valuable.

The findings of this current study do not support the previous research conducted by Lee, Myers, & Kim (2009) where it was stated that, majority of kindergarten teachers specialized in early childhood education. It has been suggested that teachers in kindergartens should at least have a Bachelor's degree with a specialization in early childhood education as this has potential to improve classroom quality (Early *et al.*, 2007).

**Table 4.1 Background Characteristics of Respondents**

Characteristics	Teachers			Head teachers	
	N (%)	Public school n (%)	Private school n (%)	Public school (n)	Private school (n)
<b>Age (Years)</b>					
≤20	11 (9.2)	1 (1.7)	10 (15.9)	-	-
21 – 30	48 (40)	9 (15.8)	39 (61.9)	-	2
31 – 40	19 (15.9)	14 (24.6)	5 (8.0)	1	1
41 – 50	13 (10.8)	13 (22.8)	-	-	1
51 – 60	11 (9.2)	11 (19.3)	-	4	1
No Response	18 (15.0)	9 (15.8)	9 (14.3)	-	-
<b>Total</b>	<b>120 (100)</b>	<b>57 (100)</b>	<b>63 (100)</b>	<b>5</b>	<b>5</b>
<b>Level of Education</b>					
WASSCE	37 (30.8)	0 (0.0)	37 (58.7)	-	-
Basic Education	6 (5.0)	3 (5.2)	5 (7.9)	1	1
Certificate					
Diploma	43 (36)	25 (43.8)	18 (28.6)	-	-
Undergraduate degree	25 (20.8)	23 (40.4)	2 (3.1)	4	3
Master's	1 (0.8)	1 (1.7)	0 (0.0)	-	1
No Response	6 (5.0)	5 (8.8)	1 (1.6)	-	-
<b>Total</b>	<b>120 (100)</b>	<b>57 (100)</b>	<b>63 (100)</b>	<b>5</b>	<b>5</b>
<b>Teaching Experience</b>					
1 – 5	59 (49.1)	10 (17.5)	49 (77.8)	-	2
6 – 10	24 (20)	13 (22.8)	11 (17.4)	1	-
11 – 15	9 (7.5)	8 (14.0)	1 (1.6)	-	-
16 – 20	8 (6.7)	8 (14.0)	-	-	-
21 – 25	8 (6.7)	8 (14.0)	-	-	1
26 – 30	5 (4.2)	5 (8.8)	-	2	1
31 – 35	3 (2.5)	3 (5.3)	-	1	-
No Response	4 (3.3)	2 (3.5)	2 (3.2)	1	1
<b>Total</b>	<b>120 (100)</b>	<b>57 (100)</b>	<b>63 (100)</b>	<b>5</b>	<b>5</b>
<b>KG Teaching Experience</b>					
1 – 5	75 (62.5)	24 (42.1)	51 (81)	4	1
6 – 10	20 (16.7)	12 (21)	8 (12.6)	-	-
11 – 15	8 (6.7)	8 (14.0)	-	-	-
16 – 20	5 (4.2)	5 (8.8)	-	-	-
21 – 25	5 (4.2)	5 (8.8)	-	-	-
No Response	7 (5.8)	3 (5.3)	4 (6.3)	-	-
No Experience	-	-	-	1	4
<b>Total</b>	<b>120 (100)</b>	<b>57 (100)</b>	<b>63 (100)</b>	<b>5</b>	<b>5</b>

#### 4.2.4 Respondents' Years of Teaching Experience

The teaching experiences (in years) of the respondents varied ranging from one (1) year through to thirty-five (35) years (Table 4.1). A little below half (approximately 49%) had experiences between 1 to 5 years. It is however worth noting that, more teachers (49; 77.8%) in the private sector ( $3.56 \pm 2.65$ ) were found in this range than their counterparts in the public sector (10; 17.5%). Some (20%) of the respondents had teaching experiences of 6-10 years and no teacher worked from 16–35 years in the private schools as compared to those in the public schools ( $15.16 \pm 9.09$ ).

There was no respondent in the private schools that had teaching experience beyond 15 years compared to the public school teachers. The Sample tests conducted revealed that, years of teaching experience was statistically significant for public ( $t=12.364$   $df=54$   $p=0.000$ ) and private ( $t=10.463$   $df=60$   $p=0.000$ ) kindergarten teachers. The reason may be that, because respondents in the public schools are permanently engaged at their posting, they are more likely to have more teaching experience and stay longer in their jobs. But with respondents in the private schools, teaching positions are likely to be contract based (over short periods) and are more prone to changing schools or jobs.

Also, public school teachers who have been in service for longer years are probably posted to the KG because of their teaching experience. The present findings are consistent with the results of Lindenberger, (2018) where teachers with less than four (4) years teaching experience were higher in private schools compared those in public schools.

#### 4.2.5 Respondents' Kindergarten Teaching Experience

The respondents' kindergarten teaching experiences ranged from 1 year to 25 years with an average of approximately 6 years. More than half (62.5%) of the respondents had previous working experience in the kindergarten ranging from 1–5 years (Table 4.1). Teachers who had working experience between 1–5 years were found in the private schools (42.5%) compared to the public school teachers (20%) within the same range. As seen in Table 4.1, respondents in the public schools had more teaching experience from one to 25 years in the kindergarten whilst private school respondents had no KG teaching experience beyond 10 years. More teaching experience in the kindergarten could mean long years of better and valuable performance amassed. This implies that, they have had various kinds of experiences teaching many children, using different types of curriculum and might have assessed children using different methods. This probably has informed their methods or approach of teaching and assessments as good or bad and may know the weaknesses and strengths of the curriculum and assessment strategies.

A statistical significance for both types of schools was shown by conducting One-Sample t-tests:  $t=9.145$   $df=53$   $p=0.000$ ;  $t=10.463$   $df=60$   $p=0.000$  for public and private schools respectively. These differences were probably as a result of the fact that, older teachers are assigned to the kindergarten in public schools as they are approaching their retirement. Meanwhile the private school teachers who are younger may leave to further their education after teaching or look for higher paid jobs. Lee *et al.* (2009) indicated in their study that, private kindergarten teachers were paid lower compared to those in public kindergartens coupled with insecure positions. Therefore ambitious teachers preferred teaching positions where they were

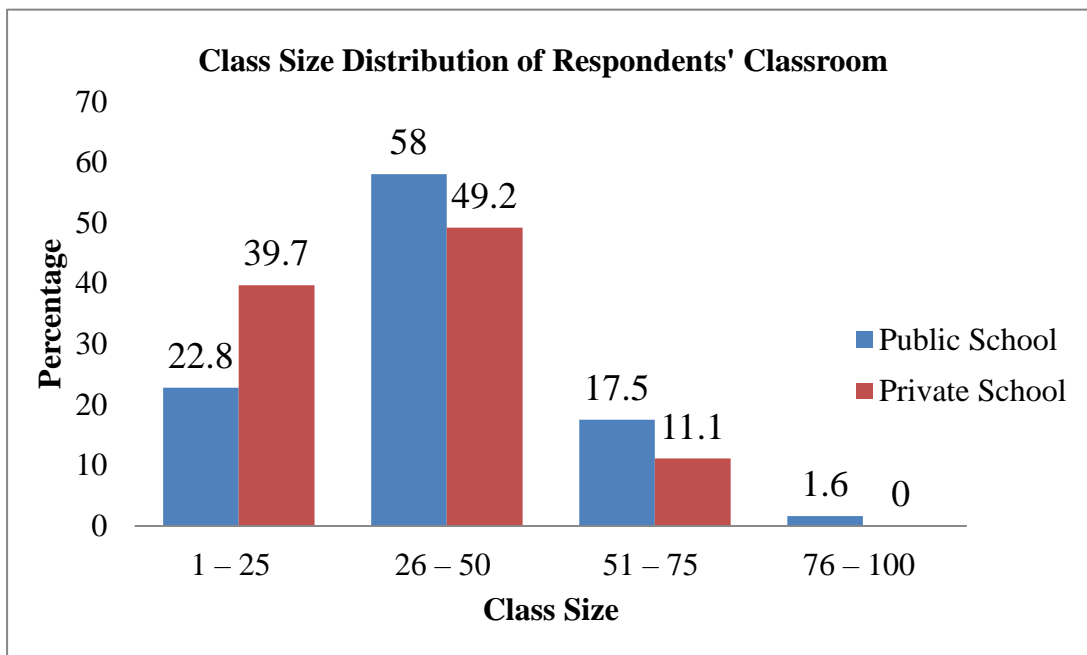
afforded better job conditions. Germino-hausken, Walston, & Rathbun, (2004) reported that, public school teachers had a higher average KG teaching experience than teachers in the private schools.

#### **4.2.6 Class Size Distribution of the Selected Public and Private Kindergartens**

A proportion of the public school (22.8%) had a class size between 1–25 pupils compared to 39.7% of the private schools understudied (Figure 4.2). Approximately about 2% of the public school respondents reported a class size of 76–100. A one-sample t-test showed a statistical significance of  $p=0.000$  with a mean class size of  $38.21\pm 15.76$  for the public schools. On the other hand, private schools had a mean class size of  $33.98\pm 15.26$  and statistically significant with a p value of 0.000. However, Pearson's chi-square test revealed that there is no statistical significance between the class size of the selected public and private kindergartens ( $\chi^2=2.343$   $df=3$   $p=0.504$ ).

Class size has enormous implications for quality since it influences teachers work load and the ability to deliver lessons effectively and have closer interaction with children. One might expect some private school classes to be smaller. Because they are operating for profit, there is the likelihood of admitting more children for financial gains. Sherani, (2014) asserted that, student-to-teacher ratio in public schools were usually quite higher than in private schools. According to NewsWeek, (2018), teachers to students ratio in private schools is almost twice the number in contrast to public schools.

Smaller class sizes allow students to have ample interactive time with teachers and peers during class activities. A study investigating preschool teachers' opinions of classroom physical characteristics by Hu, Teo, Nie, & Wu (2017) suggests that, as teachers' class sizes increase, the issue with activity planning becomes difficult and burdensome.



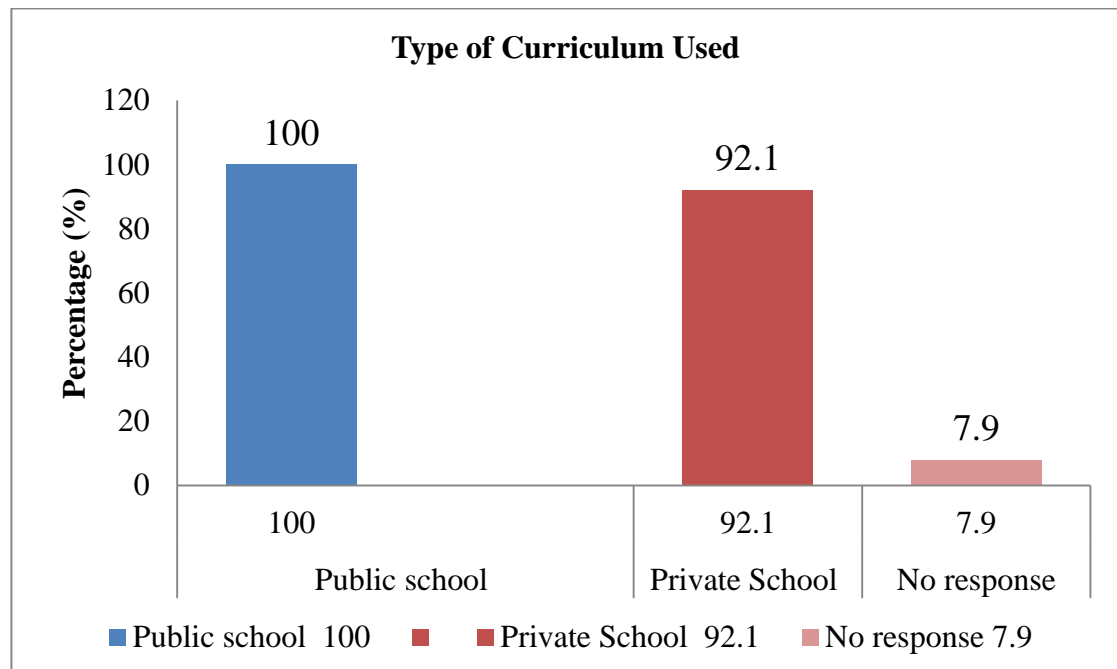
**Figure 4.2 Class Size Distributions of the Selected Public and Private Kindergartens**

### **4.3 SECTION B: Curriculum, Instructional Methods and Child Assessment Practices**

This section discusses the curriculum, instructional methods used and the child assessment practices of the respondents. The results are presented in graphs and quotes to support where necessary.

#### 4.3.1 Curriculum Used by Public and Private Kindergartens

The curriculum is a document containing learning experiences children encounter with support from teachers and caregivers (Abdulai, 2017). The Ghana Education Service Kindergarten syllabus comprising different aspects of child developmental needs is a guide with which teachers support children acquire basic skills (GES, 2016).



**Figure 4.3 Type of Curriculum Used in the Public and Private Kindergartens**

This study found out that the only curriculum being used was that of the Ghana Education Service and this is used by both the public and private schools. The Ghana Education Service (GES) syllabus for Literacy and Language was reported as the main curriculum used by both public (100%) and private (92.1%) kindergartens (GES, 2012).

This sentiment was captured by one responding head teacher who said:

*“When teaching we use the Ghana Education Service syllabus for activities so we do storytelling, dance and dramatize play because children don’t have to sit in the classroom for a long period”* (Respondent 2, Public school head teacher).

Majority (92.1%) of the private kindergartens stated that the GES curriculum was used as a guide to prepare lessons. However, 7.9% of the private school respondents did not indicate the type of curriculum they used. This is probably due to some of the private schools not having a defined curriculum being used to guide lesson planning as reported by a respondent of this study. It could also be that, these teachers used a particular curriculum but did not know the name or the type of curriculum used. A study conducted by Osei-poku & Gyekye-Ampofo (2017) revealed that, some teachers could not identify the type of curriculum used for teaching.

Although public kindergartens are mandated to use the GES curriculum, interestingly, majority of the private KGs also used this curriculum. This is surprising because there is no single standardized type of curriculum for private kindergartens and so it was expected that other curriculum will be discovered (Abdulai, 2017).

A private school head teacher said:

*“We use the GES curriculum and the proprietor who is an educationist adds her own knowledge of what we should teach.”* (Respondent 4, Private school head teacher).

In contrast, the Ghana Education Service's Language and Literacy syllabus even though it is mandatory for public kindergartens, is recommended for use by private schools in Ghana as well. However, in Afghanistan, the Ministry of Education according to Sherani, (2014) demands all private schools to use the government curricula prepared nationwide.

#### **4.3.2 Instructional Methods**

Instructional methods refer to the strategies used in teaching (Ipatenco, 2018). Teaching strategies such as the whole class, small groups and individual children instruction of public and private school teachers were assessed. The results indicate that, the whole class method was used by both public and private kindergartens. However, 91.4% of the public school respondents preferred the whole class method more compared to 68.4% of the private school respondents.

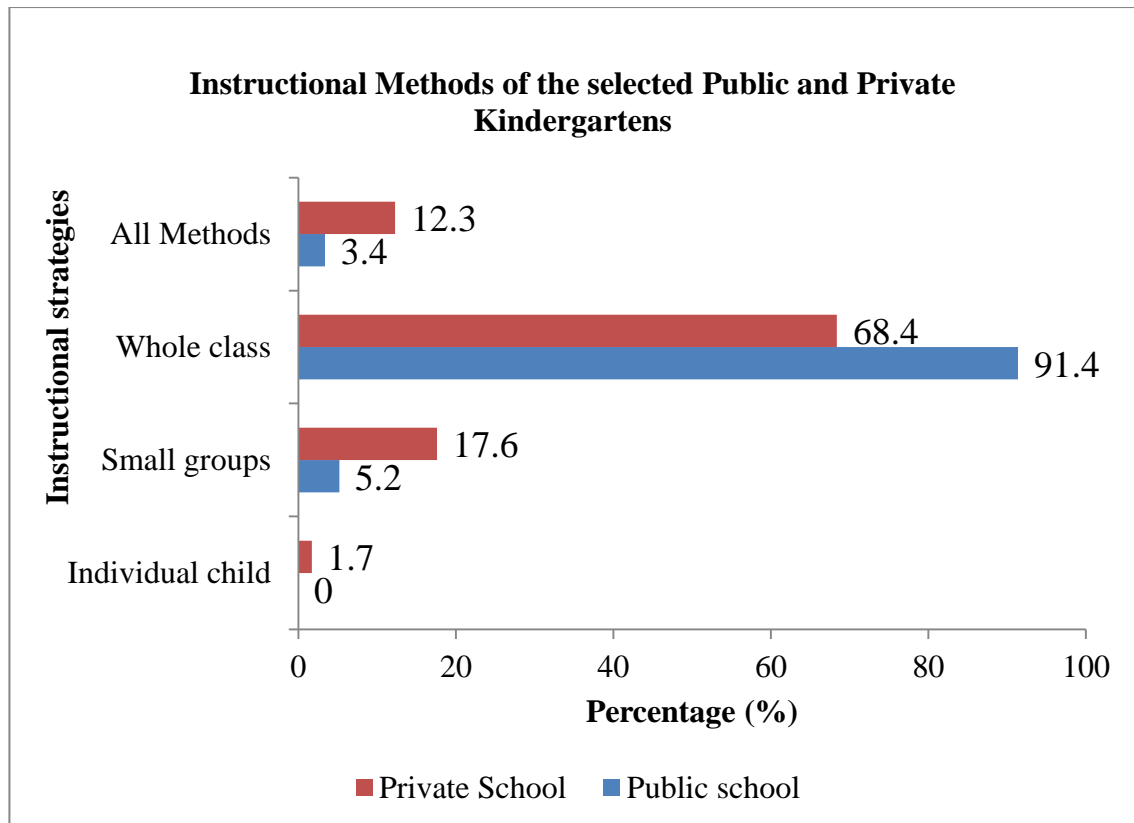
*"I teach the whole class because the children are many and I am alone. So while you are teaching, some children are also playing and by the time you realize it they can't do the work they are given"* (Respondent 9, public school head teacher).

The whole class method was reportedly used for teaching in most of the schools. This could be probably as a result of the low teacher-student ratios in the public schools. This approach probably could be the easiest way of engaging the students in the learning process. Meador (2018) posited that, planning for a whole class instruction is one plan for the entire class hence it cuts down the preparation time for teachers. Raftery (2016) indicated that whole group activities for some parts of the school day can improve children's development and small group learning supports

scaffolding in children. Further, whole class activities where children read aloud or tell stories in the classroom promoted children's social skills.

The small group methods being employed by 17.6% of the private school respondents as against 5.2% participants from the public schools suggests that, because the private schools have relatively high class sizes (that is low teacher-to-student ratios), the small group method was practiced more (Figure 4.4). This means that, the private school teachers were able to focus on the needs of their students and also ensure they participate fully through quality interactions. The small groups entail teaching students in groups about what they need to know while keeping them engaged and motivated to promote enquiry and critical thinking (Ipatenco, 2018; Wilson *et al.*, 2012). Teachers who use this strategy interact with the students more closely and guide them through practical lessons such as reading (Wilson *et al.*, 2012). Small groups also afford children with enough social interactions which help in developing their socio-emotional and cognitive abilities.

*“Small group learning is usually what we practice unless a child needs individual attention.”* (Respondent 3, private school head teacher).



**Figure 4.4 Classroom Teaching Strategies of Public and Private Kindergartens**

Only 1.7% of the private school respondents pointed out that the individual child method was used. Since no public school teacher indicated practicing individual child instruction, it was interesting to note that 3.4% used all the teaching methods (Figure 4.4). This could imply that, even though the children are not individually taught, when a child has a challenge teachers are available to assist them. The individual child instruction refers to teaching a student one-on-one. This is beneficial especially to children because not all of them learn at the same pace. Children who have challenges with understanding specific concepts benefit when teachers focus on them to enable them catch up with their peers (Ipatenco, 2018).

A Pearson’s chi-square test conducted showed a statistical significance ( $\chi^2=12.194$ ,  $p=0.007$ ) between the instructional methods of the selected public and private

schools. This implies that differences exist between the instructional methods teachers in the public and private kindergartens use in the classroom. This indicates that, teachers in the private schools focus more on each student to acquire basic skills and knowledge. On the other hand, the public school teachers tend to address the whole class which may result in children with challenges being left behind.

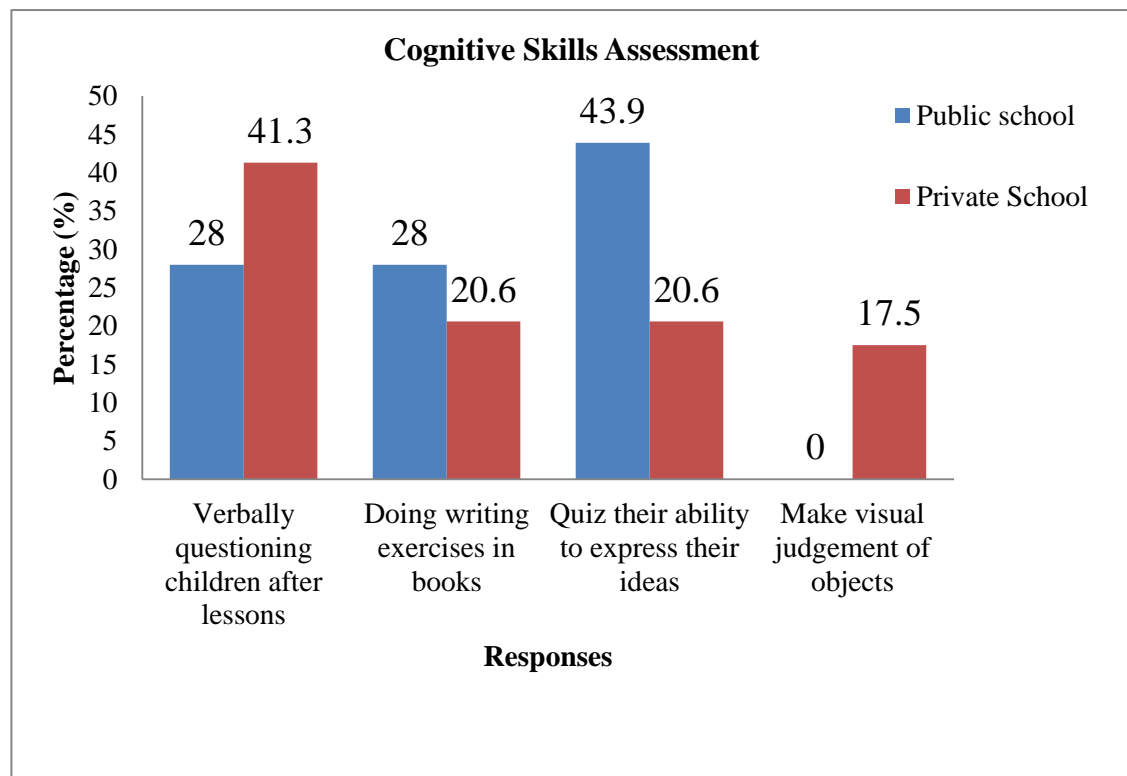
#### **4.3.3 Child Assessment Practices**

GES (2012) asserts that, assessment (formative) should be used—informally to discover children’s interests, learning style and progress towards their development. Teachers’ assessment practices were assessed in six (6) domains namely, cognitive skills, reading skills, motor skills, maths & counting skills, language development, and socio-emotional development.

##### **Cognitive skills Assessment Practices**

The study found that, teachers assessed children’s cognition using various activities. The study respondents’ cognitive skills assessment practices of children in the private schools regarding verbally questioning children after lessons was 41.3% compared to 28% of the public school teachers who reported using this assessment strategy (Figure 4.5). Also, children making visual judgement of objects were indicated by only private school teachers (17.5%). This could imply that although teachers in both private and public schools assess children’s cognitive skills, the public schools seemed to focus more on large group activities for child assessment like doing writing exercises in their books and quizzing their ability to express ideas

in class. Whereas respondents from the private schools focused more on individual child assessment practices such as assessing children’s visual judgement of objects, the public school respondents (approximately 44%) engaged the children in activities that enabled them express their ideas (Figure 4.5).



**Figure 4.5 Respondents’ Assessment Practices of Children’s Cognitive Skills**

Ampiah, (2011) stated that quality exists when students demonstrate knowledge. Therefore assessment of learners’ progress, using cognitive tests provide an indication of how well children learn and understand concepts. A Pearson’s chi-square test showed significant difference between public and private school teachers’ cognitive skills assessment where  $\chi^2 = 17.224$  with p value of 0.001. This could imply that although similar practices were reported across both schools, the type of school determines the extent to which emphasis is placed on activities promoting cognition in children. Gibson, Jones, & Patrick (2010) indicated that to

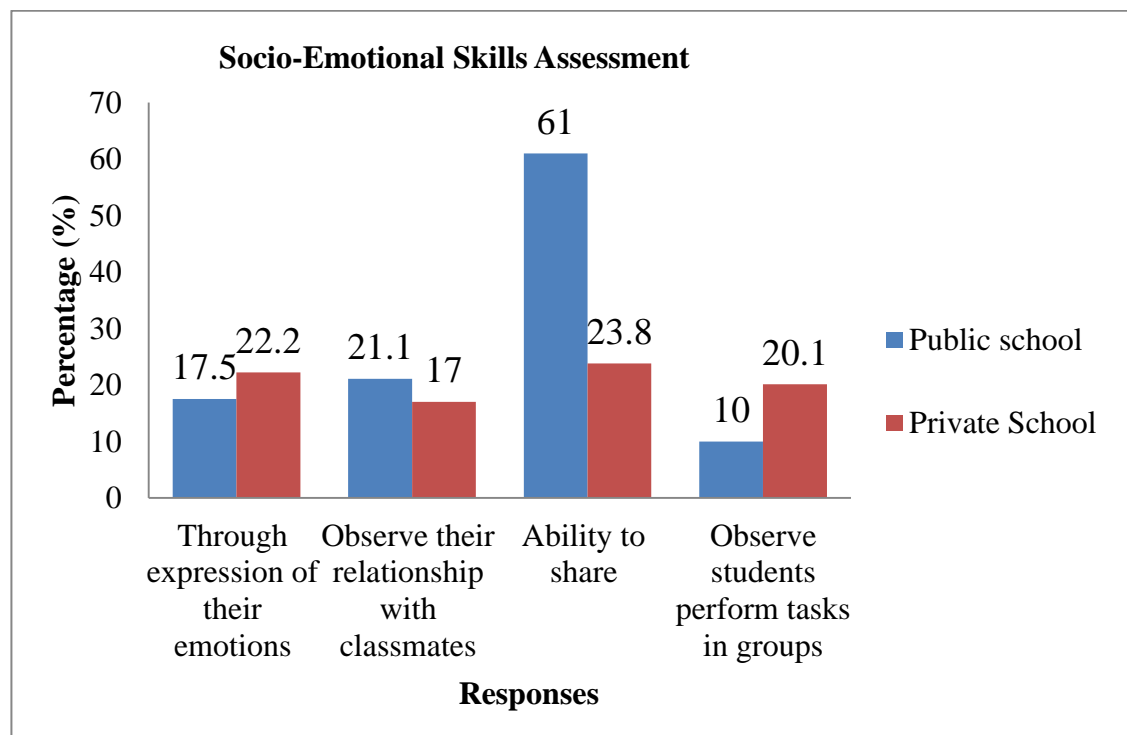
assess children's thinking and learning skills their problem solving skills, understanding of basic concepts, ability to answer questions and counting skills should be considered. This supports-the findings of this study.

Again, there was no statistical significance between respondents' cognitive assessment practices and kindergarten teaching experience ( $\chi^2=18.990$ ,  $df=12$ ,  $p=0.089$ ). This result means that length of service teaching the kindergarten does not determine a teacher's cognitive assessment practices. It could also imply that, the determinants of teachers' cognitive assessment practices were the types of activities children were engaged to perform. To test for statistical significance between class size and teachers' cognitive assessment practices, the chi-square test was conducted which revealed no difference ( $\chi^2=12.063$ ,  $df=9$ ,  $p=0.210$ ). This means that, regardless of the number of children in the classroom, respondents' cognitive assessment practices were not different. This emphasises the claim made by Ampiah (2011) that the Ghanaian educational system in Ghana is very focused on cognitive outcomes.

Research shows that, healthy cognitive development in memory, attention control and understanding occurs at a vital period of early childhood and hence there is a crucial need for children to be engaged in such activities to boost cognition (Welsh *et al.*, 2010; Zeng *et al.*, 2017).

### **Socio-Emotional Skills Assessment Practices**

More than half (61%) of the public school respondents reported using children’s ability to share as a criterion for their socio-emotional skills assessment with only 23.8% of the private school teachers who indicated using sharing as an assessment (Figure 4.6). Observing students perform tasks in groups was indicated by 20.1% of private school teachers compared to 10% of the public school teachers who used group tasks to assess children’s socio-emotional skills. It is not surprising that small group tasks to assess children’s socio-emotional skills. It is not surprising that small group instructional method was reported by the private schools (17.6%), just as the observation of children in groups was used to assess their socio-emotional skills.



**Figure 4.6 Respondents’ Assessment Practices of Children’s Socio-Emotional Skills**

A chi-square test conducted revealed a significant difference between public and private school respondents’ socio-emotional skills assessment practices ( $\chi^2=27.684$   $p=0.000$ ). Further, a multinomial logistic regression conducted revealed that, there was a relationship between public school teachers assessment of children’s socio-

emotional skills and their self-expression through which they learn about each other ( $\chi^2=35.247$ ,  $df=1$ ,  $p=0.000$ ). The Multinomial Logistic Regression model was used to test the probability of a dependent variable (public school teachers) and independent variables (respondents' socio-emotional skills assessment practices) with two or more categorical variables are related or different (Williams, 2018).

Also, public school teachers' socio-emotional skills assessment of children and observing their relationship with classmates statistically significant ( $\chi^2=35.247$ ,  $df=1$ ,  $p=0.000$ ).

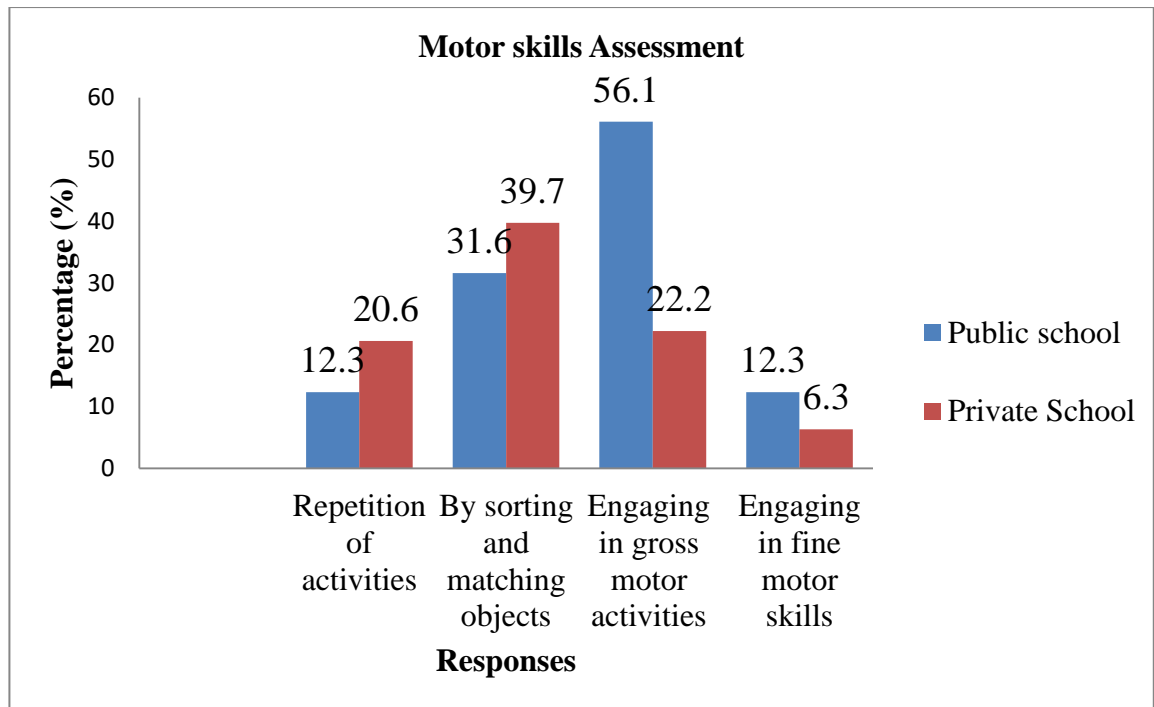
Teacher kindergarten teaching experience and their socio-emotional skills assessment showed a relationship in a chi-square test ( $\chi^2=22.268$ ,  $df=12$ ,  $p=0.035$ ). However, a chi-square test revealed that, educational level of respondents had no relationship with socio-emotional skills assessment of children. Contrary to the findings of this study, Lang, Mouzourou, Jeon, Buettner, & Hur (2017) found that teachers with associate degrees, compared to those without, were more likely to respond negatively to children's emotional displays.

Taking child development or early education coursework was associated with less negative social guidance. Also, the finding that characteristics of socio-emotional skills development include children's expression of emotions, empathy (ability to share), building supportive relationships according to Darling-churchill & Lippman (2016) are consistent with the results of this study.

### **Motor Skills Assessment Practices**

Figure 4.7 indicates that, 56% public school respondents engaged children in more gross motor activities compared to 22% of the respondents from the private schools to assess their motor skills. It was revealed that teachers assessed progress of motor skills by measuring repetition of activities to enhance children's motor skills (indicated by approximately 21% and 12% of private and public school teachers respectively). Use of sorting and matching objects to assess children's fine motor skills was used similarly in both public (approximately 32%) and private (39.7%) schools (Figure 4.7). A chi-square test of relationship revealed a statistically significant difference in motor skills assessment practices of teachers and the type of school that is public and private ( $X^2=20.735$ ,  $df=3$ ,  $p=0.000$ ). This connotes that, although both schools probably used the same activities to facilitate learning for assessment, practices in the schools varied among specific tasks.

A multinomial logistic regression model was used to test for a relationship between age of teachers and their motor skills assessment practices of children revealed no statistical significance ( $x^2=18.056$ ,  $df=12$ ,  $p=0.114$ ). However, a statistical significance ( $p=0.041$ ) between repetition of activities and respondents within the age ranges 21-30 was found. This suggests that, respondents in this age range were likely to engage children in repeated learning activities. This implies spending more time on activities and this could be very beneficial for the students most especially children who learn at a slower pace than their peers. Fine motor skills have been found to be a strong predictor of retention in the kindergarten (Cameron *et al.*, 2013).



**Figure 4.7 Respondents’ Assessment Practices of Children’s Motor Skills**

Head teachers had this to say on the relevance of assessment to children’s learning:

*“When you assess them (children) you get to know the individual child capability and their challenges and their strengths and you try to see where the child needs assistance and where a child need to come out of a challenge so it’s very good to assess them”*. (Respondent 7, public KG head teacher).

*“Children are assessed to know if they are progressing. Whether they are catching up or picking up. So if you don’t assess them there is no way of knowing”*. (Respondent 3, private KG head teacher).

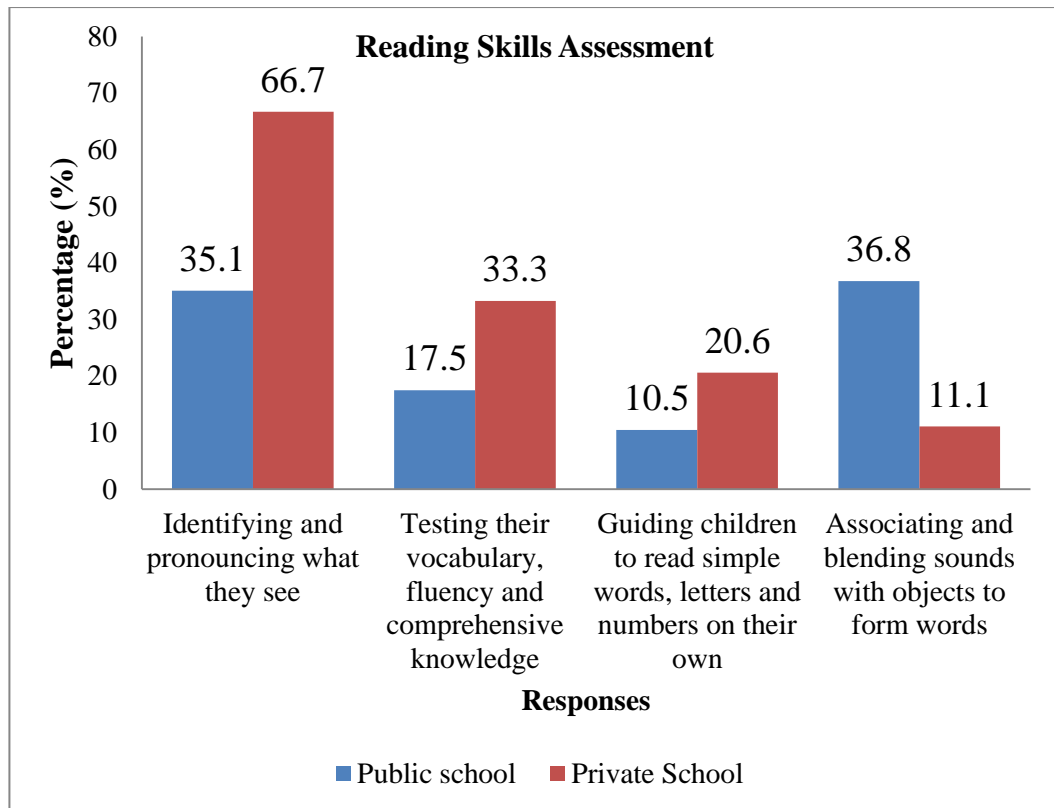
Zeng *et al.* (2017) indicated that children’s early development years are critical periods where physical activity or movement develops their emotional, motor, social and cognitive abilities and hence there is a need for them to be naturally involved in physical activity to promote and maintain healthy and active lives. Children who are engaged in regular physical activity to promote their motor skills can be associated with many health outcomes like adiposity, self-esteem and cognition.

When children are engaged in activities, their motor development is stimulated (Mathisen, 2016). Therefore, regular assessments with different tasks could inform teachers in areas children are constrained. When children play or learn using their motor skills, it contributes immensely to their self-motivation, satisfaction, social interaction and building relationships with their peers. Children who develop poor motor skills are likely to engage in less social interaction and display detachment and restrain behaviour during play activities (Trawick-Smith, 2014). This could subsequently lead to motor impairment due to inactivity (Mathisen, 2016).

### **Assessment Practices of Students' Reading Skills**

Children's reading skills as stated by the research participants revealed that, varying methods were used to ascertain the progress of their students. More than half (approximately 67%) of the private school respondents indicated assessing the students reading skills by engaging them in alphabet identification and pronunciation especially through phonics with 35.1% public school teachers indicated using the method.

The current study also found that 33.3% of the private school teachers and 17.5% public school teachers assessed their students through testing their vocabulary, fluency and comprehensive knowledge regarding their reading skills during reading lessons. Also, 25.8% of the respondents indicated that during their assessments the children are guided to read simple words in texts, letters and numbers on their own.



**Figure 4.8 Respondents’ Assessment Practices of Children’s Reading Skills**

A Chi-Square test conducted revealed a statistically significant difference between the study respondents’ reading skills assessment practices ( $\chi^2=13.311$   $df=3$   $p=0.004$ ). This implies that, both public and private schools although may use the same or similar activities to assess the students’ reading skills, there are significant differences in the respondents’ preference of certain activities over others in both schools. From the Figure 4.8, it can be seen that private school respondents assessed children’s reading skills better probably because they are more results oriented. On the other hand, public school respondents focused more on students’ phonological awareness by associating sound to letters and words. Research has shown that teaching children to associate and blend words with sounds and helping them to identify and pronounce the alphabets and words improves their reading (Chelimo, 2014).

Again, a Pearson's Chi-square test conducted showed no statistically significant difference ( $\chi^2=6.550$   $df=9$   $p=0.684$ ) between class size and students' reading assessment practices of respondents. A possible explanation for this may be as a result of the whole class instructional method of teaching which was reported by most of the study respondents. Reading out loud in the classroom is one of the strategies used during whole class and small group instruction while promoting children's socio-emotional and language skills development (Raftery, 2016).

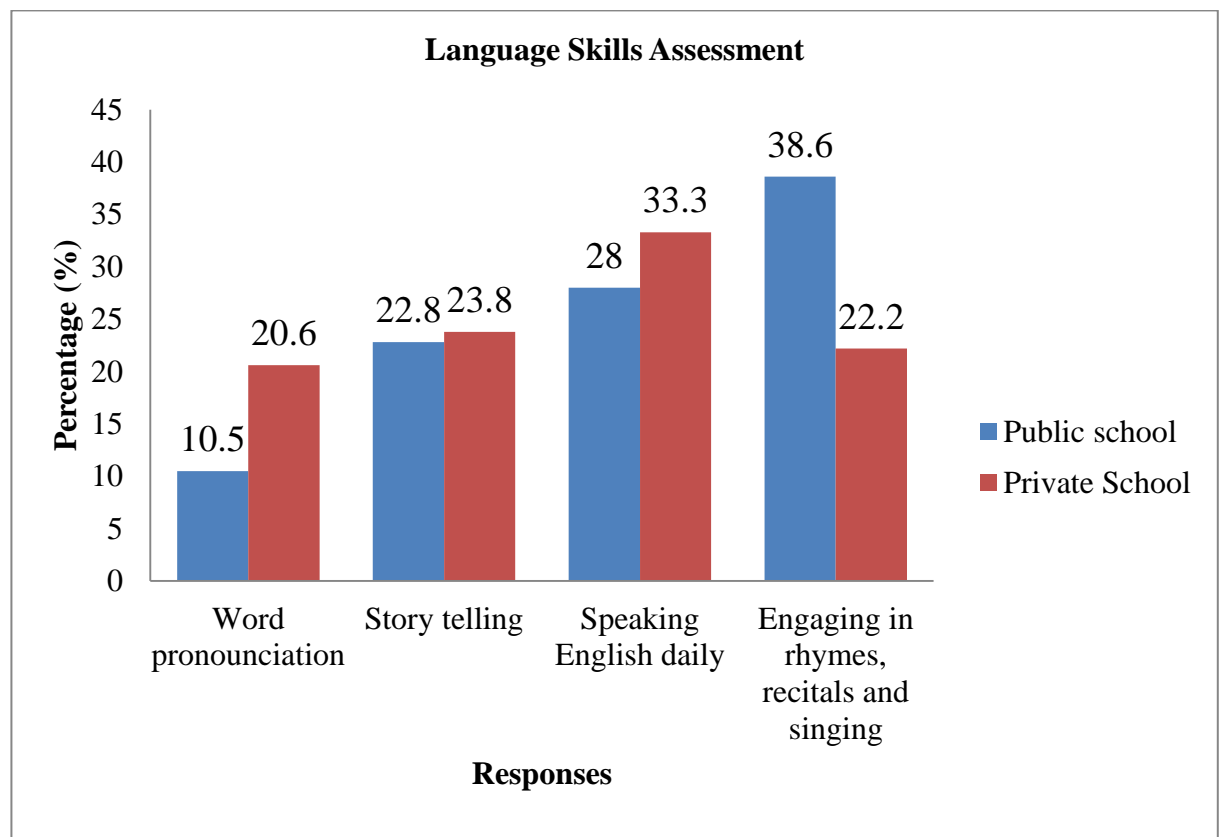
### **Language Skills Assessment Practices of Teachers**

Teachers used rhymes, recitals and singing as a method of instruction to assess children's language development. This was indicated by 38.6% of the public schools and 22.2% private school respondents. Story telling was used by a proportion of 22.8% and 23.8% of the public and private school teachers respectively. Also, word pronunciation was used more (20.6%) by the private school respondents compared to 10.5% public school teachers.

A Chi-Square test found no difference between the language assessment practices of students in both public and private school teachers ( $\chi^2=4.887$   $df=3$   $p=0.180$ ). This is possible because the Ghana Education Service curriculum places a lot of emphasis on the need to support children's language skills in the kindergarten (GES, 2012).

Also, the use of storytelling, songs and rhythms, sounds and word pronunciation to carry out classroom activities as well as the daily interactions with teachers and peers coupled with play activities children are engaged in helps develop their

language skills (Kennedy *et al.*, 2012). The GES syllabus requires that kindergarten children should be taught in the Ghanaian language spoken within the community the school is located in for most (90 minutes) parts of the school day. Even though this could be beneficial to the child’s learning, fluency in the English language for use later in life for public school children becomes a challenge compared to their peers in the private schools whose language of instruction is basically the English language (Okota-Wilson, 2017) .



**Figure 4.9 Respondents’ Assessment Practices of Children’s Language Skills**

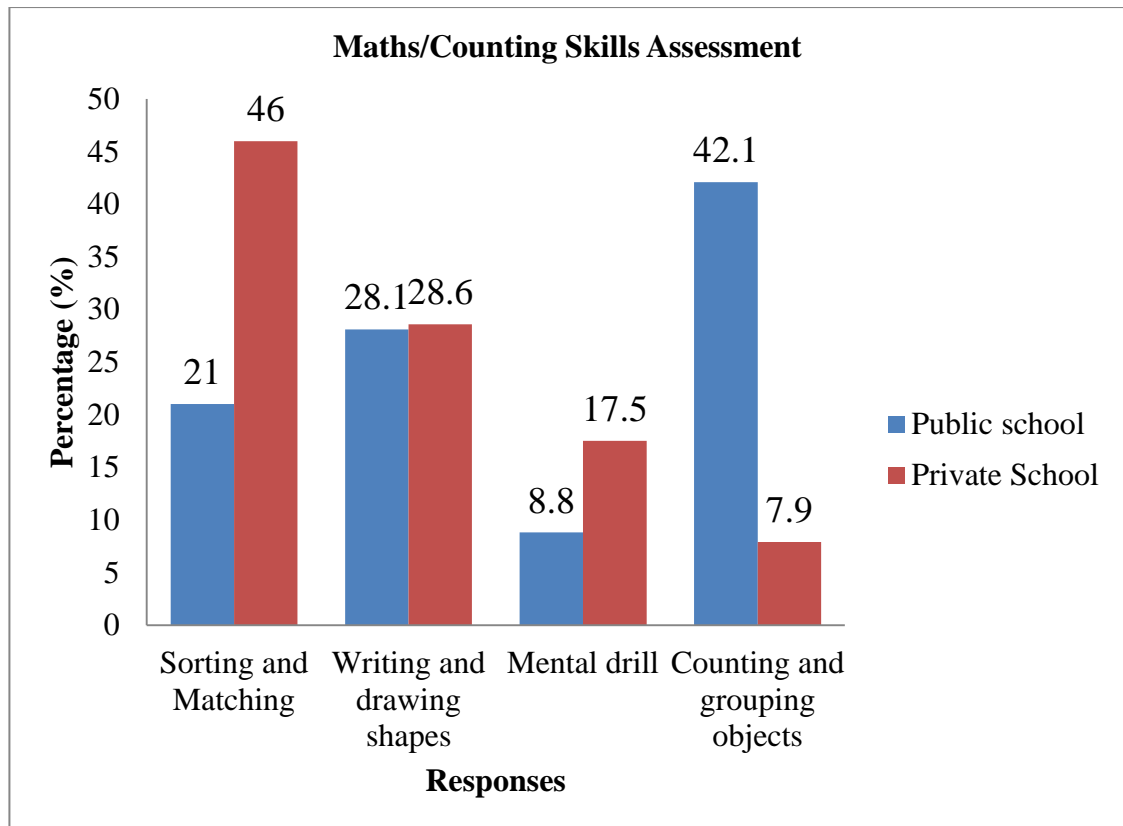
This study finding corroborates that of Justice, Yeomans-maldonado, Gonzalez, Bengochea, & McCormick (2018) where it was revealed that teachers used spoken vocabulary to increase children’s language development. Music and songs, materials with words and storytelling were some of the strategies which teachers used

repeatedly to support students' language. The link between spoken language and cognitive development in the early years has been reported (Open Resource Bank for Interactive Teaching (ORBIT), 2012).

When children observe the use of language among their teachers and peers and how it is spoken through listening, they are able to describe and make sense of their experiences during task performance (ORBIT, 2012).

### **Maths/Counting Skills Assessment Practices**

Respondents' maths skills assessment practices are reported in Figure 4.10. Almost half (46%) of the private school teachers indicated using the sorting and matching task to assess children compared to the public school respondents (21%). With counting and grouping objects, 42.1% of the public school respondents used this activity more than the private school respondents (7.9%). Mental drill was also used as a means of assessing children's maths/counting skills. For some private schools the abacus was used for a type of maths exercise known as Universal Concept of Mental Arithmetic (UCMAS) (UCMAS Ghana Ltd, 2017). This is a GES approved programme seeking to promote the education of abacus and mental arithmetic (using the mind in calculation). With this activity, the teacher gave a mathematical instruction and the students used the abacus to either add or subtract and provide the answer either in their books or orally.



**Figure 4.10 Respondents’ Assessment Practices of Children’s Maths/counting Skills**

A statistical difference was found between teachers’ maths/counting skills assessment and the public and private schools ( $\chi^2 = 21.619$   $df=3$   $p=0.000$ ). This difference could be as a result of the type of activities teachers used to engage the students. Classroom observations for instance showed that private schools used various kinds of learning materials such as the abacus whilst public schools performed activities mostly by demonstrating and writing on the board for the children to learn.

Children’s maths progress has been linked to the education provided in their early years (Presser *et al.*, 2015). Research also indicates the importance of language in promoting children’s numeracy skills as this is used to express their thinking in

words and also as a predictor of future academic achievement (Reid, 2016). Okota-Wilson (2017) indicated that the GES kindergarten curriculum for public schools revealed that, children in their first year of kindergarten are expected to learn the numerals to ten (10). This is because it assumed that the KG1 is the child's first encounter in formal education. Although the private schools use the GES curriculum, students are taught more complex maths skills.

#### **4.4 SECTION C: School Environment**

The school environment was assessed through observation with a checklist. This section discusses the school environment of some schools that were selected for observation. The observed indicators included the: classroom building, hygienic surrounding, play area, feeding, teaching and learning materials, security, indoor learning environment, sensory stimulation in the classroom, furniture and health as well as sanitary facilities. The results are presented in Table 4.2 and relevant quotes to support where necessary.

##### *Classroom Building*

All the school blocks were found in completed structures and were usually attached to a school block with a common or shared facility (the lower primary) or a detached school block mainly for the kindergarten with its own facilities. Through observation, some schools were found sharing a compound with rented houses whilst others were in the same facility with places of business. Findings of this study

corroborates that of Tekmen (2014) who found that, some schools were detached buildings and single floor buildings. Also, some centers were found in apartments joined together.

**Table 4.2 Characteristics of the School Environment of Public and Private Kindergartens**

Items	Private		Public	
	Adequacy	Frequency	Adequacy	Frequency
<b>Hygiene*</b>	Adequate	3	Adequate	5
	Inadequate	2	Inadequate	0
<b>Play Area</b>	Adequate	1	Adequate	2
	Inadequate	4	Inadequate	3
<b>Feeding</b>	Lacking	2	Lacking	1
	Adequate	1	Adequate	0
	Inadequate	2	Inadequate	2
<b>TLMs*</b>	Adequate	2	Adequate	2
	Inadequate	3	Inadequate	3
<b>Furniture</b>	Adequate	2	Adequate	3
	Inadequate	3	Inadequate	2
<b>Security</b>	Lacking	0	Lacking	3
	Adequate	1	Adequate	0
	Inadequate	4	Inadequate	2
<b>Indoor*</b>	Adequate	0	Adequate	2
	Inadequate	5	Inadequate	3
<b>Sensory*</b>	Adequate	5	Adequate	2
	Inadequate	0	Inadequate	1
<b>Health</b>	Lacking	0	Inadequate	2
	Adequate	5	Adequate	3
<b>Sanitary*</b>	Adequate	1	Adequate	2
	Inadequate	4	Inadequate	3

Hygiene\* - Hygienic surrounding

TLMs\* - Teaching and Learning Materials

Indoor\* - Indoor Learning Environment

Sensory\* - Sensory Stimulation

Sanitary\* - Sanitary Facilities

The structure of a school building has its own influence on the teaching and learning process. Many researchers have indicated the need for school building design to be taken into consideration for the sake of its influence on children's learning (Higgins *et al.*, 2005). Some studies have shown that ease of movement in schools averts the feeling of overcrowding. This suggests that, well-designed buildings have the potential of contributing to pupil's success as it affects the mood and behaviour of learners (Børve & Børve, 2017; Farooqi *et al.*, 2015; Higgins *et al.*, 2005).

Observation results based from the school environment are reported in Table 4.2. Each indicator comprised a number of characteristics. Based on these characteristics, the indicators were scored as follows; 0=Lacking Half=Inadequate All=Adequate Ten (10) schools' environments were observed, 5 public and 5 private kindergartens.

#### *Hygienic Surrounding*

For hygiene, a school surrounding free of garbage or had potable water available and accessible to the children among others were looked out for. Three out of the 5 private schools had adequate hygiene criteria compared to all 5 public kindergartens. Access to fresh, clean potable drinking water in schools is very essential to

maintaining good health of children. Water should be stored in covered tanks instead of open containers (Farooqi *et al.*, 2015; Higgins *et al.*, 2005).

### *Play Area*

Four out of 5 private schools had inadequate play area criteria while 3 out of 5 of the public schools were inadequate. The surroundings of a school make up the framework that builds children's play (Børve & Børve, 2017). A school environment that is structured to engage children in play builds their competence in social skills, strong language skills, imaginative abilities and high levels of thinking. This is because children translate all they learn into practice through play as a way of learning (Miller & Almon, 2009). Hence, giving children the opportunity to play and engage in hands-on experiential tasks helps them internalize new information in addition to what they already know. They also get the chance to interact with their friends and teachers which allows them to solve problems on their own (Brown, 2017).

### *Feeding*

With regards to feeding criteria, 2 out of 5 private schools were lacking and 1 out of 5 public schools scored zero. This means they neither provided food for the children nor had space available for eating. Higgins *et al.* (2005) indicated that, it is very necessary for children to have a canteen or a place dedicated for a variety of meals to

be eaten. Schools therefore have a role in providing meals and snacks for children during the school day (Farooqi *et al.*, 2015).

#### *Teaching and Learning Materials*

Teaching and Learning Materials (TLMs) were adequate for 2 out of 5 for both private and public schools. This included white/blackboards, books, wall clocks, musical instruments, charts and picture displays in the classroom and among others.

#### *Security*

Security was inadequate in 4 of the 5 private schools observed compared to 2 public schools with 3 lacking security. They had no fencing or wall with security gates or security guards to ensure safety in the schools. No private school had adequate security whereas 2 public schools were adequate.

#### *Indoor Learning Environment*

For indoor learning environment; enough space for free movement, to engage in activities other than listening and for the teacher to be able to move freely and interact with children during lesson delivery were observed. The arrangement and availability of TLMs were also included in the indoor learning environment. All the private schools (5) had inadequate indoor learning environment criteria whereas three of the public schools were inadequate.

Rentzou (2014) found that, indoor spaces in private schools were adequate compared to public school settings. Contrary to this study's findings some private schools' classrooms were more crowded than some public schools even though the private schools' situations were better.

### *Sensory Stimulation*

Sensory stimulation characteristics in the private schools were adequate (5 out of 5 schools). Some (2) public schools were inadequate in providing enough sensory stimulation in the classroom for students' learning. Sensory stimulation refers to making learning effective through the senses (Brown *et al.*, 2010). Day lighting according to Higgins *et al.* (2005) has been considered to be the most effective and appropriate for students achievement as it has positive biological effects on the body. Also, noise and ventilation in the classroom have been associated with students' mood and behaviour (Farooqi *et al.*, 2015).

### *Furniture*

Three out of five private schools had inadequate furniture whereas 2 out of 5 public schools had insufficient furniture especially for seating. However, most schools had child-sized tables and chairs in for the students. There were storage facilities for books and other materials as well as space for school bags and food containers which were easily accessible to children. The results of this study is in agreement with Rentzou (2014) who found that majority of the understudied public schools had inadequate furniture whilst more than half of the private schools were sufficient.

Furnishing in every classroom is of utmost importance and contributes greatly to activities carried out. For kindergarteners, soft child-friendly furnishing is prescribed

to increase participation as it has been seen to promote comfort and help in easy movement (Higgins *et al.*, 2005).

### *Health*

Health practices such as the availability of a functional first aid kit, tissues, and antiseptics and soaps to ensure children are taken care of were assessed. All private KGs (5) had adequate health criteria whilst three of the five public schools had adequate health items. This could mean that, private schools were more equipped and concerned to cater for children in order to promote their health and hygiene than the public schools.

### *Sanitary Facilities*

Four out of five private schools had insufficient sanitary facilities compared to three out of five public schools. Some of the observed schools did not have toilets for the students. This means that, the children used the public toilets in the community if there were any. In some cases, the students and teachers shared the same urinal and toilet (both male and female). A few of the schools also had wash facilities for children to wash their hands before and after eating. The Sanitary facilities which are available and accessible to students and teachers have been found to prevent absenteeism (Ayele *et al.*, 2015).

Sriklaub *et al.* (2015) posit that, the school environment helps stimulate children's development in all domains such as cognitive, social, emotional and physical development. Workman & Ullrich (2017) indicated that children need a physical setting—both inside and outdoors—where they can play, explore, and learn safely.

The learning environment needs to include engaging and developmentally appropriate materials and be arranged to promote independence and exploration based on children's different stages of development.

Head teachers from both public and private kindergartens described the importance of the physical environment to children's development with diverse perspectives including engaging in physical activity, supporting learning and providing structure (routine) and play.

#### *Play area*

With regards to the relevance of the physical environment to the students' development, the head teachers emphasized the need for children to have space and a well-structured outdoor environment set-up for them to learn. The sentiment of a public school respondent was captured below:

*"If there is no place for them (children) to play they end up playing with objects that can easily hurt them"* (Respondent 9, public school head teacher).

#### *Furniture*

Some respondents mentioned the need for children to have the appropriate furniture which enabled learning which is comfortable and safe. One respondent said:

*"Furniture is a problem, you can see four children sitting on one chair desk and some don't even have which hinders the children a lot. They can't sit well and can't write well"* (Respondent 10, public head teacher).

Furniture is important in a school as it has been linked with comfort, attraction and well-being. The furniture should be comfortable, attractive, child sized and storable (Farooqi *et al.*, 2015). While inadequate school buildings cause health problems and contribute to poor student performance, adequate and beautiful school structure has shown to increase student performance. Consequently, poorly designed and organized furniture reduces the quality of the programme (Rentzou, 2014).

#### **4.5 SECTION D: Respondents' Perceptions of Quality Kindergarten Education**

This section discusses the study respondents' subjective understanding of quality kindergarten education. Respondents' perceptions of their schools' quality, aspects of the respondents' schools which need improvement as well as their opinions of government interventions and other elements needing improvement to achieve quality kindergarten education are discussed in this section. The results are presented in tables and quotes to support where necessary.

##### **4.5.1 Respondents' Perceptions of Quality Kindergarten Education**

This section presents the three (3) main themes that were identified on quality from the respondents' open-ended responses. Table 4.3 shows the main themes and sub-themes from the study. These themes are discussed in this section.

**Table 4.3 Thematic groupings of Respondents’ Perceptions of Quality Kindergarten Education**

<b>Themes</b>	<b>Number</b>	<b>Sub-themes</b>
1. Availability of teaching and learning materials	103	<ol style="list-style-type: none"> <li>1. Appropriate teaching and learning materials</li> <li>2. Playground</li> <li>3. Physical learning environment</li> </ol>
2. Conduciveness of the learning institution	98	<ol style="list-style-type: none"> <li>1. Collaborations</li> <li>2. Effective Monitoring and supervision</li> <li>3. Conducive learning environment,</li> <li>4. Qualified teachers</li> <li>5. Academic outcomes,</li> <li>6. Varieties of teaching methods,</li> <li>7. Standard activity-based curriculum</li> </ol>
3. Necessity for child development	76	<ol style="list-style-type: none"> <li>1. Socialization</li> <li>2. Promotion of development</li> <li>3. A safe and nurturing environment.</li> </ol>

\*Multiple Responses

#### **4.5.1 Main Theme 1: Availability of teaching and learning materials**

Majority of the respondents indicated the importance of materials in teaching and learning. They attributed quality kindergarten education to the availability and sufficiency of needed materials for teaching and learning as imperative in facilitating children's learning experiences. Respondents believed that, learning with the appropriate materials enriched children's knowledge and skills through exploration and only then quality kindergarten education could be achieved. Three sub-themes emerged regarding the availability of teaching and learning materials. They included: (1) Appropriate teaching and learning materials, (2) Playground and (3) A theory-based learning environment.

##### ***Appropriate teaching and learning materials***

This was regarded an important item that assisted in children's learning whilst ensuring their safety. Most respondents expressed the critical role the appropriate learning materials contributed to the children's learning and development because it provided children with the hands-on experience needed to promote their skills. Also, the need for teachers to have the needed teaching materials to facilitate children's learning while enhancing their work was indicated. Respondents' opinions were captured in the statements below:

*“A conducive environment for children to learn and adequate materials to support the instructional process”* (Respondent 19, public school teacher).

*“Having the necessary teaching and learning materials as well as trained teachers to impact knowledge onto the kids”* (Respondent 54, private school teacher).

Some believed that the most important item in children's learning was the appropriate teaching and learning materials that provided children the opportunity to acquire a hands-on experience in learning. Some respondents expressed their views by indicating that:

*“One that teaches a child how to learn with materials on his/her own”* (Respondent 39, private school).

*“It deals with the availability of teaching and learning materials and the learning process”* (Respondent 17, Public school teacher).

*“When all resources are available and also enough for children to have access to such materials at all times”* (Respondent 38, public school teacher).

Wambui (2013) indicated that, teaching and learning materials are the objects that make learning possible, provides a hands-on experience to learning and encourages classroom participation in activities. TLMs also stimulate learning whiles making the teaching of concepts easy and more understandable (Tuimur & Chemwei, 2015). For instance, writing boards, charts, pictures, textbooks and wall clocks. These are specifically essential to kindergarteners since they learn by practicing/doing. Children also learn when they are able make visual judgements of objects during the learning process (Shabiralyani *et al.*, 2015).

### ***Play ground***

Some respondents revealed the importance of a playground where children could take a break from the long hours of sitting and listening in the classroom to engage in various kinds of physical activity to re-energize their bodies. Some indicated that

because children at the kindergarten level had the need to be engaged in some physical activity, the playground necessitated their desire for movement all the time.

The views of some respondents emphasizing the importance of play were captured below:

*“An environment with a playground and teaching and learning materials for pupils use”* (Respondent 7, public school teacher).

*“Pupils play by touching and seeing and they also learn through play as regard touching and seeing. The classroom layout should be child friendly, with the four corners”* (Respondent 13, private school teacher).

*“When the children have a physical environment designed for play, it makes them happy because they easily get tired with sitting in the classroom for hours. It is also good for them to exercise and I sometimes realize that concentration is better when they engage in play. It also prevents the children from playing with harmful objects or engaging in play with is injurious to them”* (Respondent 10, public school head teacher).

Moon & Reifel (2008) found in their study teacher’s view on children’s play. Teachers regarded play as concrete, manipulative, hands-on activities for children’s learning. This was stated as relevant for children because they have short attention spans. Sharif (2014) indicated that, school play time has been found to be the most active part of children’s day. The playground therefore allows children to have fun and relax and helps promote good health and wellbeing. Playgrounds in schools therefore play an important role in children’s daily lives for fulfilling their interest, development and learning needs. The presence of playgrounds in schools was stated as a potential for kindergarten children’s school readiness (Sharif, 2014). Erdem, (2018) found that, teachers believed outdoor activities enriched their students’

learning in their natural settings, helped develop their spatial perceptions, and improved their psycho-motor and language development.

### ***The physical learning environment***

Several respondents pointed out the learning environment as a strong motivator of children's learning and teachers' major incentive to teach. They indicated the need for the teachers to feel safe in their working environment as this encouraged them to do work with ease and comfort.

*“Where all facilities available are used to carry out activities that will help develop the children intellectually”* (Respondent 41, public school teacher).

*“Quality is when there are teaching and learning materials available and the school environment is safe for teaching”* (Respondent 42, private school teacher).

The learning environment should reinforce learners to learn at their own pace, and be able to select their own activities (Abdulai, 2017). Instruments and TLMs have been found to be beneficial to child development (OECD, 2009). The kindergarten physical environment has been stated to have direct impact on children's social and cognitive competency and development. Hence, shortcomings in the physical learning environment hinder children's development. This is because it creates undesired behavioural obstacles, causes withdrawal and lack of integration with their surroundings (Shaari & Ahmad, 2016). The physical learning environment has also been found to influence children's behaviour, attitudes and school readiness (Shaari & Ahmad, 2016; Sharif, 2014).

#### **4.5.2 Main Theme 2: Conduciveness of the learning institution**

Respondents associated quality kindergarten education to the institution having qualified and trained teachers, a curriculum that guides instruction with creative activities and interactive collaborations between staff, children and parents. Emerging themes included: (1) Collaborations, (2) Effective Monitoring and supervision, (3) Conducive learning environment, (4) Qualified teachers, (5) Academic outcomes, (6) Varieties of teaching methods, (7) Standard activity-based curriculum. Therefore, if all these factors highlighted were to be present in a school then quality was assured to be achieved.

##### ***Standard activity-based curriculum***

The study respondents stated the relevance of using a curriculum that integrated activities into learning. This means that, children's learning in any form should include actions that enabled them to not only memorize but for them to put it into practice. Some also indicated the need for children's learning not to be restricted to only the classroom as this limited their learning and development since their developmental level required more activities that allowed for manipulation of objects and movement. Some respondents were of the view that:

*“By using the activity-based curriculum judiciously and teachers should be qualified and trained on how to teach”* (Respondent 21, Public school).

*“Teaching the pupils the basic concept and appropriate lessons of that level”* (Respondent 32, private school teacher).

*“Kindergarten education is very good for children because the teachers handling them expose them to new experiences”* (Respondent 4, private school head teacher).

The curriculum as stated by Nan-Zhao (2004) is a vital component affecting educational quality and learning success. The curriculum is the totality of experiences which are planned for children and young people through their education (Children learn best by being actively involved in activities physically, cognitively, socially, and artistically through exploration and thinking (Kagan & Kauerz, 2012). It is therefore not surprising that the respondents stated the curriculum as an important component of achieving quality kindergarten education.

### ***Effective Monitoring and Supervision***

A few respondents stated the need for monitoring and supervision of teachers as a quality indicator. They believed that irrespective of a teachers’ qualification, supervision was the most effective way teachers could put in their best especially when their performance are evaluated and made known to them. Some respondents indicated that:

*“Regular monitoring of education officials with effective supervision and evaluation in my opinion that will bring about discipline in the school”* (Respondent 7, public school teacher).

*“Teaching and learning are effectively monitored and supervised by the academic board of the school for quality lessons”* (Respondent 11, private school teacher).

Others believed that, supervision was a way of keeping teachers in line with the goals of the programme since they were likely to deviate or use inappropriate methods for teaching.

Ogundele, Sambo, & Bwoi, (2014) described supervision as a process an assigned official sees to the activities carried out in the classroom and if those activities are promoting the goals of the programme as well as supporting children's learning. Ibhaze (2016) indicated the potentials of supervision to help develop teachers' competence and confidence when they are provided with constructive guidance which leads to the betterment of their practices.

Ogundele *et al.* (2014) study results revealed a significant relationship between supervision and student achievement implying that, effective supervision practices had an influence on the programme goals and consequently high quality achievement. They indicated that regular supervision and monitoring of schools from education officials guided curriculum implementation and instruction activities through advise.

### ***Conducive learning environment***

Respondents indicated emphasizing on the need for the environment to be safe and conducive to enable effective teaching to take place and also for children, to have a sound mind to learn. They were of the view that the conduciveness of the environment motivated teachers to teach children. On the other hand, it was stated that, a school environment which was not safe and enabling was disruptive for the teaching and learning processes.

*“Quality is when the school environment is safe for teaching and learning for the teachers and students”* (Respondent 3, public school teacher).

*“Quality is when the environment is good and conducive, with modified corners, and conducive classrooms are available for a child to learn”* (Respondent 37, private school teacher).

Some also indicated the crucial role the classroom environment played in teaching and learning.

### ***Qualified teachers***

According to the respondents, a kindergarten teacher should understand the need of children to be able to facilitate their learning and this is achieved if the teacher is trained in early childhood education. They associated a trained teacher to one who has the ability to connect and build relationships with children to enable effective communication through which learning can occur. Teachers’ educational level and teaching experience were stated as important for effective teaching to take place. Some emphasized that teachers needed specific skills to be able to use available TLMs to support children’s learning.

*“Quality teachers because they make teaching and learning exciting and help children understand concepts”* (Respondent 28, private school teacher).

*“The quality of teachers will make the learning and reading to be more effective for children”* (Respondent 18, public school teacher).

Teachers are the essence of any education system. Teachers are key individuals in protecting children’s ability to learn in school. Teacher’s qualification has been linked to positive child outcomes (Brinkman et al., 2016). Also, teacher’s level of education, experience and training have been shown to be of more importance to

obtaining quality similar or even more than observed classroom quality. An evaluation of a teacher training programme in Ghana by Aber *et al.* (2016) showed an improvement in the quality of teacher-child interactions in the classroom. Particularly, the programme improved teachers' support in students' expression (such as, reasoning and problem solving skills, considering students' ideas), emotional support and behaviour management (like, positive climate, consistent routine).

Iowa Department of Education (2007) added that, teacher education is associated with high quality kindergarten education which results in long-term educational, social and economic gains because they are more responsive to children and provide more language and cognitive rich experiences for children.

### ***Academic Outcomes***

Some respondents were concerned about the results of teaching and learning as they related quality to children's performance and ability to reproduce knowledge learnt. They believed that it is only when the children perform and achieve higher in examinations that showed the school was of quality. The opinions of respondents were expressed as follows:

*"When the child can recite the alphabets and numerals."* (Respondent 49, public school teacher).

*"When children are able to speak Basic English to express themselves"* (Respondent 55, private school teacher).

*“The context when a child is able to read, write, understand and be able to deliver what is being taught”* (Respondent 47, private school teacher).

*“If the children are able to perform well then it means there is quality”* (Respondent 6, public school head teacher).

This result confirms Ampiah's (2011) assertion that quality exists when students demonstrate knowledge. It implies that the young Ghanaian learner is expected to demonstrate knowledge based on the goals of the educational system of the country. Also, since children move from home into the kindergarten, more emphasis is placed on their acquisition of basic skills especially in numeracy and literacy. Hence, teachers prepare and guide children's learning for the them to gain these skills to enable them enter the primary school (Okota-Wilson, 2017).

### ***Varieties of teaching methods***

Using different methods to teach children was stated by some respondents. These respondents were of the belief that children learn in various ways and so no one method could be enough to instruct them. Hence, to achieve quality meant teaching using various approaches to concepts as a way of carrying each child along. Some respondents indicated their views below:

*“Being able to engage pupils in class and outside doing activities with requisite materials that aid learning emotionally, physically and behaviourally”* (Respondent 11, public school teacher).

*“When a teacher is able to provide and use enough or various methods and teaching experiences to help children acquire the needed literacy and numeracy skills”* (Respondent 14, private school teacher).

Respondents indicated that children's individual and collective needs are important in engaging them in activities lest they lose interest, become bored and or behave inappropriately in the classroom or outside.

Annobil & Thompson (2018) buttressed the need for child care professionals to be well informed with children's unique nature and how to tailor in the appropriate instructional strategies effectively to promote child development. They went on to indicate the significance of the teaching and learning process in the kindergarten and how the teachers' insight could guide its facilitation.

Wilson (2011) suggested that children need to be outside the classroom to explore their environment while having fun through teacher-directed and child-initiated or free choice activities (Annobil & Thompson, 2018) as a way of connecting children to their lived experiences inside and outside the classroom. Findings from Annobil & Thompson (2018) showed that teachers used various methods to teach concepts that helped children experience learning naturally within the school environment.

### ***Collaborations***

Building positive relationships with children, parents and staff were mentioned by some respondents as very important because the children have homes where they leave to school and return to and so that connection needed to be drawn. Most importantly, a respondent considered parents and children as clients whose needs should be met. Therefore, constant communications to address issues and share information were imperative to achieve quality. Some respondents expressed their sentiments by saying that:

*“I will say the teacher-pupil relationship, teacher-parent relationship if it is there I think you would have the quality. If you relate nicely with the parents, they will be able to tell you the challenges of their children. When there is something new or they don’t understand, they might come to find out from you. The children will also be free to talk to you (teacher), free to talk to the parent but where this is lacking then we have problems”* (Respondent 7, private school head teacher).

*“Quality is when the interface between parents and the school is very close, we notice something we are able to communicate to the parents and when parents notice something they talk to us so together we are preparing the child”* (Respondent 5, private school head teacher).

Positive bonds between teachers and students create the opportunity for the classroom to become supportive spaces in which children can participate in academic and social creative ways (Gallagher, 2013). Positive teacher-student relationships indicate the presence of closeness, warmth, and positivity (Burchinal *et al.*, 2008; Gallagher, 2013). Students with secured relationships with their teachers are able to explore the classroom and school setting, take on academic challenges and work on social-emotional development (Gallagher, 2013). Positive teacher-student relationships have been found in some studies to improve students’ motivation. A possible reason for the association between academic improvement and positive teacher-student relationships is students’ motivation and desire to learn thereby improving academic outcomes (Gallagher, 2013; Koca, 2016).

Contacts between children’s family-school provide opportunities for parents and teachers to have a better understanding of what occurs in at home and in school. Through multiple contacts with parents, teachers learn more about the children’s needs and habits. This helps the teachers to identify the children’s unique characters and daily life. Pirchio *et al.* (2013) study findings showed that parents were more

collaborative when the school involved them in their educational decisions and activities. It has been reported that good parent-teacher relationships increased children's educational wellbeing which generates conversations and reciprocal understanding among caregivers (Pirchio *et al.*, 2013).

Responses to the open-ended questions indicate that good relationships with the children in child care staff care are of the highest importance to them (Rush, 2006). Ntumi (2016) indicated that collaborative relationship and networking among parents, teachers and school administrators were found as positive factors increasing the teachers' attitudes and motivation, as well as their teaching and regarding curriculum implementation. This implies that, on-going communication helps ensure that, appropriate and effective learning opportunities are available to children at home and in school.

#### **4.5.3 Main Theme 3: Necessity for child development**

Most respondents also highlighted on quality as promoting child development in all domains; physically, cognitively, socially and emotionally. They believed that a quality kindergarten allowed children the opportunities to explore while developing their abilities. Emerging sub-themes included (1) Socialization, (2) Promotion of child development and (3) A safe and nurturing environment.

### ***Socialization***

Respondents pointed out that the kindergarten programme was a step towards helping children interact with teachers and their peers to build relationships which had long-lasting benefits well into their adult life. They indicated that this was where children learnt the basic skills which enhanced their socio-emotional development to enable them better fit into the society. A respondent indicated that:

*“When the child is able to socialize and effectively interact and integrate into society”* (Respondents 30, public school teacher).

Throughout the school day, children build their competence in social and strong language skills, have great imaginative abilities and high levels of thinking (Miller & Almon, 2009). Children also have the opportunity to engage with many other children with whom they interact with through which they build friendships that could last a lifetime (Brown, 2017).

Children’s school experiences also help them gain self-confidence and competence required to build relationships and emotion regulation (Darling-churchill & Lippman, 2016). Their ability to communicate their thoughts and emotions are strengthened which enable them integrate into their society.

### ***Safe and nurturing environment***

The study respondents noted that, the environment ought not to only be safe but should support and nurture children whilst serving as a learning aid in school. With

the appropriate equipment at the right place, respondents indicated that children's experience and contact with these were visual teaching aids because everything could not be taught in the classroom per se. Another aspect was the fact that, because children constantly explored their surroundings the possibility of injuring themselves was high but an intentionally designed and arranged environment prevented any form of accidents or harm to children.

*“A kindergarten that is well structured, with qualified teachers, adequate learning resources and a well-developed curriculum to aid teaching and learning for a positive outcome”* (Respondent 1, private school teacher).

*“The type of education that seeks to meet or satisfy the child's educational need that will lay a foundation for the child's educational growth”* (Respondent 48, public school teacher).

On the relevance of the school environment, a respondent had this to say:

*“For environment and learning, they go hand in hand. The environment exposes children to things that they don't know so if the environment is giving them good exposure definitely it will aid in their development but if they are not getting the right exposure they will definitely not learn the things they should. This is because at this stage physical activity is very paramount to them, they need”* (Respondents 5, private school head teacher).

Biglan *et al.* (2012) indicated that, environments that foster successful development and prevents children from developing behavioural problems are usefully characterized as nurturing environments. These environments minimize accidents, they teach, promote, and richly reinforce pro-social behaviour, including self-regulatory behaviours and all of the skills needed to become productive adult members of society. Farooqi *et al.* (2015) stated that children learn from existing materials and not in the abstract form. Research shows that, physical facilities such

as available potable water and toilets among others have their own influence on student's performances. A suitable environment therefore has its own importance in students' learning (Farooqi *et al.*, 2015). Farooqi *et al.* (2015) asserted that, the environment plays a role of a teacher and has no bounds in itself.

### ***Promotes child development***

Respondents did not resist indicating the crucial impact kindergarten education had on children's development. Respondents defined their view of a quality kindergarten education with regards to the developmental influence it had on growing children. The views of some respondents were captured this way:

*“High quality early childhood programme provides a safe nurturing environment while promoting the physical, social, emotional and intellectual development of young children”* (Respondent 8, public school teacher).

*“Ensures that good training is given to children with the aim of making them good leaders of the future”* (Respondent 6, private school teacher).

*“Using available teaching and learning materials to help children improve emotionally, physically and mental development”* (Respondent 19, private school teacher).

A study found that, children's language, social and math abilities as well as their thinking and problem solving skills were improved through kindergartens with high quality practices (Ceglowski & Bacigalupa, 2002; Van Heerden, 2016). Children who are engaged in regular physical activity to promote their motor skills can be associated with many health outcomes like adiposity, self-esteem and cognition

(Zeng *et al.*, 2017). Also, when children are engaged in activities, their motor development is stimulated (Mathisen, 2016).

Regardless of the respondents' school, it can be seen that various understandings and interpretations of quality emanated from their responses. This could imply that the respondents would be more likely to translate their understanding of quality into practice whether they have the requisite constituents or not for teaching and learning. However it is not always that perceptions are translated into practice.

#### **4.6 Teachers' and Head Teachers' Perceptions of their Schools' Quality**

From table 4.4, 56.7% of the respondents indicated their schools were of quality compared to 43.3% who stated otherwise. Of the several reasons that were given regarding the schools which were rated quality, emerging themes were; conduciveness of the school environment (approximately 48%); where 31% were from public schools and approximately 17% were private school teachers. Respondents who stated availability of qualified and committed teachers were 22% and 25% from public and private KGs respectively. Some public school teachers (approximately 27%) and 39% private school respondents indicated standard curriculum (GES), varieties of teaching methods and available teaching and learning materials conducive for learning.

On the other hand, teachers who stated that their schools were not of quality indicated concerns such as inadequate or lack of teaching and learning materials (approximately 85%) with 54% being the response from public schools and 30.3%

being private school respondents. More than half (60%) of the respondents stated lack of or inadequate infrastructure (approximately 21% public school; 39% private school responding teachers) and inadequate or no play materials (22%) was reported by 16% public school participants and 6.1% private school respondents. Comparatively, more private schools indicated their schools as quality than the public schools and with regards to the reasons given, most public schools were lacking than the private schools.

**Table 4. 4 Teachers’ and Head Teachers’ Perceptions of their School Quality**

<b>Themes</b>	<b>Public school s (%)</b>	<b>Private schools (%)</b>
<b>Yes, my school is of quality</b>		
Conduciveness of the school environment	31.1	16.5
Qualified and committed teachers	22.2	25.3
Monitoring and supervision	15.6	1.3
Performance /Competitive	4.4	8.9
Good school governing structure	-	8.9
Standard Curriculum (GES), available TLMs & varieties of teaching methods for conducive learning	26.7	39.2
<b>Total</b>	<b>100.0</b>	<b>100.0</b>
<b>No, my school is not of quality</b>		
Lack of/ Inadequate TLMs	54.4	30.3
Untrained teachers	5.9	15..2
Lack of/ Inadequate Infrastructure	20.6	39.4
Inadequate teaching staff	2.9	9.1
Inadequate or No play materials	16.2	6.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

\*Multiple Responses

#### **4.7 Aspects of Schools which needs Improvement to Achieve Quality**

Results from the question, which aspect of your school in your opinion needs improvement to achieve quality, yielded several responses including: creating a print-rich environment indicated by 9% of the public school respondents and 11.4% private school teachers. A proportion (34.6%) of the public school teachers indicated the need for the provision of play equipment to keep learners interested and engaged compared to 24% private school respondents. Employing more experienced teachers was indicated by a few public school respondents (approximately 3%) who can facilitate learning appropriately while providing care whilst 15.2% private school teachers stated this need.

Public (33%) and private (approximately 13%) school respondents indicated concerns for the inadequacy or lack of teaching and learning materials. Public (approximately 4%) and private (6%) school respondents were of the view that teachers should be motivated (salary increase, hospital benefits, allowances and scholarships for further studies) whereas a few (5%) revealed that a reduction in enrolment would also enable limit the number of children admitted yearly which would cut down the burden of large class sizes.

**Table 4.5 Aspects of schools which needs Improvement to Achieve Quality**

<b>School Needs</b>	<b>Public schools (%)</b>	<b>Private schools (%)</b>
A print-rich environment	9.0	11.4
Play equipment	34.6	24.1
Managing instructional time & methods	15.4	5.1
Provision of computers & Television	10.3	16.5
Providing TLMs	33.3	12.7
Employ more experienced teachers	2.6	15.2
Teacher motivation and incentives	3.8	6.3
Reduce Enrolment	5.1	-
<b>Total</b>	<b>114</b>	<b>91.2</b>

\*Multiple responses

Findings in Table 4.5 show that kindergarten teachers have a lot of concerns and challenges which need addressing to improve on the services they help to deliver to these institutions and families.

#### **4.8 Respondents' Opinions of Government's Interventions to Improve Quality in Kindergarten Education**

Respondents of this study revealed the significant role the government needs to play when it comes to a holistic quality kindergarten education in the metropolis. Teachers from both public and private schools (approximately 28% and 17% respectively) indicated emphatically the need to provide teaching and learning materials which are appropriate to enhance learning activities (Table 4.6). Some respondents from the private schools stated that, government support for the private sector especially with qualified teachers by 11% would be appreciated.

Regular in-service training (Table 4.6) was also put forward as an important need by approximately 6% public school respondents and 21% private school respondents, that is, training teachers to specialize in early childhood education (approximately 15% public school respondents, 7% private school respondents) and empowering the existing human resource base of the schools through motivation and compensation (public (8%) and private (10%) school respondents) was also indicated.

**Table 4.6 Respondents’ Opinions of Government Interventions to Improve Quality in Kindergarten Education**

<b>Responses</b>	<b>Public schools (%)</b>	<b>Private schools (%)</b>
Provide TLMs	27.5	16.9
Empower the Human Resources	8.2	10.0
Build more schools	4.3	15.5
Support the private sector with qualified teachers and TLMs	-	11.3
Frequent Monitoring & Supervision of Schools	20.3	14.1
Limit enrolment number	18.8	4.2
Train & Employ ECE teachers	14.5	7.0
Regular In-service training	5.8	21.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

\*Multiple responses

#### 4.9 Respondents' Views of Other Elements Needing Improvement to Achieve Quality Kindergarten Education

Teaching in the local dialect (by 6% public schools and 21% private school respondents), the need to apportion time for children to rest (5% and 8% public and private school respondents respectively) and 7% and 13% public and private school respondents respectively stated the relevance of using technology for teaching and learning (such as televisions, computers and so on) (Table 4.7).

**Table 4.7 Respondents' Views of Other Elements Needing Improvement to Achieve Quality Kindergarten Education**

<b>Responses</b>	<b>Public schools (%)</b>	<b>Private schools (%)</b>
Teaching in the local dialect	6.1	21.3
Organise workshops/In-service training frequently	18.3	9.8
Parents should get involved in their children's education	16.0	6.6
Assessing teachers' performance and Proper supervision	22.0	14.8
Create welfare for teachers and provide motivation/compensation	9.8	5.0
Insist on cut-off age & number for admissions	8.5	1.6
Provide quality Play equipment & TLMs	8.5	21.3
Apportion time for children to rest	5.0	8.2
Use of Technology for teaching and learning	7.3	13.1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>

\*Multiple responses

#### **4.10 Hypotheses Testing**

For this study, the hypotheses were tested at a significance level of 0.05. Hypothesis 1 was tested using the Pearson Chi-square of Independence and Hypotheses 2, 3, and 4 were analysed using the Multinomial Logistic Regression Model. The Chi-Square test is used to analyse categorical data to determine if there is a relationship between categorical variables (Kent State University Libraries, 2018).

The Multinomial Logistic Regression model is used to test the likelihood of dependent variable and independent variables with two or more categorical variables being related or different (Williams, 2018). For this study, comparisons were made between two or more variables to ascertain whether the mean values are statistically significant. Indicators of quality in both public and private kindergartens and among variables of interest to this study were compared for differences and associations. Both tests results were tested at 5% level of significance thus p-values at 0.05 and below were considered significant meaning statistical differences between two or more groups exists.

#### 4.10.1 Hypothesis 1 (Ho<sub>1</sub>)

Ho<sub>1</sub>: There is no relationship between class size and instructional methods

**Table 4.8 The Relationship between Class Size and Instructional Methods of Teachers**

Variable	Chi-Square Test	Degree of freedom	P-value	Level of significance	Phi Cramer's V
Class size	28.058	9	.001	0.05*	.517

against  
Instructional  
Methods

---

Where 0.05\* means association at 5% level of significance

The result indicates that, class size had a determining factor of the type of instructional methods teachers use in their classroom therefore the null hypothesis is rejected. This implies that, respondents considered the number of children in the classroom before they planned activities to tailor in the type of instructional method for the teaching and learning process. It can therefore be assumed that, teachers found in large classrooms preferred the whole class instruction to cut down lesson preparation time and an easy lesson delivery approach, whereas the small group instruction was likely to be used for teaching in a classroom with medium to small class hence planning different areas of interest to teach children who may need distinct approaches to learning.

**4.10.2 Hypothesis 2 (Ho<sub>2</sub>)**

Ho<sub>2</sub>: There is no relationship between teachers' characteristics and instructional methods

**Table 4.9 The Relationship between Teachers' Characteristics and Instructional Methods of Teachers**

Variables	2 log likelihood	Chi-Square Test	Degree of freedom	P-value	Level of significance (5%)
Intercept	72.617	46.377	3	.000	0.05
Teacher characteristics and Instruction (Education)	38.406	12.166	3	.007	0.05*

Where 0.05\* means association at 5% level of significance

A multinomial logistic regression model was used to test this hypothesis. Independent variables; gender, age, employment status, teaching experience, education and instructional methods as the dependent variable were tested. Only Education was statistically significant hence this hypothesis is rejected. Therefore, teacher education level has the potential of influencing classroom instructional methods. A study conducted by the Iowa Department of Education (2007) found that, high quality kindergarten education was linked with teachers who had at least a four-year degree and were trained specially in early childhood education. The teachers were more responsive and had supportive interactions with the students, provided richer language and cognitive experiences and were less controlling.

Specifically, the whole class method was statistically significant with a p-value of 0.011. This finding suggests that, the whole class instruction was most preferred in

teaching amongst both public and private school teachers. This could be because as stated by Ipatenco (2018) it is the easiest to plan for. The teacher only needs to prepare one plan of activities which is used for the entire classroom.

## CHAPTER FIVE

### 5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents the highlights of the major findings conclusions and the recommendations. These recommendations suggest ways quality kindergarten education could be improved based on the results of this study.

#### 5.2 Summary

The study aimed at assessing the quality of kindergarten education in public and private kindergartens in the Tamale Metropolis. A cross-sectional study design with a mixed method approach was employed to select one hundred and twenty (120) teachers and ten (10) head teachers from 102 public (57) and private (63) kindergartens in the Tamale Metropolis. The respondents were interviewed face-to-face, some were given self-administered questionnaires and observations were carried out in some selected schools.

The information gathered were analyzed quantitatively using the Predictive Analytic Software (PASW version 22) and qualitatively by generating and categorizing commonly emerging themes whilst the stated hypotheses were tested using the Pearson Chi-square test of Independence and the Multinomial Logistic Regression Model at 5% level of significance ( $p=0.05$ ).

The study found that there were more female respondents than their male counterparts. Further, the findings revealed that respondents' ages ranged from 18 to 58 years. However, respondents in the private schools were relatively younger and had less teaching experience than the respondents in the public schools. Similarly, the study found that the respondents' level of education in the public schools were relatively higher likewise their years of experience than those in the private schools. This was not surprising because the public schools have prerequisite qualifications for employment unlike the private schools.

Again, the findings revealed that regarding curriculum, both the public and private schools used the GES syllabus for Literacy and Language and the respondents' role was to implement the dictate of the curriculum. Regarding the understanding and implementation of the curriculum, the public school respondents would have an upper hand since their training was based on the curriculum. However, some private school respondents had ideas of the requirements of the curriculum whereas a few did not but only implemented what they were instructed to do by the school owners.

Public schools were found to use the whole class method more compared to the private schools whereas the private schools employed the small groups' method more than the responding public school teachers. Furthermore, regarding assessment, there were not much difference in terms of cognitive skills, motor skills, maths/counting skills, language development, reading skills and socio-emotional skills assessment. However, the public school respondents tend to focus more on

assessing the students based on whole class activities and less of assessing children performing group tasks. On the other hand, the private school respondents assessed the pupils more based on group and individual tasks and less of whole class activities meaning that, the children benefit and develop differently in each domain as the findings show.

The school environment was examined using the GES minimum requirements for kindergartens as a benchmark. The findings showed that both the public and private schools had inadequate play area, indoor learning environment, feeding, furniture and TLMs were among others with a few having adequate indicators as shown in the results.

All the respondents had good understanding regarding quality however, the respondents had interpretations they gave regardless of being in public or private kindergartens. According to them, quality is having an activity based curriculum and qualified teachers who can use the appropriate TLMs available to both the teacher and students to facilitate learning in a safe and conducive environment. The perceptions of the responding teachers of what quality should be imply that it might influence their implementation of the curriculum, methods of instruction and how they carry out assessment. Regardless of the type of school respondents were from, they identified what was lacking which could affect quality. The lack of these essential elements has the likelihood of influencing teaching and learning although

the respondents may translate their knowledge and understanding of quality into practice with what is available to them.

### **5.3 Conclusion**

Based on the findings of the study, it is concluded that, the Ghana Education Service curriculum and the whole class instructional method was consistently used by both public and private kindergartens in this study. Respondents used varieties of activities to assess children in the domains of development by way of the formative assessment practices as required by GES. Both private and public schools met some of the indicators of quality required by the GES, however, some still had inadequacies in play area, teaching and learning materials, appropriate furniture for children and feeding requirements among others. The study findings proved that, respondents (heads of schools and teachers) have a wealth of knowledge which could be harnessed and implemented to achieve the desired quality kindergarten education. Challenges reported by the respondents and observations made by the researcher show that more investments and commitment need to be made if the goal of achieving high quality are to be met because there is more desired to achieve the standard quality kindergarten education.

#### **5.4 Recommendations**

1. Findings of this study revealed that most schools had inadequate built-infrastructure. It is therefore recommended that the Ministry of Education should develop more infrastructures especially in the public schools to accommodate the increasing number of children enrolled.
2. Most of the respondents had no training in Early Childhood Education. It is therefore recommended that the head teachers in collaboration with the Metropolitan Education Directorate should make efforts in organizing training in early childhood education for these teachers as well as In-service training sessions to serve as refresher courses for teachers regularly according to their professional needs.
3. Based on the study findings on child assessment practices, it is recommended that early childhood education programmes should provide kindergarteners with opportunities to be assessed with varying informal techniques and tools within children's natural learning settings to enable teachers provide relevant support in their development and learning.
4. Findings from the school observations showed that, the school design should be taken into consideration in order to provide the appropriate learning environment for kindergarten children. It is therefore recommended that, the physical environment of kindergartens should be designed taking into account the children's developmental needs which are desired to achieve quality education.
5. The study findings revealed that, the respondents' views on provision of high quality kindergarten education are usually not sought for or implemented in policies in the country. It is therefore recommended that further studies on the opinions of teachers

and head teachers regarding the best practices for ECCE be carried out and the results taken into consideration since they are the stakeholders directly involved in educating the children.

6. An operational definition for quality based on the cultural context in the Ghanaian education system for ECCE ought to be established since teachers have different perceptions of the quality of ECCE.

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## APPENDICES

### Appendix 1: Ethical Approval Letter



## UNIVERSITY OF GHANA

ETHICS COMMITTEE FOR BASIC AND APPLIED SCIENCES (ECBAS)

*P. O. Box LG 1195, Legon, Accra, Ghana*

Ref. No: ECBAS 011/17-18

30<sup>th</sup> May, 2018.

Miss Fauzia Yarim Laar  
Dept. of Family and Consumer Sciences  
University of Ghana  
Legon, Accra

Dear Miss Laar,

**ECBAS 011/17-18: QUALITY EARLY CHILDHOOD CARE AND EDUCATION IN THE TAMALE METROPOLIS: A COMPARATIVE STUDY OF PUBLIC AND PRIVATE KINDERGARTENS.**

This is to inform you that the above reference study has been presented to the Ethics Committee for Basic and Applied Sciences for a full board review and the following actions taken subject to the conditions and explanation provided below:

<b>Expiry Date:</b>	29/05/19
<b>On Agenda for:</b>	Initial Submission
<b>Date of Submission:</b>	24/10/2017
<b>ECBAS Action:</b>	Approved
<b>Reporting:</b>	Bi-Annual

Please accept my congratulations.

Yours sincerely,

Professor Daniel Bruce Sarpong  
ECBAS Chairperson



Tel: +233-207684121

Email: [coghartey@ug.edu.gh](mailto:coghartey@ug.edu.gh) / [ethicscbas@ug.edu.gh](mailto:ethicscbas@ug.edu.gh)

Appendix 2: Introductory Letter



**UNIVERSITY OF GHANA**  
DEPARTMENT OF FAMILY AND CONSUMER SCIENCES  
SCHOOL OF AGRICULTURE

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Ref. No.: .....

October 24, 2017.

**TO WHOM IT MAY CONCERN**

Dear Sir/Madam,

**INTRODUCTORY LETTER**  
**MS. FAUZIA YARIM LAAR (10599615)**

Ms. Fauzia Yarim Laar is a student of Department of Family and Consumer Sciences, College of Basic and Applied Sciences, University of Ghana, Legon. She is currently pursuing her MPhil degree. She is researching on "**Quality Early Childhood Care and Education in the Tamale Metropolis: A Comparative Study of Public and Private Kindergartens**". The research is purposely for academic work.

I shall be most grateful if she is offered the necessary assistance.

Thank you.

Yours faithfully,

Dr. Sheriffa Mahama  
(SUPERVISOR)

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COLLEGE OF BASIC AND APPLIED SCIENCES

• Telephone: +233 (0) 244 615 310      P. O. Box LG 91, Legon, Accra, Ghana.      • Email: [fcsciences@ug.edu.gh](mailto:fcsciences@ug.edu.gh)      • Website: [www.ug.edu.gh](http://www.ug.edu.gh)

Appendix 3: Consent of Participation

**CONSENT OF PARTICIPATION**

This is a research conducted by Fauzia Yarim Laar (Miss) a Graduate Student from the Department of Family and Consumer Sciences, College of Basic and Applied Sciences, University of Ghana, Legon. This study seeks to assess; “Quality in Early Childhood Care and Education in the Tamale Metropolis: A Comparative study of Public and Private Kindergartens”. The study involves the completion of a questionnaire by teachers, a face-to-face interview with head teachers, an observation for a day in the school of the school environment as well as during teaching and learning.

The questionnaire should take approximately 45 minutes to complete. There are guidelines describing how the questions should be answered by ticking, circling, marking or explaining briefly in writing where appropriate. There is no wrong or right answer to any of the questions asked. The researcher will do the observations and will try as much as possible not to distract the classroom activities of the day during this process.

This study is beneficial as it will add to the existing knowledge in the early childhood care and education sector in helping to improve quality in kindergarten education in Tamale and the country as a whole. It will also inform policy in planning early childhood development programmes.

All information collected is mainly for research purpose and there will not be in anyway shared with other participants or schools. All the information provided will be treated confidentially and no one will be identified in any report of the results by name. The researcher will be the only person who will have direct access to the

information provided. Participation in this study is completely voluntary and so at any point in time if you do not want to provide any information or participate further, you may withdraw. This will not affect or stop the continuity of this research.

For further information or enquiries regarding this study for answers to questions to this study, kindly contact;

Dr.SheriffaMahama or Dr. Vivian Tackie-Ofosu

(0541226612)

(0505550320)

(Supervisors)

Department of Family and Consumer Sciences

College of Basic and Applied Sciences

University of Ghana,

Legon.

“I have read the above consent regarding my participation in this study, and I am willing to give consent for me to participate in this study. I have not waived any of my rights by signing this consent form. Upon signing this from, I will receive a copy for my personal records”.

---

Name of Volunteer

---

Signature

---

Date

Appendix 4: Questionnaire

**QUESTIONNAIRE (TEACHERS)**

I am a Masters' student of the Department of Family and Consumer Sciences at the University of Ghana conducting a study on the topic: **Quality Kindergarten Education in the Tamale Metropolis: A Study of Public and Private Kindergartens**. Your participation in this study is voluntary and you will be liberated at any time if you do not wish to continue. This information is collected for research purposes only and will also be treated confidentially. You are not required to identify yourself by name on any part of the questionnaire, kindly provide your views on the questions. There is no right or wrong answers to any question because your opinions are unique.

**Thank you for accepting to participate in this research!**

**SECTION ONE: Background Information**

These questions are about you, your education and the time you have spent in teaching. In responding to the questions, please mark the appropriate box.

1. What is your gender?  
a) Female                       b) Male
2. How old are you (in years)? \_\_\_\_\_
3. What is your employment status as a teacher?  
a) Full-time                       b) Part-time
4. What is the highest level of formal education that you have completed?  
a) WASSCE                       b) Basic Education Certificate                       c) Diploma                       d) Undergraduate degree                       e) Master's degree   
e) Others (please specify) \_\_\_\_\_
5. How long have you been working as a teacher (in years)?  
a) Less than a year                       b) 1-2                       c) 3-5                       d) 6-10                       e) 11-15   
f) 16-20                       g) 20 and above
6. How long have you been a kindergarten teacher (in years)?  
a) Less than a year                       b) 1-2                       c) 3-5                       d) 6-10                       e) 11-15   
f) 16-20                       g) 20 and above

**SECTION TWO: Curriculum and Instructional Methods**

1. Which curriculum do you use? \_\_\_\_\_

2. Do you teach individual children, small groups or the whole class?  
.....  
.....  
.....

Kindly explain briefly, how this is done (in Question 3 above)?  
.....  
.....  
.....  
..



8. Are children supervised when they are outside the classroom? a) Yes b) No  
Please explain your answer  
.....  
.....
9. Who does the supervision (if yes to Q 8 above) a) Class teacher b) Teacher's assistant c) Volunteer d) Others (please specify)
7. While children are playing, what do you do?  
.....  
.....
10. Do you think it is important for children to have the space for physical activities (play and running around)? a) Yes b) No
11. If yes in Question 10 above kindly indicate why you think it is important.  
.....  
.....

**SECTION FOUR: Child Assessment Practices**

1. How do you assess your children (students) regarding these aspects of learning?  
a) Cognitive skills  
.....  
.....
- b) Physical/motor skills  
.....  
.....
- c) Reading skills  
.....  
.....
- d) Language development  
.....  
.....
- e) Socio-emotional development  
.....  
.....
2. How often is assessment carried out?  
a) Everyday a week b) Once a week c) 2 – 3times a week d) 4-5times a week  
e) Monthly f) End of Term g) others (please specify)
3. Which criteria do you use for assessment? *Please tick as many as apply*  
a) Keeping records of the children's experiences during learning, play and exploration  
b) Observing children's specific activities c) Tests d) Giving homework e) Asking individual children questions in class f) others (please specify)
4. Please explain briefly how this is done as asked in Q 3 above?  
.....  
.....
5. Why do you use this type of assessment for the children?



- .....  
.....
7. What other elements of kindergarten education could be improved to achieve quality?

.....  
.....  
.....

**Thank you very much for completing this questionnaire!!!**

Appendix 5: Interview Guide

**INTERVIEW GUIDE (Head teachers)**

Thank you for agreeing to talk with me. I want to talk with you to discuss about your profession as teachers in the early childhood sector and your beliefs about the purposes of early childhood education.

I wish to ask you a few questions. Some of these questions will be of a more personal nature while others will look at some of your perspectives on teaching and learning. There are no limitations to your responses so kindly feel free to elaborate and seek clarification if you need to.

I will like to seek for your permission to record our conversation. Kindly indicate your consent by appending your signature.

I agree to be audio recorded.

\_\_\_\_\_

Name	Date
------	------

\_\_\_\_\_

Signature

**Background Information**

1. Can you please tell me a little about yourself?
  - a. Age
  - b. Qualification
  - c. How long have you been a teacher? -----
  - d. How long have you been a kindergarten teacher? \_\_\_\_\_
  - e. How long have you been a kindergarten head teacher? \_\_\_\_\_

**Section one:**

1. How will you describe the philosophy guiding the programme of this school?
2. How will you describe the structure of this school's programme? What is your focus?

(For example is it, Child-based, Teacher-based, Centre-based, and Activity-based)
3. How relevant is this programme to the children's education?
4. How is teaching and learning carried out in the classroom? Which strategies are used (Group or individual)?

5. How are Teaching and Learning Materials acquired for the school?

**Section two:**

1. In your opinion, how relevant is the physical environment of the school to the pupil's learning and development?
2. Is this school lacking with regards to physical infrastructure? What is lacking? How does it affect teaching and learning?

**Section three:**

1. How many teachers are in this school?
2. What is the teacher-child ratio for each class?
3. How are teachers recruited?
4. What minimum qualification does a teacher need to be recruited?
5. How often do you supervise the classrooms during teaching?
6. How is the supervision done?
7. What observations are made?
8. Do you have in-service training for the teachers? How often? If No, what is the reason?

**Section four:**

1. How are children assessed?
2. What criteria are used to assess children?
  - Documentation (how is this done?)
  - Observation (how is this done?)
  - How often do you give paper and pencil tests?
3. How relevant is this to the child's learning?

**Section five:**

1. Kindly describe what you classify as quality kindergarten education
2. What does quality kindergarten education mean to you (head teacher)?
3. How will you describe a quality kindergarten education?
4. In your view, would you describe your school as quality kindergarten? Please explain.
5. Which component in the school in your opinion needs improvement to achieve quality (the physical or classroom environment or qualified trained teachers)? Please explain why?

Appendix 6: Observation Checklist

**SCHOOL ENVIRONMENT CHECKLIST**

ITEMS	Yes	No	Comments
<b>SCHOOL ENVIRONMENT</b>			
<b>Safe environment</b>			
1. Noisy			
<b>Hygienic surroundings</b>			
1. Well-trimmed hedges and grass			
2. Rubbish/Garbage			
3. Free of water			
4. Available potable water			
<b>Classroom Building</b>			
1. Completed structure			
2. Uncompleted structure			
<b>Classroom Location</b>			
1. Storey building (ground floor)			
2. Storey building (first floor and above)			
3. Detached block			
4. Outside			
<b>Type of classroom building roofing</b>			
1. Aluminum zinc			
Others .....			
Is the classroom roofing safe?			
Materials classroom walls are made of			
1. Wood			
2. Clay			
3. Cement blocks			
Others .....			
Main colour of classroom walls			
1. White			
2. Off-white			
3. Pink			
4. Blue			
5. Green			
Others .....			
<b>Classroom Shape</b>			
1. Rectangular			
2. Square			
3. L-Shaped			
Others.....			

Classroom Partitioned?			
1. Wood			
2. Plastic (eg. PoP)			
Are there windows in the classroom?			
1. Windows			
2. Perforated walls(designed blocks)			
Others .....			
Do windows have...?			
1. Perforations			
2. Wooden or glass shutters			
3. Wooden or glass panes			
4. Louvre blades			
Does classroom have ceiling?			
1. Wooden			
2. Plaster of Paris (PoP)			
Others .....			
Does the classroom appear cluttered?			
Dirty walls			
<b>Sanitary Facilities</b>			
1. Toilets (separate for boys & girls)			
2. Urinals (separate for boys & girls)			
3. Wash area for teachers and children			
4. Refuse disposal containers			
<b>Play Area</b>			
1. Indoor space for easy movement			
2. Outdoor space for play activities			
3. Child supervision during play			
4. Dry play area			
5. Designed with grass			
6. Sand pit			
5. Accessible to disabled children			
<b>Security</b>			
1.Fenced school			
2. Closeness of school to a road			
3.Security gates			
4. Security guards			
<b>Sleep Area</b>			
1. Mats			

2. Cloths/Blankets			
<b>Feeding</b>			
1. Meals provided for children			
2. Hygienic kitchen			
3. Eating area for children			
<b>CLASSROOM LAYOUT</b>			
1. Free space for pupils to move around			
2. Do doorways allow for free entry and exit without distraction			
3. Free space for teacher to move about and interact in the classroom			
4. Free space to rearrange furniture for group activities			
5. Free space for children to engage in other activities (other than listening)			
6. Free space for easy movement of special needs children (wheelchairs, crutches etc)			
7. Does teachers' location allow all pupils to see, hear and participate in activities?			
8. Are classroom tables large to foster collaborations			
9. Traditional row seating arrangement			
10. Circular/Clusters seating			
11. U-Shaped			
Others .....			
Do the seats appear comfortable?			
Number of doors (at least 2 a class)			
Classroom well-ventilated (Two or more windows)			
Is the floor smooth?			
Are there learning centres set-up?			
<b>Furniture</b>			
1. Child-sized chairs (per child)			
2. Tables (with smooth edges)			
3. Teachers' desk (chairs & Tables)			
4. Is the desk in the classroom?			
5. Bookshelves			

6. Shelves (for bags, water, food)			
7. Cupboard			
Others .....			
<b>Equipment</b>			
1. Black board			
2. White board			
3. Charts on walls			
4. Posters / pictures			
5. Wall cocks			
6. Display tables			
Others .....			
<b>Teaching and Learning Materials (Cognitive Stimulation)</b>			
1. Timetable / Routine			
2. Teacher lesson notes			
3. Slates			
4. Cardboards			
5. Educational Toys (building blocks, puzzles, etc)			
6. Charts posters			
7. Flash cards			
8. Pencils, crayons, paints, brushes			
9. Drawing Books			
10. Reading books			
11. Writing books			
12. Musical instruments (Drums, flutes, tambourines, keyboards, etc)			
13. Can children access them?			
14. Computer/Laptops/Tablets			
Others .....			
<b>Sensory Stimulation</b>			
1. Does enough sunlight enter the classroom?			
2. Is there electricity in the classroom?			
3. Is there enough light to see and perform activities?			
4. Is there external noise audible in the classroom?			
5. Is there any unpleasant odour inside the classroom?			
6. Is there any unpleasant odour from outside in the classroom?			
<b>Health</b>			
1. First Aid box			
2. Tissue			
3. Soap & Antiseptic			