UNIVERSITY OF EDUCATION, WINNEBA

TEACHERS' ASSESSMENT PRACTICES FOR CHILDREN WITH INTELLECTUAL DISABILITIES IN INCLUSIVE CLASSROOMS IN THE KUMASI METROPOLIS, GHANA

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MASTER OF PHILOSOPHY

2019

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A thesis in the Department of of Early Childhood,
Faculty of Educational Studies,, submitted to the School of
Graduate Studies in partial fulfillment

of the requirements for the award of the degree of
Master of Philosophy
(Early Childhood Education)
in the University of Education, Winneba

DECEMBER, 2019

DECLARATION

Student's Declaration

I, **Nurudeen Iddriss Muhammed** declare that this dissertation is my original work and has not been presented for another degree in any other university.

SIGNATURE:……………………………………

DATE:………………………………………………

Supervisor's Declaration

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

NAME OF SUPERVISOR: DR. Michael Subbey

SIGNATURE:……………………………………

DATE:……………………………………………….

DEDICATION

This work is dedicated to all special needs children in inclusive classrooms.

ACKNOWLEDGEMENTS

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LIST OF ABBREVIATIONS

AFT	The American Federation of Teachers
ALI	Assessment Literacy Inventory
API	Assessment Practices Inventory
CRPD	Convention on the Rights of Persons with Disabilities
CRDD	Curriculum Research and Development Division
GES	Ghana Education Service
GSS	Ghana Statistical Service
ECCD	Early Childhood Care and Development Division
ECE	Early Childhood Education
FCUBE	Free Compulsory Universal Basic Education
IECE	Inclusive early childhood education
IoE	The Institute of Education
IQ	Intelligent Quotient
KG	Kindergarten
MoEYS	Ministry of Education Youth and Sports
NAEY	National Association of Education for the Youth
NCME	The National Council on Measurement in Education
NCREL	North Central Regional Educational Laboratory
NCTM	The National Council of Teachers of Mathematics
NEA	National Education Association
NWEA	Northwest Evaluation Association
SpEd	Special Education Division
SEN	Special Educational Needs

TALQ	Teacher Assessment Literacy Questionnaire
TED	Teacher Education Division
UCC	University of Cape Coast
UEW	University of Education
UNESCO	United Nations Educational, Scientific, and Cultural Organization
UNICEF	United Nation`s Children Fund
UN	United Nations
WHO	World Health Organization

ABSTRACT

The purpose of this study was to investigate the various assessment practices teachers employ in assessing children with intellectual disabilities in inclusive classrooms in the Kumasi metropolis. A descriptive survey design was adopted using a sample of 120 early childhood teachers from 22 public inclusive schools in the Kumasi Metro. The purposive sampling technique was used to select all 22 public inclusive schools, while convenience sampling technique was employed to select the actual respondents for the study. Questionnaire was used to gather the research data. Means and Standard deviations were used as statistical tools to analyse the data. The findings revealed that most inclusive public early childhood teachers in the Kumasi metropolis have a positive view about assessment practices and confirm to employ it in assessing children with intellectual disabilities in inclusive classrooms. It was also evident that most inclusive public early childhood teachers in the Kumasi metropolis have knowledge about assessment practices in inclusive schools. Again, it was revealed that most public early childhood teachers in the Kumasi metropolis employ assessment tools in supporting the learning need of children with intellectual disabilities in inclusive schools. However, from the findings, it was found that most public early childhood teachers in the Kumasi metropolis are faced with many problems that hinder them in their quest to administer assessment tools on children with intellectual disabilities in inclusive classrooms.

It was therefore recommended that more workshops and in-service training should be organized to inclusive public early childhood teachers in the Kumasi metropolis with respect to their assessment practices for the intellectually difficult children. In addition, teachers should also be sensitized on regular basis on the importance of their assessment practices with regard to construction, administration and scoring of tests.

CHAPTER ONE

INTRODUICTION

1.0 Background to the Study

The fruitage of education cannot be fully realized if there is no measure to successfully check the success and weaknesses of it. Fortunately for us as humanity, the check on how successful and poor our classroom teaching and learning has become is to *assess.* Assessment influences all aspects of students' education (Brown, Rust & Gibbs 1994; Gibbs, 2006). Changes in assessment will result in changes in learning, so care must be taken in reconsidering assessment practices.

Teaching, as a practice is hinged on assessment: for there cannot be an effective teaching without further assessing whether what has been taught has gone down well or not. Hence assessment is an important component of teaching (Dhindsa, Omar, & Waldrip, 2007, p.1261). In other for the teacher to describe the nature and extent of the learner's learning in terms of how far the aims and objectives of teaching have been achieved and what is left to be covered, there is the need for assessment of the learner (Tamakloe, Atta & Amedahe, 1996). According to Lumadi (2013), nobody denies that assessment plays an integral part in the teaching, learning, and entire educational process. Similarly, Heaton (1975) states that, both testing and teaching are so closely interrelated that it is virtually impossible to work in either field without being constantly concerned with the other.

Assessment is used in everyday life to refer to different things, depending on the context, the system, and the philosophy underlying the system in which it is used. For instance, in systems, such as the United States of America, the concept evaluation

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would suffice (Rowntree, 1981) and in Anglophone systems (Rwanamiza, 2004) they would talk about evaluation instead of assessment.

Tuttle (2009) defines assessment as a process of giving feedback which develops and expands student learning. Likewise, Heaton (1975) and Phye (1997) assert that assessment is a systematic process that entails identifying the extent to which students have mastered and achieved the learning goals. Assessment in special / inclusive education refers to "the process of gathering inter-personal and intra-personal performance data on the learner's current behaviour language or motor skills…" (Wallace & Larsen, 1992).

There is increasing empirical evidence that the quality of learning depends on the adopted learning approach (Ramsden et al. 1986; Charman et al. 1995; Gibbs, 1999; Ramsden, 1992; Ho et al. 2001; Ramsden, 2003). The approach is determined by a plan which delineates what should be taught, and when and how it should be taught (Gensee & Upshur 1996). They can as well be thought of as blueprint for achieving course objectives as well. Because assessment significantly affects students' approach to learning, assessment paradigms have shifted from "testing learning of students to assessing for students learning" (Birenbaum & Feidman, 1998, p. 92).

Additionally, to raise standards in pupils' learning an assessment-led reform which is widely considered a powerful tool in promoting higher standards of teaching and learning and a more credible means for public accountability should be adopted (Black and Wiliam, 1998 a and b; Broadfoot and Black, 2004; Black, Harrison, Lee, Marshall, and Wiliam, 2010).

Classroom assessment (formative assessment) is considered as a critical factor in promoting quality education and has become the pivot of various educational improvement efforts (Owusu-Oduro, 2015).

Eventually, Assessment of children`s achievement is changing largely because today's children face a world that will demand new knowledge and abilities (Agbemaka, 2016). For instance, in the global economy of the 21st century, children will not only need to understand the basics, but also to think critically, to analyse, and to make inferences (Boston, 2002). Helping children to develop these skills will require changes in assessment at the school and classroom level, as well as giving new approaches to large scale, high-stake assessment as pointed out by the North Central Regional Educational Laboratory (NCREL, 1994) in the U.S.

There is vast literature available that links childrens' learning approaches to the perceptions children have about assessment (Crooks, 1988; Boud, 1990; Gibbs, 1999; Crossman, 2004). The influence of assessment on study strategies adopted by children has been extensively researched (Laurilland, 2002). Moreover, there are recent works on assessment of learners from different parts of the world, for instance Australia (Crossman, 2004), United Kingdom (Maclellan, 2001), Rwanda, (Rwanamiza, 2004) and Ghana (Akyeampong, Pryor & Ghartey, 2006).

Experts in the assessment world generally agree that no single tool or approach can fully capture the complete picture of student learning. Fortunately, there are many more assessment tools and approaches available today than there were a decade ago (Borden & Kernel, 2010). Similarly, in a report by NWEA (2012), the authors point out that no single assessment can provide the breadth and depth of information needed to understand student learning and support improved instruction. To this effect,

teacher educators recommend the use of authentic measures for assessing students (Goodman, Arbona, & De Rameriz, 2008). Wiggins (1990) defines authentic

assessment as one which requires the students to use knowledge of skills to produce a product or complete a performance. In spite of these recommendations, Garrison & Ehringhaus (2007) assert that there are still educators who only practice traditional models of assessment, for example, paper and pencil exams. Limited research also shows that the most commonly used authentic assessments include teacher observation, self-observation checklists, demonstration, peer observation, and event tasks. Alternatively, the least commonly used techniques were the essay and the portfolio techniques (Mintah, 2003).
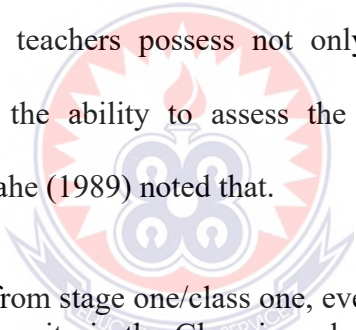
Over the past four decades, (Owusu-Oduro, 2015) research on assessment has gained prominence in educational discourse and as a result, has contributed in shifting attention towards improving learning outcomes. The focus of this attention has been towards greater interest in the interaction between assessment and classroom learning and away from the concentration on the properties of restricted forms of tests which are only weakly linked to the learning experiences of children (Black & William, 1998).In support of this Asamoah-Gyimah (2002) opined, "classroom or teacher-made tests are frequently used as a major evaluating device of childrens' progress in schools'' (p. 2). Hardly can one envisage or conceptualize an educational system where the child is not put under a classroom or teacher-made tests.

According to Anamuah-Mensah and Quagrain (1998), tests have been regarded as one of the most tangible clues and the most crucial yardstick in determining the attainment of the objectives of any learning experience. The question remains whether children are taught so that they can excel on a test or whether they are taught to construct

meaning that will sustain in the long term. As Dhindsa et al. (2007) summarize, teachers "sacrifice learning for drilling children in the things that they will be held accountable" (p. 1262). According to Stiggins (1991), "teachers spend much of their instructional time ('a third to a half') in assessment related activities. While this would suggest the need for teachers to be knowledgeable with assessment practices, that is not the case," (p. 85).

In a national survey, Ward (1980) reported that only about half of the teachers had received pre- service instruction in tests and measurement. In recent times, as more and more emphasis is being placed on child performance and teacher accountability, measurement and assessment are becoming increasingly important to all educators. It is critical therefore that teachers possess not only comprehensive knowledge of subject matter but also the ability to assess the learning of the subject matter (Anhwere, 2009). Amedahe (1989) noted that.

> Teachers from stage one/class one, even in the kindergarten to the university in the Ghanaian education system engage in some sort of assessment practices in order to determine whether learning has taken place or not, or sometimes for selection to the next ladder of education. Besides, teachers construct tests to find out problem areas of children in specific areas of topics treated.

Undoubtedly, classroom assessment plays an important role in teaching and learning, yet, available research has identified a number of problems that bedevil the quality of classroom assessment. In the UK and America for instance, problems have been found with the use of poorly focused questions, a predominance of questions that require short answers involving factual knowledge, the elicitation of responses that involve repetition rather than reflection, and a lack of procedures designed to develop higher order skills (Black & William, 1998). Research has shown that classroom

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discourse in sub-Saharan African schools emphasizes recitation and rote memorization without encouraging pupil understanding (Hardman, Abd-Kadir, & Smith, 2008; Kanu, 1996; Pontefract & Hardman, 2005). Instructional approaches that focus on rote learning are limited in their ability to assess higher levels of knowledge among students.

Evidence of similar situations where questions asked were often narrow and demanded recall of information rather than facilitating higher order thinking has also been cited in Kenya (Kelleghan & Greaney, 1992). In addition, it was found out that there was little assessment of pupils' understanding of what had been taught before lessons were introduced (Ackers, Migoli & Nzomo, 2001). In Tanzania, teachers' questioning was found to require only the recall of facts whereby pupils responded individually or in chorus (O-saki & Agu, 2002). From a study that compared Ghanaian and Japanese classroom assessments, Hattori and Saba, (2008) found that Japanese teachers asked higher order thinking skills questions than their Ghanaian counterparts.

To face these problems head on, Andrews and Barnes (1990), observed that the most important service that can be rendered to classroom teachers in a measurement course is teaching the technique of constructing, administering and scoring classroom or teacher –made tests based on the basic principles in measurement and evaluation. Improving assessment literacy is important for teachers (as well as school and district administrators) as it help them understand different assessments and make effective use of assessment data (Darling-Hammond, 2010; Herman, Osmundson, & Dietel, 2010; Nelson, 2013; Northwest Evaluation Association [NWEA], 2012); enables teachers to deeply understand the standards, thereby improving their professional

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practice and capacity to support student learning and achievement (Darling-Hammond, 2010; Darling-Hammond & Adamson, 2013; Rosemartin, 2013); ensure that feedback from assessments is timely, specific, understandable to the receiver, and actionable (McTighe & O'Connor, 2005; NWEA, 2012); help teachers find the assessment type that are most useful to their instructional practice (Lazarin, 2014; Nelson, 2013; NWEA, 2012); assist teachers in considering the costs of assessments, including test preparation and lost instructional time (Nelson, 2013); prioritize quality over quantity when it comes to required assessments (Darling-Hammond, 2010); incorporate different kinds of data to evaluate students (Darling-Hammond, 2010; Darling-Hammond & Adamson, 2013; Kamenetz, 2015; Nelson, 2013, Rosemartin, 2013). These examples illustrate how assessment can be used to support and enhance student learning, as well as to improve teaching.

Lundberg and Reichenberg (2013) in their work, "*Developing Reading Comprehension Among students with Mild Intellectual Disabilities*" assessed forty (40) pupils with mild intellectual disabilities. The test instruments covered word recognition, sentence comprehension, fluency, reading comprehension of connected passages and listening comprehension. Their procedure was modeled after Reciprocal Teaching (RT), including explicit instruction of four basic strategies; prediction, question generation, clarification and summarization. A clear result from the study was that students with mild intellectual disability were able to participate in constructive text talks, as majority of the students scored a maximum of 15 points.

Browder, Wakeman, Ahlbrim-Delzell, & Algozzine, (2006) review of 128 studies of reading interventions with one or more students with moderate to severe intellectual disabilities, most interventions were found to focus on sight words, with

about 33% using picture identification tasks. Less than one third included any comprehension skills. Interventions that taught fluency, phonics or phonemic awareness were uncommon. Different methods of sight word instruction have been used, including time delay, picture integration, and picture fading. Time delay, which calls for a period of time to pass before the student is prompted to say the word, was found more effective than the other two, in which a picture cue for the sight word is faded as the letters of the word simultaneously become more dominant or the pictures fade but the word itself stays at the same intensity. However, sight word instruction has not been found to help with decoding new words and requires direct instruction on each word taught, limiting it as a reading strategy (Bradford et al., 2006).

Dutch researchers have investigated how reading comprehension for 12-year-old students with mild intellectual disabilities may be improved (Varnhagen & Goldman, 1986).The point of departure was that people with intellectual disabilities do not comprehend casual relations within the form of written texts. For 30 minutes a day for eight weeks, the students were given exercises in order to develop their ability to make casual inferences. By emphasizing causality the researchers hypothesized that this would enhance the students´ reading comprehension. The hypothesis proved to be valid. Both expository texts and narratives were used in the study. In order to measure the comprehension level they made the students (1) retell what they had read, and (2) answer a series of why-questions (Vygotsky, 1978).

During a survey of SEN, a "screener`` was administered to caregivers, siblings and teachers of children throughout Ghana (total N= 551). When asked "do you recognise any of the following labels as being associated with the child, 3.1% of respondents indicated yes to the label "developmental delay or autism" and 3.9% responded yes to the label "mental retardation or mental handicap" (Boro et al., 2006). This affirmation

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by the respondents show the incidence of children with intellectual disabilities in the classrooms, yet teachers assess these learners as though they are all the same. In the words of Wade (2000) teachers use the "one-size-fits all" approach to teaching and instructions.

In reality, teachers are faced with a group of learners with different characters, interests, styles, and pace of learning and working. Curriculum differentiation should not be an exception but rather a central method of ensuring curriculum access (Gilbert & Hart, 1990). From the foregoing discourse, the researcher found it expedient to investigate the various assessment practices teachers employ in assessing children with intellectual disabilities in inclusive classrooms in the Kumasi metropolis.

1.1 Statement of the Problem

In most countries, there is a considerable gap between what is learned in the classroom and the real-life sense of the present or future world of pupils (Anamuah-Mensah & Towse, 1995). The same could be said with regard to Ghana, though there is a centrally defined curriculum that is approved by a centralized body, the Curriculum Research and Development Division (CRDD), for all schools under the auspices of the Ministry of Education, the Curriculum Research and Development Division (CRDD) does not provide for special arrangements for children with needs, particularly those with intellectual disabilities in classrooms and children with hearing and visual disability. Gadagbui (1998) found that both normal and special schools follow the National Curriculum, with some degree of adjustment for children with visual and hearing impairments. She notes;

> Not much has been achieved in the area of curriculum adaptation to address the diverse learning needs of children with special needs in the regular classroom (p.15).

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It raises the question of whether the goals of the National Curriculum can be met for all children who are especially underage with intellectual disabilities. Can all kids meet the same standards? Would the National Curriculum assessment procedures be sufficient for all children, and particularly those with intellectual disabilities?

In addition, one notion we endorse as Ghanaians is that since graduates from the various universities have taken a semester or two courses in evaluation and testing, that is enough to guarantee good evaluation practices in the kindergarten Level particularly for mentally disabled children. This premise assumes that tutors in colleges of teacher training build, administer and score classroom or teacher-made tests based on the basic principles of measurement and evaluation testing (Anhwere, 2009). In certain instances, the assumption is not completely true. In contrast, studies by Amedahe (1989) and Quagrain (1992) revealed that most Ghanaian teachers had limited ability to build goal and essay type tests, which are the most frequently used tools in our schools. That's because most initial teacher training programs don't have enough space for a testing course. Amedahe (2000) argued that "teacher-based tests can be made of a number of factors, including training in evaluation techniques, class size and the policy of a particular school in evaluation standards with implications for the validity and reliability of the evaluation results" (p. 112-113).

This study sought to find out the various assessment practices teachers in our various inclusive classrooms employ to assess children (early childhood) with Intellectual disabilities. The study sought to examine the testing practices of teachers in selected public inclusive kindergartens in Ghana (Kumasi in particular) in terms of the development and construction, administering and scoring of classroom or teacher-

made tests. As children with disabilities are still struggling with educational exclusion, and present worrying drop-out rates, as teaching models, assessment procedures, and curricula are not tailored to accommodate their needs (UNESCO, 2009)

1.2 Purpose of the Study

The purpose of this study was to explore the various assessment practices early childhood teachers employ in assessing children with intellectual disabilities in inclusive classrooms in selected early childhood centers of the Kumasi metropolis.

1.3 Objectives of the Study

i. Explore the views of early childhood teachers regarding assessment practices in inclusive early childhood centres in the Kumasi metropolis.

ii. Ascertain the level of teacher knowledge about assessment practices in inclusive early childhood centres in the Kumasi metropolis.

iii. Investigate the assessment tools teachers employ in assessing the learning needs of children with intellectual disabilities in inclusive early childhood centres in the Kumasi metropolis.

iv. Examine the problems faced by early childhood teachers in administering assessment to children with intellectual disabilities in inclusive early childhood centres in the Kumasi metropolis.

1.4 Research Questions

The study was guided by the following research questions:

1.   What are the views of teachers regarding assessment practices for children with intellectual disabilities in inclusive classrooms in the Kumasi metropolis?

2.   What is the level of teacher knowledge about assessment practices in inclusive

early childhood centres in the Kumasi metropolis?

3.   What assessment tools do teachers employ in assessing the learning needs of children with intellectual disabilities in inclusive early childhood centres in the Kumasi metropolis?

4.   What problems do kindergarten teachers face in administering assessment tools to children with intellectual disabilities in inclusive public early childhood centres in the Kumasi metropolis?

1.5 Significance of the Study

Since kindergarten teachers in the public schools in Ghana are homogeneous, based on the qualifications, the conclusions and recommendations made could be quite relevant and a guide to all kindergarten teachers in public early childhood centres on how to assess children with intellectual disabilities. Currently, the education system in Ghana practises an examination-oriented learning culture, in which teaching and learning are more likely to be driven by marks and qualifications. This study encourages shifts in practices to better educate students who need to respond well to demands of today's societies.

Additionally, the study could serve as an important reference source for inclusive public and private kindergarten teachers, headmasters/mistresses, Teacher Education Division (TED), Early Childhood Care and Development Division (ECCDD) and Special Education Division of the Ghana Education Service (GES),University of Education (UEW) and the Institute of Education, of the University of Cape Coast, (UCC) and other private educational institutions that train teachers in their effort to improve the management of testing with the adequate information about what is

actually involved in assessment practices in the Early Childhood Centres. It is hoped that the study would complement studies already undertaken in this subject matter.

Besides, the study could contribute to the improvement of testing practices, specifically, on children with intellectual disabilities on construction, administration and scoring of teacher-made tests in the inclusive early childhood centers.

1.6 Delimitations of the Study

The study focused on 284 teachers from 71 selected inclusive public kindergartens in the Kumasi Metropolis. The study was limited to the assessment practices of teachers on children with intellectual disabilities in inclusive public early childhood centres.It was as well limited to inclusive classrooms only. As a result, findings from this study cannot be generalised to all/other forms of disabilities or classrooms.

Besides, issues concerning assessment practices are so numerous that it would not be feasible for any one study to identify all. There are 158 public early childhood centers in the Kumasi metropolis.

Finally, the study was delimited to issues of test construction, administration and scoring based upon the basic principles of testing. Other areas of study will include problems faced by kindergarten teachers in the management of testing practices in the Early Childhood Centers.

1.7 Limitation of the Study

The researcher was faced with several limitations. This study employed the use of descriptive research methodology which may not produce all of the related practices of teachers' assessment for children with intellectual disabilities, the extent of using these methods and tools and their effectiveness. Another limitation of this study could be that though the researcher did this study through teachers' point of views, there are enough room and would be interesting if the based on observation and also large scale. Likewise, only one hundred and twenty (120) teachers were considered here.

Furthermore, negative attitudes of the respondents towards filling in the questionnaires; getting time with principals/circuit supervisors at schools; and finally, limited interactions between the researcher, teachers and students since they work under fixed schedule at school. . However, the researcher found convenient time like break and made use of introductory letter to mitigate for the negative attitude.

1.8 Operational Definition of Terms

Assessment: the process of collecting information to make decisions concerning children's education.

Assessment Tools: any test or procedure (for example, ability test, structured interview, work sample) used to measure a student's qualifications and interests (U.S. Department of Labor, 2000).

Classroom Assessment Practices: Teachers' beliefs and the value they have regarding assessment of students, their perceptions about assessment training, their test planning, construction, to grading and use of assessment results.

Evaluation: Judgement regarding the quality, value or worth of a response, product, or performance, based on established criteria and curriculum standards

Inclusion means that children with special needs are part of the regular classroom and are educated with their age-appropriate peers by general classroom teachers.

Intellectual disabilities: Within this study, intellectual disabilities will include disabilities identified by the special education team in the school of study. For purposes of this study children with mild to moderate intellectual disabilities will be considered.

Special Education Teachers receive specialized training in working with children who have special needs. These teachers operate within resource rooms or as a support to children with special needs in inclusive classrooms.

Students with Special Needs include those students with learning, multiple, or physical disabilities, speech, and language problems, behavior disorders, mild and moderate forms of designated disabilities, and giftedness.

Summative Assessment occurs at the end of an instructional unit to document student achievement.

1.9 Organization of the Study

The study will be organized into five chapters. The first chapter will discuss the Introduction, which will highlight the background to the study, the research problem,

and the purpose for the study. The research questions will be stated, with the significance and delimitation of the study.

Chapter Two will review the literature related to the study. The review will involve empirical studies and conceptual framework. The third chapter will describe the methodology used for the study. This involves the research design, population and sampling procedure, the research instrument, the pre-testing procedure, the procedure for data collection and the data analysis. In Chapter Four, the results will be discussed while the final chapter will summarize the study and provides conclusions. Recommendations will be given in the last section of the chapter based upon the findings of the study.
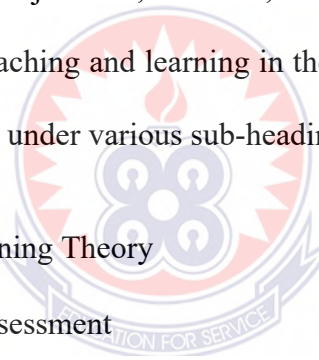
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter discusses the relevant literature pertaining to the development of the inclusive schools philosophy and teachers' assessment and grading practices. Specifically, it provides a brief overview of the history of inclusive education, the rationale and philosophy underlying inclusive educational settings and some of the implications of implementing inclusive practices in schools. Also provided is a comprehensive definition of the inclusive classroom and inclusion within the school.

Information is gathered from journals, abstracts, the internet, books, and works people have done on managing teaching and learning in the classroom. For easy referencing, the literature was reviewed under various sub-headings, as follows:

- Constructivist Learning Theory

- Constructivists' Assessment

- The Concept of Early Childhood Education

- The Importance of Early Childhood Education

- Concept of Assessment Practice

- The Concept of Inclusion Education in Ghana

- Early Childhood Teachers View about Assessment Practices

- Early Childhood Teachers' Knowledge about Assessment Practices

- Challenges of Early Childhood Teachers about Assessment Practices

- Assessment Practices

Constructivist Learning Theory

Constructivist learning theory says that all knowledge is constructed from a base of prior knowledge (Davis, 1991). According to Vygotsky (cited in Davis 1991), children are not blank slate and knowledge cannot be imparted without the child making sense of it according to their current conceptions; therefore, children learn best when they are allowed to construct a personal understanding based on experiencing things and reflecting on those experiences. Davis (1991) again states that learners are the makers of meaning and knowledge and constructivist teaching fosters critical thinking, and creates motivated and independent learners. This theoretical framework holds that learning always builds upon knowledge that a student already has; this prior knowledge is called a schema (Davis, 1991). He then explains that because all learning is filtered through pre-existing schemata, constructivists suggest that learning is more effective when a student is actively engaged in the learning process rather than attempting to receive knowledge passively.

James and Pedder (2006) also state that the focus of constructivists is on how people construct meaning and make sense of the world through organizing structures, concepts and principles in schema (mental models). According to James and Pedder (2006), prior knowledge is regarded as a powerful determinant of a pupil's capacity to learn new material. He then indicates that cognitive constructivists emphasize 'understanding,' thus problem solving is seen as the context for knowledge construction. Davis (1991) again argues that processing strategies, such as deductive reasoning from principles and inductive reasoning from evidence, are important and as a result, differences between experts and novices are marked by the way in which experts organize knowledge structures and their competence in processing strategies.

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Torrance and Pryor (2001) point out that the interaction between teacher-pupil goes further than just finding out whether the pupil has reached the target behaviour, as in behaviourism. Teacher-pupil interaction in a test situation goes beyond the communication of test results, the judgments of progress and the provision of additional instruction, to include a role for the teacher in assisting the pupil to comprehend and engage with new ideas and problems (Torrance & Pryor 2001). To them, the process of assessment itself is seen as having an impact on the pupil, as well as the product or the result. Harlen (2006) stated that the constructivists' view of learning focuses attention on the processes of learning and the role of learners. Early childhood teachers engage pupils in self-assessment and use their own assessment to try to identify their current understanding and levels of skills.

2.1 Examples of constructivist activities

The constructivist classroom, students work primarily in groups and learning and knowledge are interactive and dynamic (Harlen, 2006). Davis (1991) states that with the constructivist classroom, there is a great focus and emphasis on social and communication skills, as well as collaboration and exchange of ideas which is contrary to the traditional classroom in which students work primarily alone, learning is achieved through repetition. He further argues that the subjects are strictly adhered to and are guided by a textbook. According to Duffy, Jonassen and Lowyck (1993), some activities encouraged in constructivist classrooms are:

- Experimentation: Students individually perform an experiment and then come together as a class to discuss the results.

- Research projects: Students research a topic and can present their findings to the class.

- Field trips. This allows students to put the concepts and ideas discussed in

class in a real-world context. Field trips would often be followed by class discussions

- Films. These provide visual context and thus bring another sense into the learning experience.

- Class discussions. This technique is used in all of the methods described above. It is one of the most important distinctions of constructivist teaching methods.

2.2 Constructivists' Assessment

Traditionally, assessment in the classrooms is based on testing thus it is important for the student to produce the correct answers (Davis, 1991). However, he further posits that in constructivist teaching, the process of gaining knowledge is viewed as being just as important as the product. Thus, assessment is based not only on tests, but also on observation of the student, the student's work, and the student's points of view (Davis, 1991). According to Davis (1991), some constructivists' assessment strategies include:

- Oral discussions. The teacher presents students with a "focus" question and allows an open discussion on the topic.

- What we know, what we want to know, what we have learned, How we know it (KWL-H) Chart. This technique can be used throughout the course of study for a particular topic, but is also a good assessment technique as it shows the teacher the progress of the student throughout the course of study.

- Mind Mapping. In this activity, students list and categorize the concepts and ideas relating to a topic.

2.3 The Concept of Early Childhood Education

The definition of the term early childhood education, depends on the angle one picks it from. In terms of child's life, early childhood education is considered as the period from birth to eight years of age (Miles & Browne, 2004). Grotewell and Burton (2008) also shared this definition as they elaborated it accordingly as the time between the zero and eight years of age. However, by school terms, early childhood education incorporates the group settings for infants through elementary school grade three (Miles & Browne, 2004). In other words, early childhood education is a special branch of education serving with children from infancy to elementary grade level of three (Gonzalez-Mena, 2008). As definitions of these authorities imply, we believe that early childhood education brings or exposes children (birth to eight) into the world. Significance of the early childhood education increased tremendously all over the world within the last twenty years. This situation is complementary with research results based on long term effects of early education to later life (Groark, et, al., 2007).
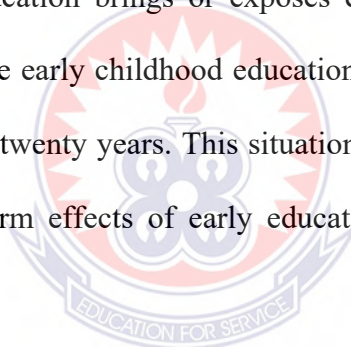
2.4 The Importance of Early Childhood Education

Early childhood education, within the last few decades, considered different fields (Roopnarine & Johnson, 2005) such as developmental psychology, cultural psychology, childhood studies, cultural anthropology, history and philosophy. This is because recent studies showed that babies and young children are born with the capacity to understand the world around them (Nutbrown, 2006). In addition, children's brains are ready to learn when they come to the world. During this process; both the environment and genes take an important role which in turn, builds the brain (Levitt, 2008). Considering what have been said so far by authorities in respect to childhood education, it can be asserted that children are been perceived as competent

learners rather than empty slates. This has therefore brought changes in the way of perceiving children or early childhood education. The readiness of children to learn even when they are just born triggered the ideas of necessity of early childhood education both for the individual child and for the society as a whole.

Longitudinal studies have shown that early childhood education is the period when children's develop more rapid and expand their intellectual faculties as they grow. Therefore, education in this crucial period creates significance for the development of children. In a study conducted by Barnett (1995), it was found that getting an early childhood education provided an increase in the IQ level of children in the short term and in the long term; it increased the child's school achievement.

Early childhood education also becomes more beneficial especially, for the children coming from low socio-economic background. Bassok, Bridges, Fuller, Loeb and Rumberger (2007) identified benefits of being exposed to early education for children coming from low-income families as cognitive growth and school readiness. Besides children from low socio-economic background, good quality of early childhood education provides early reading and math skills to children from high and middle socio-economic status.

Early education cultivates children in terms of socialization rather than purely academic enhancement such as math and reading. Webb (2003) elaborated that children learn cooperation through education in child care centers and such skills help them to obey rules and stay safe in the society. Regarding socialization, parents also share the same perspective. In the study of Seng (1994), it was revealed that one of the biggest reasons for parents sending children to early childhood education center is to get them socialized. In fact, in a longitudinal study, Kagıtcibasi (1991) explained

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that children who received early childhood education became emotionally and socially more competent adults compared to the ones whom did not received early education.

In addition to the above exposition on early childhood education, we also have the conviction that proper early childhood education will help children enjoy academic benefits; early education provides children a better future in the long term such as preparing them for school and increase in high school graduation rates.

It is however imperative for the Government of Ghana to start to pay particular attention to the early childhood education since it has been proved that good quality of early education has long lasting effects on the children's later life and very productive for the society. To affirm this idea, Oppenheim and MacGregor (2002) established that children who receive early education are less likely to involve in crime and more likely to complete their high school education and get into a college education. In another studies such as Chicago Longitudinal study and the Cost, Quality and Child outcome study indicated that getting high quality early childhood education make children become successful students and citizens in their later lives (Reynolds & Ou, 2004).

On the other hand, according to the World Bank Report (2005), between 0-6 years of age, each 1 dollar invested on children was returned in a fold of 7.6 dollars in the future as a result of the productivity gained through early childhood education. Parallel to this study, Everingham, Karoly, and Kilbourne (1997) indicated that rate of the return of the investment in people in early childhood period is higher compared to investment in other periods of human life.

In addition, research results support that through early childhood education, children are exposed to good quality experience, which allows the connections in their brains to develop and this is of immense importance to the society. Such results opened the way to start education of brains as early as possible. In one of the study conducted by Knudson (2004), it was elaborated that developmental flexibility of brain wiring or its ability to change due to influences of experience were affected by both genes and early environmental factors. So, the necessity occurs for educators, policy makers and others in the society helping children to construct their initial brain architecture by providing education for them in their early ages.

Findings of the longitudinal and cross sectional studies (Kagitcibasi 1991; Barnett, 1995; Openheim & MacGregor, 2002; Reynolds & Ou, 2004) related the benefits of early childhood education provided logical reasons to emphasize on early education for a better society. Besides, in the last twenty years, socio-cultural changes such as getting into the information age and changes in the world order through globalization triggered early childhood education to be a concern of many societies.

2.5 Concept of Assessment Practice

The term assessment means different things to different people. Nitko (2001) cites the American Federation of Early childhood teachers, National Council on Measurement in Education and National Education Association, who see assessment as a method of obtaining information that is used to make decision about students' curriculum and programme and national policy. From this, assessment can be viewed as a means of collecting information about students in order to help in making decisions concerning the students' wellbeing in terms of the curriculum and programme and national policies on education.

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Palomba and Banta (1999) define assessment as "the systematic collection, review and use of information about educational programmes undertaken for the purpose of improving learning and development" (p. 4). They are more specific in the use of assessment results to improve learning and development. This implies that the information collected from assessment should be that which could be used by teachers to help students to enhance their academic performance.

Green and Lewis (1986) on the other hand viewed assessment as the estimation of the relative magnitude, importance or value of an individual's work or performance observed. According to them, assessment is not just the collection of the information but looking at how valuable the information that has been collected is the focus of assessment. Early childhood teachers usually do this as they observe their students at work in school and through the conduct of various tests and other assignments periodically.

In assessment, early childhood teachers communicate with students through various means in order to gather meaningful information to make decisions concerning different aspects of students' development. Tamakloe, Amedahe and Atta (2005) maintained that "assessment occurs when one person through some kind of interaction with another, obtains and interprets information about that other person in terms of his knowledge and understanding or abilities or attitudes" (p. 176). Airasian (1991) also sees assessment to be a process whereby information about a student is collected, interpreted and synthesized to assist in decision making.

McMillan (2001) notes that there are a number of "essential" assessment concepts that early childhood teachers need to know about to make valid decision about students, various means should be used to obtain the information so that any bias will be

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removed. The information gathered could be from different sources in order to make the decision about the student. Linn and Grolund (1995) supported McMillan's (2001) assertion that assessment should be used to gather information about student learning.

Nitko (1996) defines assessment as "a process for obtaining information about learners" (p. 4). From the various definitions by the different authorities, the main issue about the definition of assessment is on the gathering of information about students in order to make an informed decision that will support the wellbeing of the student. Assessment is the process of observing a sample of a student's behaviour and drawing inferences about the students' knowledge and abilities (Ormrod, 2008). When one is looking at students' behaviour, typically, only a sample of classroom behaviour is used.

Assessment is for the benefit of not only the student but the teacher and other stakeholders as well. According to McAlpine (2002), assessment is a form of communication to the student as a form of feedback to their learning. It also serves as feedback to the early childhood teachers teaching. To the curriculum designer, it is the feedback on the curriculum and to the administrator as a feedback on the use of resources and to employers to indicate the quality of job applications.

To Allen (2004), assessment is the systematic process of documenting and using empirical data on knowledge, skill, attitudes, and beliefs to refine programs and improve student learning. The concept assessment itself can be defined and interpreted in several ways like financial, educational or even psychological assessment (Angelo & Cross, 1993). Bardes and Denton (2001) conceptualized assessments are systematic methods of gathering data under standardized conditions and reaching a conclusion regarding the knowledge, qualification and potential of an

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employee. Assessment, according Bardes and Denton (2001) is the systematic collection, review, and use of information about educational programs undertaken for the purpose of improving learning and development. To Palomba and Banta (1999), assessment is the process of gathering and discussing information from multiple and diverse sources in order to develop a deep understanding of what students know, understand, and can do with their knowledge as a result of their educational experiences. The process ends when assessment results are used to improve subsequent learning.

The Yukon Department of Education (2015) defined the concept of assessment as the systematic process of gathering information from many sources to make appropriate educational decisions. It identifies the student's strengths and needs and contributes to the design and implementation of effective strategies. Classroom early childhood teachers are in a position to offer an abundance of information regarding students in their classrooms.
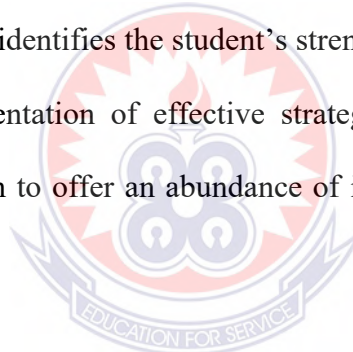
Assessment is an orderly procedure for collecting data about student achievement and serves as an indispensable component of teaching and learning (Dhindsa et al., 2007). According to Hodges, Eames, and Coll (2014) the principal goal of any educational program is to facilitate student learning. Therefore, in educational programs, assessment is intrinsically linked to student learning and performance. Assessment of student performance and learning necessarily includes consideration of hard and soft skills and involves a variety of assessors. Struyven et al. (2006) were of view that the impact of assessment is significantly observable on students' performance. The way students approach learning determines the way they think about classroom assignments and tests. Pellegrino and Goldman (2017), and Shepard (2000) suggested

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that classroom assessment can be improved in order to increase learning, such as the content and the characteristics of assessment, utilisation of assessment results and integration of assessment as a course in educational programmes.

It is noted that because assessment significantly affects students' approach to learning, assessment patterns have shifted from testing learning of students to assessing for students learning (Birenbaum & Feldman, 1998). According to (Gulikers, Bastiaens, & Kirschner, 2006), current assessment methods are attempting to increase the correspondence between what students need to learn and what is expected for them to know once they finish their studies. However, the demand remains whether students are taught so that they can excel on a test or whether they are taught to construct meaning that will sustain in the long term.

According to Romanoski, Cavanagh, Fisher, Waldrip and Dorman (2005) although early childhood teachers and administrators typically select assessment forms and tasks, the purpose of assessment varies among various stakeholders, including students, early childhood teachers, parents, schools, and policy makers. Hence, including students' and early childhood teachers' perceptions in designing assessment tools would be considered reasonable, given the fact that both students' preferences and early childhood teachers' rationale might influence the way students proceed with learning and the way it is tested.

Goodrum, Hackling and Rennie (2005) state that, ideally, assessment enhances learning, provides feedback about student progress, builds self-confidence and self-esteem, and develops skills in evaluation. In addition, they argue that effective learning occurs when correspondence exists between teaching, evaluation, and results. Therefore, due to its close relation with instruction and learning outcomes, assessment

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has a key role in learning. Although little evidence exists that students should be involved in decision making about assessment tasks, earlier studies such as Romanoski (2005) recommend an investigation of student involvement in classroom assessment.

Goodrum, Hackling and Rennie (2001) assert that, assessment is a key component of teaching and learning process. Brown and Pendlebury (1992) indicated that the purpose of assessment is primarily concerned with providing guidance and feedback to the learner on their learning. The nature and extent of this guidance and feedback is dependent upon the purpose of the assessment. As a purpose, assessment prepare students for life and this is based on the view that learning is not something that only occurs during formal education, but is something that occurs throughout life (Rowntree, 1987). Given the influence of assessment on learning, Rowntree (1987) argued that assessment should help students to understand their own learning by providing feedback to themselves and be discouraged off dependence on others for knowledge of how well he or she is doing.

Boud and Falchikov (2006) considered that equal attention needs to be given to all components of assessment alongside the well-established purposes of assessment for certification and assessment to aid current learning. Traditional approaches to assessment involve the teacher determining the required learning, the related assessment tasks and criteria, the performance of the student, and the grade awarded. Such approaches mean the student takes a passive, rather than active, role in assessment; counter to the need for sustainable assessment practices that help prepare students for lifelong learning beyond the academy.

Boud and Falchikov (2006) argued that assessment activities should not only address the immediate needs of certification or feedback to students on their current learning, but also contribute in some way to their prospective learning. When graduates leave the confines of a formal education environment they will need to be equipped to make their own judgments about themselves, their performance and their learning, in a world described by Barnett (1999) as one involving super-complexities in which knowledge of what is required in a job is frequently changing. In such a world, workers will need the capability to learn and change as a result of experience and reflection (Duke, 2002). In as much the concept assessment is concerned, there seem to be ways that can be employed to get assessment executed, thus, assessment method. According to the University System of Georgia (1992); Western Carolina University (1999), assessment methods are the strategies, techniques, tools and instruments for collecting information to determine the extent to which students demonstrate desired learning outcomes. Several methods should be used to assess student learning outcomes. Direct methods of assessment ask students to demonstrate their learning while indirect methods ask students to reflect on their learning. Tests, essays, presentations are generally direct methods of assessment, and indirect methods include surveys and interviews.

2.6 The Concept of Inclusive Education in Ghana

Inclusion in education is recognized as a basic human right and the foundation for a more just and equal society (European Agency for Development in Special Needs Education, 2012). According to the Children's Act 778, Section 5, of the Ghana constitution, "The Inclusive Education is based on the value system which holds that all persons who attend an educational institution are entitled to equitable access to quality teaching and learning which transcends the idea of physical location but

incorporates the basic values that promote participation, friendship and interaction."
According to UNICEF (2014) policy on Inclusive Education, "Inclusive schools must recognize and respond to the diverse needs of their students, accommodating both different styles and rates of learning and ensuring quality education to all through appropriate curricula, organizational arrangements, teaching strategies, resource issues and in partnerships with their communities." Inclusive Education is when children with disabilities are placed in the same classroom environment as other children of their age who do not have disabilities. (Graphic online, 2014).

In addition, it is an educational system where every child shares in all facets of the educational process with facilities that address the specific unique needs of the individual as a matter of basic right and not charity (Obeng Asamoah, 2016). Inclusive Education is bringing together children with special needs and children with non-disabilities with the right support services in place to enhance learning. In other words, accepting and embracing all children with all forms of disabilities by giving them equal opportunities.

Inclusive Education began informally in Ghana as integration into schools since 1951 Accelerated Education Plan and the 1961 Educational Act for free education which resulted in basic enrolment. (Gadagbui, 2008). Then the Jomtien World Conference in Education of Education for All. The United Nations Educational, Scientific, and Cultural Organization (UNESCO) alongside with other UN Agencies and NGOs worked towards the achievement of this goal together with the efforts made at the country level. In 2006, the United Nations (UN) put forward the Convention on the Rights of Persons with Disabilities (CRPD) within which Article 24 addresses the principles of inclusive education: Persons with disabilities can access an inclusive,

quality and free   primary education and secondary education on an equal basis with others   in the communities in which they live (UN, 2006, article 24).

All these, however to Gadagbui, (2008) did not provide what it takes to run an effective inclusion, as access to special schools was possible for some and those integrated had no equal opportunity. For example, the 1992 Constitution of Ghana had emphasized the Free Compulsory Universal Basic Education (FCUBE-1995) which also increased access to basic schools. Ministry of Education/Ghana Education Service adapts Inclusive Education. The Ministry of Education knowing well that Ghana is a signatory to the Salamanca and Dakar Conferences pursued these rights hence in its Education Strategic Plan of 2003-2015 adapted Inclusive Education.

The inclusion of mild to moderate children with disability into the mainstream started as a pilot project 2003-2004 with three regions; Central Region, Eastern Region, Greater Accra with ten (10) districts but now Northern Region and Volta Region are added to create an increase of 4 districts to the 10 Districts initially created. (Gadagbui, 2008).

2.7 Inclusion of children with intellectual disabilities in the Classroom

Research studies by Crawford (2005); Myklebust and Batevik, (2009) demonstrate the importance of inclusion for students with low functional skills and/or intellectual disabilities. Both studies explored the correlation between students who had been taught in inclusive classrooms and their future employment and economic independence. When severity of impairment was controlled, results from both studies indicated that students who were taught in inclusive, general education classes were more likely to find employment and be economically independent post-high school.

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Based on the importance of early childhood for all children with and without disability and Special Education Needs and concern for Early Childhood Education for all children (Bredekemp, 2011: Darragh, 2010), inclusion should commence in early childhood (Smith et al.,2012). Therefore, Inclusive early childhood education is viewed as a living reflection of the developmentally appropriate practices (Delani, 2001) that is valuing diversity, individuality and the rights of all children to live in a community.it is about access, participation and support (DEC/NAEY, 2009) and the right to equal educational and social experiences for all children (Moore, 2009; Smith et al.,2012; Winter, 2007) and maximize children potential as they benefit academically and socially from provisions in Early Childhood Education settings.

In the 21st century Inclusive early childhood education is seen as a promise for all children to have learning and social opportunities together (Cologen, 2014; Winter, 2007) though exclusion can start early in life (Holdsworth, 2010). Children with disabilities often experience stigma from birth and abuse and are more prone to exclusion, concealment, abandonment, institutionalization and abuse(UNESCO,2009) and are still combating educational exclusion (UNESCO,2008).

Empirical evidence shows that Inclusive early childhood education is beneficial with and without disability, as well as teachers, parents and families, childcare providers, professionals and society (Allen & Cowderry, 2012; Deiner, 2013; Smith et al., 2012). Increasingly, Inclusive early childhood education classrooms are becoming the most common type of learning contexts for educational preschool children with disability (Gruenberg & Miller, 2011; Odom et al.; Soukakou, 2012).

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2.8 Early Childhood Teachers View about Assessment Practices

There is enough evidence that in schools, assessment merely refers to tests, examinations and grading (Lissitz & Schafer, 2000). According to Dean (1999), most teacher education programmes skim over classroom assessment, leaving early childhood teachers to assess in the way they were assessed when they were in school. Campbell and Evans (2000) evaluated pre-service teacher who had completed course work in educational measurement and found that student early childhood teachers did not follow many assessment practices recommended. The National Council of Teachers of Mathematics, NCTM, (2000) held that assessment has the potential to enhance mathematics learning and to promote students' interest in mathematics. This is too general a statement considering the fact that in most schools assessment means testing and grading (van de Wallen, 2001). Gullickson (1984) has the view that most early childhood teachers believe they have adequate knowledge of testing and measurement, more to experience than university course work.

Numerous researchers and organizations have specified that the content domain in which early childhood teachers need to develop assessment skills. Among the commonly discussed skills are choosing appropriate methods, developing paper and pencil test, administration and scoring tests interpreting standardized test results, evaluating and improving assessment instruments, using assessment in decision making and grading (Airasia, 1994; Stiggins 1992).

McMillan, Myran and Workman (2002) in their study, aimed at describing the nature of classroom assessment and grading practices, found that early childhood teachers were mostly interested in assessing students' mastery or achievement and that performance assessment was used frequently. Morgan and Watson (2002) reported

that most middle and high schoolteachers use teacher-constructed tests to assess students' achievement. In addition, Morgan and Watson found that most early childhood teachers view classroom assessment as an added requirement to their teaching job and not as a tool to improve their teaching.

Cooney (1994) and Garet and Mills (1995) found similar results. Cooney surveyed high school mathematics teachers' assessment practices while Garet and Mills surveyed grade 4 to 12 mathematics teachers across the United States. Both studies reported that teachers mostly used short-answer tests for assessment. The two studies further reported that there was a strong influence of publisher's assessment materials on classroom practices. Teachers use the readymade tests without making modifications to them (Cooney, 1994; Garet & Mills, 1995). Beckmann, Senk and Thompson (1997) identified three reasons why teachers do not use multiple assessment methods. First, some teachers had limited knowledge of different forms of assessment. Second, teachers felt they had no time to create different forms of assessment. Third, early childhood teachers felt there was little or no professional guidance; therefore, they (early childhood teachers) were not confident enough to try out other forms of assessments.

Cooney (1994) reported a strong link between assessment and grading in the minds of high school early childhood teachers. A study conducted by Gurski (2008) in Canada, examined secondary classroom early childhood teachers' assessment and grading practices in one urban school division. It compared the assessment practices of ten elementary early childhood teachers over a period of 11 weeks with Ohio's fourth and sixth grade science Proficiency Tests. The study asked secondary early childhood teachers, within inclusive classrooms, to indicate their current assessment and grading

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practices. Evidence from the survey demonstrated that early childhood teachers in inclusive schools have diverse assessment and grading practices and that they have begun to explore the potential for assessment to assist all students in their learning.

In another study, by Chapman (2011) in New Zealand, on the assessment practices of early childhood teachers in New Zealand outdoor education tertiary programmes, it was found that early childhood teachers were generally highly skilled outdoor education practitioners; however, there were indications that there were gaps of understanding of theoretical assessment concepts. Early childhood teachers seemed to find summative assessment challenging but they routinely used formative assessment to promote learning and worked hard at providing quality opportunities for learning. The use of assessment criteria was common practice. The role of professional judgement in assessment decisions were treated with suspicion because it was seen as too subjective. However it became clear that professional judgement was essential aspect of their assessment practices.
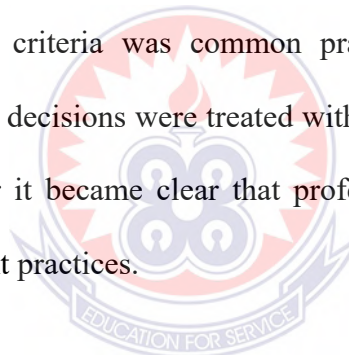
2.8 Early Childhood Teachers' Knowledge about Assessment Practices

It is accepted that the proper use of assessment requires teachers to possess deep knowledge about the method or the procedures involved in using it. The American Federation of Teachers (AFT), the National Council on Measurement in Education (NCME), and the National Education Association (NEA) (1990) jointly indicated that, in using assessment, teachers should competently be able to choose and develop methods appropriate for assessment decisions, to administer, score and interpret results, and use the results when making educational decisions about students. The standards show that, teachers using assessment need to develop valid grading

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procedures, communicate assessment results to various audiences and recognize unethical, illegal, and inappropriate methods and uses of assessment.

Brookhart (2011) proposed assessment knowledge and skills for teachers by emphasising that, teachers need to understand learning in the content area they teach, be able to set and apply learning intentions consistent with content and depth of the curriculum goals, and possess the strategies for communicating the expectations of the learning intentions to students. According to Brookhart (2011), teachers need to also understand the purposes of the assessment type, and be able to apply it, be skilful in analysing assessment type methods, be skilful in providing meaningful feedback on student work. Again, teachers need to have the ability to develop scoring schemes to quantify student performance for making informed educational decisions, be skilful in administering external assessments and interpreting their results. Furthermore, teachers need to be able to apply educational decisions made out from classroom assessments, be able to communicate assessment information to students to motivate them to learn, and understand the legal and ethical issues in the classroom assessment practices.

Koh (2011) indicated that assessment can be a powerful tool in making improvements in educational systems, and as such, Calderhead (1996) reports that its effectiveness depends on teachers' knowledge due to the continual interaction between teachers and students'. Knowledge in assessment by teachers is very vital in education because it gives them the impetus to do what is required for students to achieve what society expects from them. According to Darling-Hammond and September (2013), teacher involvement in the design, use, and scoring of performance-based assessments has the potential to powerfully link instruction, assessment, student learning, and teacher

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professional development. In a policy document prepared in the United States, Darling-Hammond and September (2013) indicated that the use of high-quality standards and performance-based assessments over time has been shown to improve both teaching and learning. As teachers become more experts in their practice through involvement and engagement with performance-based assessments, the outcomes for students can be expected to improve. If used wisely, this approach has the potential to address multiple important education goals through one concentrated investment (Darling-Hammond & September, 2013).

According to Joetta and Carter (2001), high-achieving nations implement their standards by developing systems that incorporate curriculum, instruction, and assessment to improve both teaching and students' learning. Teachers are involved throughout the assessment process in developing, reviewing, scoring, and analyzing the results of student assessments, which enables them to understand the standards and develop stronger instruction. According to Black and Wiliam (2010), high-performing nations use open-ended performance tasks to give students opportunities to develop and demonstrate 21st Century skills, such as the ability to find and organize information to solve problems, frame and conduct investigations, analyze and synthesize data, and apply learning to new situations. Students solve extended problems in mathematics and the sciences, showing and explaining how they are approaching the task, compare and synthesize evidence from different kinds of data and texts, and then compose essays that explain and defend their thinking.

According to Darling-Hammond and September (2013), the growing emphasis on project-based, inquiry-oriented learning by high- performing nations has also caused many of these countries to introduce school- based tasks into their assessment

systems, such as research projects, science investigations, and development of products ranging from software solutions to engineering designs. The use of these types of assessments provides teachers with models of good curriculum and assessment practice, enhances curriculum equity within and across schools, and allows teachers to see and evaluate student learning in ways that can inform instructional and curriculum decisions. Such curriculum-embedded assessments can also build students' capacity to assess and guide their own learning (Darling-Hammond & September, 2013).

Recognising the need for teachers to possess an adequate knowledge in educational assessment, Plake and Impara (1992) developed an instrument titled the "Teacher Assessment Literacy Questionnaire (TALQ)" consisting of 35 items to measure teachers' assessment literacy. The TALQ was based on the Standards for Teacher Competence in Educational Assessment of Students (AFT, NCME, & NEA, 1990). The instrument was administered to a randomly sampled 555 in-service teachers around the United States. The results indicated that the teachers might not be well prepared to assess student learning as revealed by the average score of 23 out of 35 items correct (Plake, Impara, & Fager, 1993).

In his discussion of the assessment knowledge, Popham (2006) asserted the need for a continuous in-service assessment training aligned with the assessment realities. In a survey of assessment knowledge of purposively sampled 69 teacher candidates in Bangladesh by adapting Teacher Assessment Knowledge Questionnaire, Volante and Fazio (2007) found that the self-described levels of assessment knowledge remained relatively low for the candidates across the four years of the teacher education programme.

Likewise, Campbell, Murphy, and Holt (2002) applied the TALQ to a randomly sampled 220 undergraduate students in the United States who completed a course in tests and measurement. The results revealed that the average score for the sample was 21 out of 35 items correct, suggesting the need for more attention to the assessment literacy of the prospective teachers. Similarly, Mertler and Campbell (2005) developed another instrument titled the "Assessment Literacy Inventory (ALI)" consisting of 35 items in alignment to the "Standards for Teacher Competence in Educational Assessment of Students" (AFT, NCME, & NEA, 1990). The instrument was administered to a sample of 249 pre-service teachers in the United States. These results imply that teachers' assessment literacy deserve further recognition and investigation. When comparing assessment literacy of pre-service teachers and in-service teachers, the studies have indicated that the assessment literacy level of pre-service teachers was lower than that of in-service teachers (Mertler, 2003; 2004). This suggests that an observed base in the classroom assessment might cause the difference in assessment literacy.
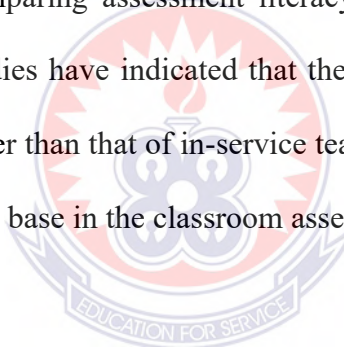
Alkharusi, Aldhafri, Alnabhani, and Alkalbani (2012) in their study in Oman, among randomly sampled 165 in-service teachers, using a self-report questionnaire revealed that although teachers held a favourable attitude towards assessment and perceived themselves as being competent in educational assessment, they demonstrated a low level of knowledge in performance-based assessment. Teachers used a variety of assessments in the classroom primarily for assigning grades and motivating students to learn, with some variations by gender, grade level, and subject area but were limited in terms of performance-based assessment. Teaching load and teaching experience accounted for some of the variations in teachers' educational assessment practices.

A mixed-method study conducted in Turkey among 22 teachers by Cimer and Cakır (2010) using questionnaire, interviews and document analysis revealed that, teachers interviewed were lacking knowledge about assessment and the situation was attributed to the fact that it was a new thing that was introduced into the educational curricular. The questionnaire asked teachers to indicate their perceived level of knowledge regarding the assessment methods introduced with the new curriculum.

As indicated in the study, the mean scores of the teachers' knowledge of the various performance assessment methods changed between 2-3, meaning that their levels of knowledge of these methods were between low and medium (Cimer & Cakır, 2010). Supporting this, during the interviews it was seen that teachers were aware of the changes and the requirements of the system but they did not implement them. When asked about the methods they used to assess their students, all of the teachers indicated primarily using written tests, which they had already been using before the changes were introduced. These tests comprised multiple choice, fill in the blanks and true-false type questions (Cimer & Cakır, 2010).

Overall, the results obtained showed that assessment was not effectively implemented in schools where the mixed-method study was conducted. The teachers continue to use traditional tests in their assessments. Only a few used portfolio and performance tasks, but they were not implemented effectively. For example, only two teachers indicated that they used portfolios but they treated it only as a folder to collect students' work (Cimer & Cakır, 2010). However, what makes a portfolio a valuable learning and assessment tool is its self-reflection component. Self-reflection process adds on the benefits of portfolio process to learning and differentiates it from a process of simply collecting samples of students' work in a folder (Paulson, Paulson,

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Meyer, 1991). Thus, clearly, changes in the assessment system could not enter classrooms. The main reason drawn from the data is teachers' lack of knowledge of performance assessment methods.

Zhang and Burry-Stock (2003) surveyed a random sample of 297 teachers in America across teaching levels and content areas about their assessment skills using the Assessment Practices Inventory (API). Zhang and Burry-Stock (2003) found that teachers with training in assessment tended to report higher levels of self-perceived assessment skills in performance-based assessment, standardized testing, test revision and communicating assessment results. In a survey of 288 teacher candidates who were sampled randomly and enrolled in a teacher education programme in Canada, DeLuca and Klinger (2010) found that teacher candidates who chose to enrol in an educational assessment course had higher levels of confidence in assessment knowledge and skills than those who did not have formal instruction in assessment.

2.9 Challenges of Early Childhood Teachers about Assessment Practices

Eshun et al. (2014) conducted a study to investigate the influence of authentic assessment on classroom practices of early childhood teachers and the challenges they encounter in the Social Studies classroom in Ghana. The study used a descriptive case study design and it involved 10 senior high schools and twenty early childhood teachers randomly sampled from fifty-seven (57) senior high schools in the Central Region of Ghana. Semi-structured interview guide was the main instrument used for data collection. The research found out that the forms of authentic assessment some early childhood teachers used in their classrooms were limited due to examination policies, time, resources and assessment methods employed by their schools. Furthermore, they revealed that most early childhood teachers they observed were not

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using assessment techniques that involved students in the teaching and learning process. Again, they indicated that some early childhood teachers revealed that using the authentic assessment would delay them in completing topics in their syllabuses given to them.

Beckmann, Senk and Thompson (1997) in their study conducted in USA identified three reasons why early childhood teachers do not use multiple assessment methods. First, some early childhood teachers had limited knowledge of different forms of assessment. Second, early childhood teachers felt they had no time to create/develop assessment. Third, early childhood teachers felt there was little or no professional guidance; therefore, early childhood teachers were not confident enough to try out authentic assessments.

Despite the rich results and improved academic work assessment presents to early childhood teachers in relation to their students' outcome, assessment faced is with a number of challenges. Palomba and Banta (1999b) indicated that measures are labour intensive as a significant amount of time and care must be set aside by early childhood teachers for planning and using assessment. Again, it is not clear that measures can be generalized to the student population. This lowers the level of generalization and can affect the perceived validity of the use of assessment measure.

Assessment is challenged in terms of the knowledge required to learn and execute. As the role of student assessment is changing today, it is largely because today's students face a world that demands knew knowledge and abilities, and the need to become life-long learners in a world that demand competences and skills not yet defined (Segers, Dochy & Cascallar, 2003).

The information age is characterized by a steadily growing, dynamic and changing mass of information in terms of assessment. Students and early childhood teachers need digital literacy, but also a variety of competences in order to function well in the information society. Birenbaum (1996) has analyzed and categorized these competences and skills concerning assessment in the following way: (a) cognitive competences such as problem solving, critical thinking, formulating questions, searching for relevant information, making informed judgements, efficient use of information, conducting observations, investigations, inventing and creating new things, analyzing data, presenting data communicatively, oral and written expression; (b) meta-cognitive competences such as self-reflection, or self-evaluation (c) social competences such as leading discussions, persuading, cooperating, working in groups, etc. and (d) affective dispositions such as perseverance, internal motivation, self-efficacy, independence, flexibility, or coping with frustrating situations.

Assessments take more time to administer, often are tied directly to specific curriculum and instructional programs or particular assignments, and take more time for scoring, reporting back the results, and putting the results to effective use with students than do standardized tests (Reeves, 2007*).* According to Reeves (2007), the assessment challenge, at both the district and school levels, is to develop the capacity of classroom early childhood teachers to evaluate student work in shared and common ways, often using established rubrics or scoring criteria to evaluate student products and performances. The results are often complex and nuanced. The student's work on such tasks is typically neither right nor wrong, but rather, combines a variety of strengths and areas needing improvement. Such evaluations can inform summative judgments, but, most fruitfully, they provide formative instructional guidance,

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challenging early childhood teachers to use the results to help students take the next steps towards excellence.

2.10 Assessments Tools

Assessments tools are tests or procedures (for example, ability test, structured interview, work sample) used to measure a student's qualifications and interests (U.S. Department of Labor,2000) The various techniques involved in assessment are the tools and instruments to collect the information about how the students can demonstrate desired learning outcomes (Prasanthi & Vijetha Inti , 2019).

There are various techniques of assessing students. The most common means by which early childhood teachers attempt to assess their students are tests and examinations (Tamakloe, Amedahe & Atta, 2005). These techniques include, but are not limited to paper and pencil test and performance task. Other means of assessing students are through the responses of students in class, homework performance, and observation of students, interviews/conference with students, students' presentations and portfolios.

Forms of Assessment

2.11 Formative Assessment

According to McTighe and O'connor (2009) formative assessment is generally carried out throughout a course or project and is also referred to as "educative assessment," as used to aid learning. In an educational setting, formative assessment might be a teacher or the learner, providing feedback on a student's work and would not necessarily be used for grading purposes. Formative assessments in education can be of many kinds and could espouse investigative test or diagnostic test, standardized

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tests, quizzes, oral question, or draft work. Formative assessments are carried out concurrently with instructions. Formative assessments aim to see if the students understand the instruction before doing a summative assessment (McTighe & O'connor).

By definition, Airasian (1991) opinionated that formative assessments are interactive and are used primarily to form or modify an ongoing learning process or learning activity. Formative assessment is focused on improving student motivation and learning with the goal of producing higher-quality work or thinking. It is important to realise that there are two different spectators for formative assessment (Edmund, 2006). According to Edmund (2006), formative assessment concerns early childhood teachers and many of the early childhood teachers may check for student understanding by asking questions or by observing students as they discuss a topic in small groups. In formative assessment, early childhood teachers are informally "collecting data" that will help them determine what needs to happen next in instruction and early childhood teachers serve as the data users. Formative assessment also concerns students as they need to know what would move their responses to questions. Formative assessment is about providing immediate feedback to students concerning what has been learnt. It is believed that providing students with effective feedback can increase student achievement significantly (Marzano, Pickering, & Pollock, 2001).

According to Palomba and Banta (1999), formative assessment is often done at the beginning or during a programme, thus providing the opportunity for immediate evidence for student learning in a particular course or at a particular point in a

program. Formative assessment in the classroom is noted to be one of the most common assessment techniques that early childhood teachers use and purpose of the technique is to improve quality of student learning (Palomba & Banta, 1999). As an important component of teaching and learning, formative assessment in the classroom can lead to curricular amendments when specific courses have not met the student learning outcomes (Palomba & Banta). According to Angelo and Cross (1993), formative assessment in the classroom can also provide important programme information when multiple sections of any course is taught because it enables programmes to examine if the learning goals and objectives are met in all sections of the course. It also can improve instructional quality by engaging the faculty in the design and practice of the course goals and objectives and the course impact on the programme (Bardes & Denton, 2001).

Formative assessment in the classroom has been the focus of almost major stakeholders in an attempt to synthesize the research studies on classroom assessment. Synthesis of more than 250 studies concerning formative assessments as opposed to summative assessment conducted by Black and Wiliam (1998), revealed that formative assessment produces more powerful effect on student learning. In his review of the research, Crooks (2001) was of the view that effect sizes for summative assessments are consistently lower than effect sizes for formative assessments when it comes to assessment in the classroom. It can be said that classroom formative assessment data can contribute to a comprehensive assessment plan by enabling capacity to identify particular points in a programme to assess learning and monitor the progress being made towards achieving learning outcomes (Bardes & Denton, 2001).

In terms of merit, Sasser (2018) indicated that formative assessments are not graded and this takes the anxiety away from students. It also detaches the thinking that they must get everything right. Instead, they serve as a practice for students to get assistance along the way before the final tests. Early childhood teachers usually check for understanding in the event that students are struggling during the lesson. Early childhood teachers address these issues early on instead of waiting until the end of the unit to assess. Early childhood teachers have to do less re-teaching at the end because many of the problems with mastery are addressed before final tests (Sasser, 2018). According to Sasser (2018), the goal of formative assessment is to gauge student learning and adapt content accordingly. Since it is "low stakes," to Sasser, formative assessments should be used to monitor student learning qualitatively as opposed to examine it quantitatively (final exam). Therefore, when assessing for learning, formative assessment is the way to go; when assessing the measure of learning, summative assessment is best.

Reddy (2018) was of the view that formative assessment is necessary and important for behaviour change among learners. In order to face unexpected outcomes and respond to emergent properties, formative assessment is mandatory. Reddy (2018) outlined some merits of formative assessment:

The main intention of formative assessment is that it helps in the development of knowledge and skills for the learners. With this category of assessment, the instructors, leads or early childhood teachers are able to identify the needs of the individuals and direct them towards their objectives or educational goals. The individual's hindrances and difficulties are found out by this method and appropriate remedies are applied to overcome them. With assessment the upcoming lesson or task

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is also planned. With formative assessment, an assessment is offered by the instructor or teacher to make sure that the individuals have mastered the concept that has been taught to them.

Formative assessment is beneficial as it plans for the future where any methods related to teaching or other career tasks can be altered. Weakness is diagnosed at an early stage and remediation is made. By this way the individuals are kept of track and move towards progress with continuous feedback. Future planning in case of any change in the methods of teaching or given task is planned well ahead, with formative assessment.

Formative assessment covers up a wide range of diagnostics that are required by the students or individuals. The feedback is a main parameter which enables students to reflect what they are learning and know the reason for the same. Formative assessment assists individuals enhancing their performance and producing successful outcomes.

Another beneficial aspect of formative assessment is that it is an ongoing process. By this way, the feedback is increased and issues are detected at an early stage. When academics are considered, conceptual errors are identified before they start with working with their term papers. Once students initiate with term paper they are guided and validated by their instructors with each step.

Formative assessment is noted to provide of the learning process. A rich picture of the source or programme is learned with the help of formative assessment as it unfolds. With this type of assessment, doors are opened for prospective learning for present program as well as future programs that are planned. The success and failure of the

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project can be determined with the help of formative assessment and the reason for the same is also identified. The complex factors that are present within the program are also identified with this assessment.

Formative assessment helps provide feedback to learning process. Reflective practice is assisted with the help of formative assessment. Also, conflict management systems are strengthened in a number of ways. The major advantage is that, formative assessment feedback is offered based on the conflict management and resolution work capacity.

With the help of formative assessment, planning is made and also revisions for any recommendation for plans are allowed in the classroom situation. With this type of assessment in the classroom, program implementation and program plans are compared. There is also enhanced opportunity for reconsidering program plans and goals. When program plans are revised and presented through formative assessment, early childhood teachers who work with the program can revise plans or also stick to new or old plans that are appropriate to present reliabilities. Formative assessment also offers inputs for future project planning and ideas.

It is widely understood that problems emerge when formative assessment is being reduced to a mini-summative assessment or to a series of teaching techniques for coaching to improve grades and levels. On the one hand, a serious threat to the effectiveness of formative assessment occurs when it is assimilated into larger accountability systems such as National Curriculum Assessment (Shuichi, 2016).

To Sasser (2018) and Reddy (2018), in using formative assessment, some early childhood teachers may complain about sacrificing time to assess during the lesson

and fear that they may not even finish the lesson. Early childhood teachers then feel the need to rush through a series of units, which causes students to lack mastery once the assessment is given at the end of the unit. Early childhood teachers may lack training or professional development on how to use formative assessments successfully because, historically, assessments are completed at the end. Formative assessment may lack the same weight, low to no point value as a summative assessment and students may not take the assessments seriously, which may cause early childhood teachers to misread feedback from students. Reddy (2018) suggested limitations to the use of formative assessment.

Formative assessment is considered to be time consuming process if they are followed on a monthly, weekly or daily basis by early childhood teachers in the classroom. These assessments are time and resource intensive. This is because they are in need of frequent gathering of data, analysis, reporting as well as refinement of new implementation and how effective it should be, as such, early childhood teachers may find it difficult in practicing due to the time demands.

Planning and exercising formative assessment can be a tiring process for teacher who practices it. This disadvantage leads many individual early childhood teachers to avoid the practice of formative assessment.

In order to practice formative assessment, well qualified and trained individual early childhood teachers are required so that formative assessment is carried over successfully and ended. However, it is indicated that most early childhood teachers do not possess the required skills to assess their students formatively (Reddy, 2018). There are a number of methodological challenges faced by early childhood teachers

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with formative assessment at times of rapid refinement process which takes place when trying to evaluate the impact of intervention.

2.12 Summative Assessment

According to Mctighe and O'Connor (2005), summative assessment is generally carried out at the end of a course or project. In an educational setting, summative assessments are typically used to assign students a course grade. Summative assessments are evaluative. Summative assessments are made to summarize what the students have learned, and to determine whether they understand the subject matter well. This type of assessment is typically graded and can take the form of tests, exams or projects. Summative assessments are often used to determine whether a student has passed or failed a class.

Summative assessment looks at whether a student has achieved the desired learning goals or met standards (Edmonds, 2006). In the classroom, summative assessments usually occur at the end of instruction and documents what students have learned. Looking at the grades in a teacher's grade book should give an idea of what the key instructional goals or outcomes were for a grading period. These grades most likely represent summative assessments (tests, quizzes, projects, reports, written assignments) that tell the teacher whether the student has mastered the skills or learned the content. A key aspect of summative assessment is determining the level to which students need to "master" the content and thinking. Tests that define "mastering" content at the level of memorizing events, names, and facts are less likely to be building students' thinking skills than tests that ask students to write about big conflicts or themes that recur over time.

According to Angelo and Cross (1993), summative assessment in the classroom is comprehensive in nature, provides accountability and is used to check the level of learning at the end of the programme. For instance, if upon completion of a programme students will have the knowledge to pass a certification test, taking the test would be summative in nature since it is based on the cumulative learning experience. Classroom summative assessment programme goals and objectives often reflect the collective nature of the learning that takes place in a programme (Palomba & Banta, 1999). It is noted that, in any educational programme, it is relevant to conduct summative assessment at the end of the programme to ensure students have met the programme goals and objectives. Bardes and Denton (2001) articulated that, attention should be given to using various methods and measures in order to have a comprehensive plan. Eventually, the foundation for an assessment plan is to collect summative assessment data and this type of data can stand-alone.

According to Reddy (2018), summative assessment is one that takes place at the end of the assessment cycle. It is a type of assessment that judges the worth of the task by the end of program activities. The main focus of summative assessment is based on the outcome. Summative assessments can also be mentioned as assessments technique that is used to measure the outcome of individuals or students. Similarly, in education, summative assessment is used to assess students on what they have learned. Reddy (2018) suggest the following merits of summative assessment:

Summative assessment follows certain strategies for assessment by means of assignments, tests, projects and more. By these ways, the teacher can make out if the students have learned and understood the subject. An assignment is said to be a summative one by the way it is utilized and not by the design of the test, assignment

or by self-assessment. By this way, the instructor can make out to what degree the students have understood with the materials that have been taught.

The usual procedure is that summative assessments are done at the end of any instructional period. Thus, summative assessment is considered to be evaluative in nature rather than being mentioned as diagnostic. They are also utilized to estimate the effectiveness of educational programs. Another key advantage is that they are utilized to measure improvement towards objectives and goals. More over course-placement decisions are also made with summative assessment.

The results of summative assessments are ones that are recorded as scores or grades into the students' academic records. They can be in the format of test scores, letter grades or report cards which can be used in college admission process. Many schools, districts, and courses consider summative assessment as a major parameter in the grading system.

The presence of summative assessment is a motivator as it assists the individuals and offers them an opportunity to develop a learning environment. This is an assessment meant for learning and is based on the outcome.

The outcome of the summative assessment is considered as an enhancing factor when it is positive. With this type of assessment, confidence is improved and also, it acts as a foundation for certain behaviour change at workplace or institution (Reddy, 2018).

With the help of summative assessment results, trainers and instructors can find out weak areas where the results are steadily low. By this way, alternative methods can be utilized in order to improve the results. New training can be followed for future events focusing towards success.

With the help of summative assessment, the supervisor can measure the educational faculty or the instructor. The level of performance of all the early childhood teachers, and instructors can be measured by means of this assessment. The school needs for teacher's accountability are met by means of summative assessment. The assessment is carried out with a form which has checklist and few occasional narratives.

Despite the value attached to summative assessment as a measure of end product, it is not devoid of lapses. A criticism of summative assessments is that they are reductive, and learners discover how well they have acquired knowledge too late for it to be of use (Mctighe & O'Connor, 2005). Reddy (2018) suggest the following limitations:

Summative assessment demotivates individuals such that when student motivation and its impact is reviewed, it indicates that there prevails a lower self-esteem by students who performed in a poor manner. This in turn, leads them to put in less effort towards their studies and for their future academic progress.

One main disadvantage of summative assessment is that since it focuses on output at the end. In case there are hindrances or difficulties, learning process at the end can be tough. There is no chance to recover as the results are at the end. This is not an accurate reflection when learning is considered. Nothing is done to identify hindrances or challenges well in advance in a summative assessment. Instructional issues are not identified until they blow up and become critical when summative assessment is used in schools.

Since summative assessment is a single test at the end of the complete session of academics, it makes almost all individuals anxious and disruptive. They face the summative assessment with nervousness and fear.

When summative assessment is considered, it focuses mainly on the performance of the early childhood teachers as they teach to the test. Overall, summative assessment is not perfect because even outstanding students may face questions that may bring them down. The main reason for that would be a student may become nervous or tensed due to pressure for exams. Hence, summative assessment is not considered as the best reflection for learning in schools.

Repeated practice test for low-achieving students lowers their self-confidence and self-esteem. The summative assessment results have a negative effect on low achievers when they are more pronounced for students than for schools or authorities. Secondary school low-achievers may perform in a worse manner as they are failing in the course of time. It is also considered as a limiting process for the able individuals. Anxiety is another reason which is caused in a test especially amongst girls and leads to expanding the gap between higher and low achieving individuals.

The instructors and early childhood teachers work towards the test and deviate themselves from curriculum and content. There can be chances for distortion in terms of teaching techniques. The other disadvantage is that summative assessment questions may not be framed in a manner similar to formative assessment. The instructors and early childhood teachers may themselves have to dedicate more time for summative assessment which may not actually enhance individual's knowledge. With all this, early childhood teachers also adopt some didactic teaching style which may not be perfect and comfortable for many students.

2.13 Performance-Based Assessment in School

Nitko (2004) defined performance-based assessments as tangible and reliable tasks that demand students to do something with their knowledge and skills, such as give a demonstration or presentation, or write a report on what they have been taught. According to Stecher (2010), assessment is a structured situation in which stimulus materials and a request for information or action are presented to an individual, who generates a response that can be rated for quality using explicit standards. The standards may apply to the final product or to the process of creating it.

Stecher (2010) indicated that the definition of assessment is poised with four (4) features that include structured, stimulus, response and standard. The structured situation in assessment is constrained with respect to time, space and access to materials. The structure makes it possible to replicate the conditions, so the same assessment can be administered to different people and their performances can be compared. The requirement that there be structure with respect to administrative conditions does not exclude from consideration complex, extended tasks, such as conducting a scientific experiment and reporting the results. Instead, structure insures that tasks can be replicated at different times and in different places. The stimulus material in the assessment serves as the basis for the response. The response expected from the stimulus in assessment must have directions indicating the nature of the desired response and the directions can be part of the stimulus materials. The standard in assessment must prompt responses that can be scored according to a clear set of standards and in most cases standards are developed before the assessment is given (Stecher, 2010).

The Wisconsin Education Association Council (1999) defined assessment as the one which requires students to demonstrate that they have mastered specific skills and competencies by performing or producing something. The Association indicated that assessment is about designing and carrying out experiments, writing essays which require students to rethink, to integrate, or to apply information, working with other students to accomplish tasks, demonstrating proficiency in using a piece of equipment or a technique, building models, developing, interpreting, and using maps, making collections; writing term papers, critiques, poems, or short stories, giving speeches, playing musical instruments, participating in oral examinations, and developing portfolios, developing athletic skills or routines.

According to the Office of Educational Research and Improvement (1993), like all types of performance-based assessments, the procedures require that students actively develop their approaches to the task under defined conditions, knowing that their work will be evaluated according to agreed-upon standards. This requirement distinguishes assessment from other forms of testing as they require students to actively demonstrate what they know and performance-based assessments may be a more valid indicator of students' knowledge and abilities.

2.14 Qualitative Assessment

This is concerned with the assessment of qualities that an individual possess. A student's view of what constitute a good relationship with a patient is a qualitative data (Quinn, 2000). A common misconception is that qualitative assessments are not as reliable, valid, or objective as quantitative ones. This is not necessarily the case. There are well-designed and statistically reliable means of interpreting and analysing qualitative data and numerous resources for learning to use qualitative methods

(Silverman, 2001; Maxwell, 1996). For example, an instructor might assess the same learning goals using a multiple-choice test or an essay test.

Similarly, a instructor might grade a senior project presentation quantitatively with a standard set of evaluation criteria (i.e., a rubric). Alternatively, he or she might provide the student with a prose evaluation, in a non-scaled format, citing the strengths and weaknesses of the presentation. However, it is best if this evaluation is organized around standard set of criteria that were shared with the student beforehand. A student survey designed to gather information on student satisfaction may elicit data that are quantitative (i.e., "On a scale of 1 to 7, how satisfied are you with the quality of advising?") or qualitative ("How would you describe your experience with academic advising?"). Qualitative data must be sorted, categorised, and interpreted (most often by humans rather than by computer programs) before a final judgment can occur.

Methods of ensuring the reliability of qualitative data are time-consuming. For instance, to ensure that portfolio assessment is reliable; at least two raters are used to review each portfolio, providing a form of "inter-rater" reliability. Focus groups, another commonly used form of qualitative data collection, require large investments of time to gather data from comparatively few students. A good use of qualitative evaluation is to help develop quantitative evaluation criteria (rubrics).For instance, one might conduct focus groups for designing questions for a satisfaction questionnaire or use a scoring rubric for portfolios to determine what characteristics of students' writing might be evaluated.

2.15 Aptitude Assessment

Aptitude is how well a student will perform in the future. According to Elliot, Kratochwill, Cook and Travers (2000), an aptitude test is a test that predicts a student's performance in a certain task by sampling the cumulative effect on the individual on many experiences. They are used to predict what students can learn. They are used to measure performance based on learning abilities.

2.16 Paper and Pencil Test

This is often the first choice used for formal assessment because of its practicality (Ormrod, 2008). The assessment requires students to write independently or to demonstrate understanding of concepts. A teacher gives seatwork as well as homework to students for them to respond in writing. These help the students to practice the learning target.

2.17 Portfolios

Another alternative assessment tool that has attracted widespread popular attention is portfolios. Portfolios are collections of student work gathered over time. The contents of portfolios can range from comprehensive coverage containing materials that are quite selective, containing only a limited number of student-selected items. Student portfolios offer a range of flexibility that makes the method attractive to a wide range of teachers and programs. Portfolio assessment offers many advantages, but Frazier and Paulson (1992) note that the primary value of portfolios is that they allow student the opportunity to evaluate their own work. Further, portfolio assessment offers students a way to take charge of their learning; it also encourages ownership, pride, and high self esteem.

2,18 Learning Logs and Journals

Learning logs and journals are tools designed to cause students to reflect on what they have learned or are learning. When used properly, they encourage student self assessment and provide a mechanism for making connections across the various subject matter areas. Herman, Aschbacher, and Winters (1992) indicated that the fundamental purpose of learning logs and journals is to "allow students to communicate directly with the teacher regarding individual progress, particular concerns, and reflections on the learning process" (p. 2).

A distinction can be made between learning logs and journals. Learning logs usually consist of short, objective entries under specific heading such as problem solving, observations, questions about content, lists of outside readings, homework assignments, or other categories designed to facilitate recordkeeping (Burke 1994). Student responses are typically brief, factual, and impersonal.

On the contrary, journals typically include more extensive information and are usually written in narrative form. They are more subjective and focus more on feelings, reflections, opinions, and personal experiences. Journal entries are more descriptive, more spontaneous, and longer than logs. They are often used to respond to situations, describe events, reflect on personal experiences and feelings, connect what is being learned with past learning, and predict how what is being learned can be used in real life (Burke 1994).

2.19 Projects

Many different types of projects can be developed to challenge students to produce something rather than reproduce knowledge on traditional tests. Projects allow students to demonstrate a variety of skills including communication, technical,

interpersonal, organizational, problem-solving, and decision making skills (Burke 1994). Projects also provide students with opportunities to establish criteria for determining the quality of the planning and design processes, the construction process, and the quality of the completed project.

2.20 Rubrics

Among the most common methods for student self-assessment are scoring rubrics. Marzano, Pickering, and McTighe (1993) have defined rubrics as "a fixed scale and list of characteristics describing performance for each of the points on the scale" (p. 10). Rubrics are scoring devices (or tools) that are designed to clarify, communicate, and assess performance. They are grading tools containing specific information about what is expected of students based on criteria that are often complex and subjective.

Rubrics typically contain two important features; they identify and clarify specific performance expectations and criteria, and they specify the various levels of student performance. In their simplest form, rubrics are checklists requiring a "yes" or "no" response.

2.21 Graphic Organizers and Concept Mapping

Graphic organizers are visual representations of mental maps using important skills such as sequencing, comparing, contrasting, and classifying. They involve students in active thinking about relationships and associations and help students make their thinking visible. Many students have trouble connecting or relating new information to prior knowledge because they cannot remember things (Burke 1994).

Teachers can help students use graphic organizers by modeling and using topics that can be easily understood. Students can develop skills in developing graphic organizers

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if they are allowed to work first in small groups and can select a topic of their choice related to the lesson content.

Although graphic organizers are learning tools, they can also effectively be used as authentic assessment tools. This provides students with a creative and engaging way of expressing what they know and are able to do.

CHAPTER THREE

METHODOLOGY

3.0 Introduction

The purpose of this chapter is to discuss the requirements of the methodology, imposed by the research questions and the theoretical framework, and the reasoned selection of appropriate methods. Specifically, it will describe the research design, population, the sample and sampling procedures, the research instruments, data collection procedures and the methods employed in analysing the data.

3.1 Research Design

The Descriptive survey study was employed in this study. As descriptive method tends to `` look at individuals, groups, institutions, methods and materials in order to describe, compare, contrast, classify, analyse and interpret the entities and the events that constitute their various fields of inquiry"(Cohen, Manion, and Morrison, 2000). According to Phillips and Burbules, the use of a quantitative approach such as surveys "does not attempt to describe the total reality about, say a classroom; rather, it seeks to develop relevant true statements" (2000, p.38).

Research design is the overall plan employed by the researcher to obtain answers to the research questions and for testing the hypothesis formulated (Agyedu et al, 2007). It should comprise "a flexible set of guidelines that connect theoretical paradigms; first, to strategies of inquiry followed by methods of collecting empirical material." (Denzin and Lincoln, 2000). It encompasses decisions about how the research is conceptualized, the conduct of the research and the type of contribution the research is intended to make to the development of knowledge in a particular field of study (Cheek, 2008). Additionally, in developing a research design, theoretical,

methodological and ethical considerations relevant to the study are taken (Cheek, 2008).

Osuala (2001) noted that: "descriptive surveys are versatile and practical, especially to the researcher in that they identify present needs" (p. 35). Descriptive research involves collecting data in order to answer questions concerning the current status of the subjects of the study. It determines and reports the way things are (Gay, 1992).

Surveys gather data at a particular point in time with the intention of describing the nature of existing conditions, or identifying standards against which existing conditions can be compared, or determining the relationships that exist between specific events (Cohen, Manion, and Morrison, 2000). Frankel and Wallen (1993) maintained that "obtaining answers from a large group of people to a set of carefully designed and administered question, lies at the heart of survey research" (p. 17). The aim of descriptive study is to describe, observe and document aspects of a situation as it naturally occurs rather than explaining them (Polit and Hungler, 1995). It provides a more convincing accurate picture of events whilst seeking to explain people's perception and behaviour on the basis of data gathered at a point. It is appropriate when a researcher attempts to describe some aspect of a population by selecting unbiased samples who are asked to complete questionnaires (Frankel & Wallen, 1993).

The descriptive design was seen appropriate for this study because it tend to lead the researcher to draw meaningful conclusions from the study. Babbie (1990) noted that it helps to generalize from a sample to a population so that inferences can be made about some characteristic, attitude, or behavior of this population. Hence, other research designs were seen inappropriate.

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Youngman (1984) states that the prime source of surveys "must be the working hypotheses and the literature survey" and this is the source employed in the development of the survey for this research.

3.2 Population

Nitko (2004) defined a population as the entire aggregation of cases that meet a designated set of criteria. The population for the study included all 1,139 teachers from 158 public early childhood centres in the Kumasi metropolis. However,120 teachers were drawn from 22 public inclusive early childhood centres in the Kumasi metropolis.

3.3 Sample and Sampling Procedure

There are 158 public early childhood centres in the Kumasi metropolis. There are 1,139 teachers: of which 568 are trained (thus have earned at least diploma in the teaching profession) whilst the other 571 are untrained (have earned senior high school certificate).

A sample size, according to Cohen, Manion and Morrison (2007) can be determined in two ways, either by the researcher exercising prudence and ensuring that the sample represents the wider features of the population or by using a table which forms a mathematical formula. The researcher adopted the former.

A sample size of 120 teachers was involved in the study from a total number of 22 public inclusive kindergartens. In all 158 public kindergartens in the Kumasi metropolis, only 22 of these schools (**APPENDIX D)** include children with intellectual disabilities in their early childhood level, thus from kindergarten to primary three. In other words, teachers have already taught children with intellectual

disabilities or have one way or the other had an engagement with them. An introduction letter from the Kumasi Metro. education office to all heads and circuit supervisors of participating schools was obtained and attached to this letter was the list of these twenty two (22) public inclusive schools.

Purposive Sampling techniques (Bryman,2016; Cresswell, 2013; Marshall & Rossman, 2011, Patton, 2015; Teddlie & Tashakkori, 2009), also called Pragmatic sampling (Emmel, 2013) was appropriately utilised in this study for selecting schools and participants who could inform the assessment practices on children with intellectual disabilities. Denscombe (2003) states that the reason for employing purposive sampling is "the researcher already knows something about specific people or events and deliberately selects particular ones because they are seen as instances that are likely to produce the most valuable data" (p.15). The idea for purposive sampling is to sample participants in a deliberate manner in that the sampled participants are relevant to the study (Bryman, 2012). Purposive sampling technique is a non-probability technique used when the researcher builds up a sample likely to satisfy certain specific needs (Cohen et al., 2007). The researcher employed the Purposive Sampling at two levels: firstly, the selection of all the twenty two (22) public inclusive schools in the region per the researcher's judgment of how useful they would be for the study; secondly, the selection of teachers from kindergarten one (1) & two (2) and primary one to three as these are the Early Childhood classes. A case was also made for Early childhood centres that had more than two kindergarten teachers.

Borg and Gall (1979) suggest that, sample sizes should be large where: only small differences or small relationships are expected or predicted and the sample is

heterogeneous in terms of the variables under study. Effective sampling therefore gives room to generalization of the findings to the targeted population making the research very practical and economical to conduct yielding more comprehensive information.

3.4 The Research Instrument

A self-designed questionnaire was used for the study. A questionnaire was used for the study because it offered the researcher the opportunity to sample the perceptions of a larger population. It also provided large amounts of data, at relatively low cost, in a short period of time. Participants were assured of anonymity and so they were more truthful in responding to the questions than they will be for instance, a personal interview, particularly when it involved sensitive or controversial issues.

Questionnaires are used to collect structured survey information, largely using closed questioning to obtain easily classifiable data about the sample. Care was therefore taken to ensure that the questions were clear and unambiguous and easy for the teachers to understand and respond accurately. Kerlinger (1973) stated that the questionnaire is widely used for collecting data in educational research because it is effective for securing factual information about practices and conditions and for enquiring into the opinions and attitudes of subjects. This will be carried out by running a survey questionnaire which endeavours to obtain some facts and opinions from respondents" practical points of view regarding teachers` assessment practices. Denscombe (2003) states that information from a questionnaire in general tends to fall into two "broad categories -„facts" and „opinions"" (p.146). Besides the easiness of coding data statistically, a questionnaire "tends to be more reliable because it is anonymous, it encourages greater honesty, it is economical in terms of time and

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money, and there is the possibility that it may be mailed" (Cohen et al., 2000). The questionnaires were designed based on Cohen, Manion, and Morrison (2013).

1. Decide the purposes/objectives of the questionnaire.

2. Decide the population and the sample (as questions about their characteristics will need to be included on the questionnaire under 'personal details').

3. Generate the topics/constructs/concepts/issues to be addressed and data required in order to meet the objectives of the research (this can be done from literature, or a pre-pilot, for example, focus groups and semi structured interviews).

4. Decide on the kinds of measures/scales/questions/responses required.

5. Write the questionnaire items.

6. Check that each issue from (3) has been addressed, using several items for each issue.

7. Pilot the questionnaire and refine items as a consequence.

8. Administer the final questionnaire (Cohen et al., 2013, p. 379)

The questionnaire was in five sections. **Section A** was on personal data of respondents such as age, gender, educational background and years of experience **section B** was on the views of teachers regarding various assessment practices they employ in assessing children with intellectual disabilities in inclusive classrooms **section C** was on the level of teacher knowledge about assessment practices in inclusive early childhood centres **section D** was on the problems faced by early childhood teachers in administering assessment tools on children with intellectual disabilities in public early childhood centres **section E** considered the assessment tools teachers employ in supporting the learning need of children with intellectual disabilities in inclusive early childhood centres.

To evaluate teachers' assessment practices on children with intellectual disabilities in inclusive public early childhood centres, the respondents were given a four point Likert scale questionnaire to respond to. The scoring was based on the four points Likert scale of measurement of Strongly Agree (SA), Agree (A), Disagree (D) and Strongly Disagree (SD). The options of the items were weighted in the Likert format with SA= 4, A = 3, D = 2 and SD = 1.

Likert scale was considered by the researcher because it has the added advantage of being relatively easy to develop. It also builds in a degree of sensitivity and differentiation of response while still generating numbers. Though Likert scales are powerful and useful in research, the researcher is not unmindful of its limitations. For instance, there is no assumption of equal intervals between the categories, hence a rating of four indicates neither that it is twice as powerful as two nor that it is twice as strongly felt. Also the researcher cannot check on whether the respondents are telling the truth since some respondents may be deliberately falsifying their replies. Also in using a Likert scale, the researcher has no way of knowing if the respondents might have wished to add any other comments about the issue under investigation.

3.5 Validity and Reliability of the Instrument

According to Fielding and Gilbert (2000), validity is the extent to which an indicator accurately measures a concept. The focus of validity is not on the instrument itself but on the interpretation and meaning of the scores derived from the instrument (Ary, Jacobs & Razavieh, 2002). That is, an indicator of some abstract concept is valid to the extent that it measures what it is purported to measure. O'leary (2004) described reliability as related to internal consistency.

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Internal consistency meant that data collected, measured or generated remained the same under expect trials. It was therefore necessary to ensure that research instruments were reliable in case the research method was repeated elsewhere in different samples. Therefore, reliability was ensured through expect judgment and pre-testing.

According to Wallen and Fraenkel (1991), the content validity and face validity of research instrument must be determined by expert judgment. Therefore, to ascertain the content validity and reliability, the items constructed in the questionnaires were shown to senior members in the Department of Early childhood Education, University of Education, including the supervisors. This was to examine: (a) whether they were related to the research questions; (b) whether they elicit the appropriate responses from the respondents; (c) whether the vocabulary structure were appropriate; (d) whether the items were properly arranged; (e) if items fitted into sections they had been placed in; and (g) whether any of the items were ambiguous and misleading. The suggestions they gave were used to improve the instrument and thereby helped to establish the face and content validity.

3.6 Pilot-Testing

The purpose of the piloting was to increase the validity and reliability of the questionnaire (Oppenheim, 1992; Morrison,1993). Cohen, Manion and Morrison (2007) elaborated that piloting involves checking for clarity of items, instructions and layout as well as to gain feedback on the questionnaire. In addition, piloting fosters the elimination of ambiguities or difficulties in wording.

The questionnaire was pre-tested in four public inclusive early childhood centres namely, Pankrono M/A primary, Santasi M/A basic, Old Tafo Methodist B and State basic 1, after series of discussions with my supervisor and other lecturers who are experts in developing research instruments. The sample for the pre-testing was 20 teachers, comprising 5 teachers from each school. The pilot study was necessary as it helped determine whether questionnaires would be understood by the sample to be surveyed or not. An introductory letter explaining the purpose of the study, soliciting co-operation of respondents and assuring them of confidentiality of information was sent to the head of teachers, circuit supervisors and head of kindergarten units for their consent and permission.

3.7 Data Collection Procedure

The researcher considered it pertinent to seek the permissions of the school for the study. To this effect, the researcher applied for introductory letters from the Early childhood department to the Kumasi Metro Education office. The researcher was asked to return a week later for emborsed letters to heads of participating schools, circuit supervisors and heads of kindergarten units, various heads to seek the permission of the headmaster and his assistant of the school for the data collection. The questionnaire was self-administered at the selected school for the study. Items in the questionnaire was clearly explained to the respondents before they were be made to provide any necessary responses to the items. This ensured consistency and appropriateness of responses of the pre-school teachers. Questionnaires were not retrieved the same day they were dispatched as some teachers were occupied as at when the items were distributed.

3.8 Data Analysis

The information that was gathered from the study using the questionnaires was checked for accuracy, clarity of expression, and completeness. The researcher saw to it that answers to questions are complete and expressions are found to be meaningful and understandable. The responses to the questionnaires was organised and analysed with respect to the research questions on which the instruments were design for the study using bar charts frequency tables and means and standard deviations. In essence, the questionnaires that was retrieved was serially numbered, coded and scored. The Statistical Product for Service Solutions (SPSS version 21.0) was used to facilitate data analysation. Ary and Jacobs (1976) noted that researchers use descriptive statistics to organize, summarize, interpret and communicate information obtained. Specific questions were formulated to allow for the investigation of the research problem. Tables were constructed to represent the four likert type scaled response subgroups of "strongly agree", "agree", "disagree", and "strongly disagree" for analysis and discussion.

3.9 Ethical Considerations

Access and approval was gained from the Department of Early Childhood (Appendix B) and the Ghana Education Service (Kumasi Metro, Appendix C) before data was gathered both in the pilot and main studies for the purposively selected research sites and participants in the Kumasi Metropolitan Education unit (Bryman, 2016; Cresswell, 2013; Yin, 2011). The whole process of inquiry was guided by ethics, and therefore did not interfere with the rights of participants (Bryman, 2016; Hesse-Bieber & Leavy, 2011).

An introductory letter was obtained from Kumasi Metropolitan Education unit to assist the researcher in having access to the subjects for data collection. The research involved participants directly, largely through uncontroversial and non-sensitive topic. The researcher collected data with the help of a questionnaire.

Another important consideration was the confidentiality of participant information. Although the questionnaires were anonymous, personal information was collected regarding age, gender and other demographic data to understand if these are influencing factors on teacher's assessment practices for children with intellectual disabilities in the Kumasi Metropolis. The questionnaires were collected a week after distribution, whiles others were taken on different days as some teachers were occupied on the days of distribution.

Another important aspect that cannot be overlooked in the ethics of data consideration is Informed consent. The researcher met the participants and explained to them the need to participate in this research. They also had the option to opt out of the research without any fear of intimidation from either the researcher or the headmaster/mistress or the circuit supervisor. Hence, the participants voluntarily gave their consent to participate.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.0 Introduction

This chapter presents the results of the analysis of the questionnaire data based on the purpose of the study. The purpose of the study was to explore the various assessment practices early childhood teachers employ in assessing children with intellectual disabilities in inclusive classrooms in selected early childhood centers within the Kumasi metropolis. The analysis and interpretation of data were carried out based on the results of the four (4) research questions set for the study. The analysis was based on the 95% return rate data obtained from 120 public inclusive early childhood teachers in the Kumasi metropolis. The quantitative data were analyzed using descriptive statistics (mean statistic -MS, standard deviations-SD, frequencies-F, and percentages-P). The first part of this chapter describes the demographic characteristics of the 120 public early childhood teachers in the Kumasi metropolis. In the second part, the research findings are presented based on the research questions formulated for the study.

4.1 Description of Respondents

This section on the questionnaire (Biographical) discusses the background information of the respondents. These include the respondents' gender, age, and department of lecturing. Table 1 shows the distribution of the respondents their biographical information.

Table 1: Demographic Characteristics of the Respondents

Variables	Subscale	Freq.	Percent %
Gender	Male	43	35.8
	Female	77	64.2
Educational level	SHS	09	7.50
	Dip	86	71.6
	B.Ed	16	13.3
	M.Ed	02	1.66
	MA	01	0.83
	MSC	00	00.0
	M. Phil	06	5.00
Number of years of teaching	0-5	29	24.2
	6-10	84	70.0
	11-15	06	5.00
	16-20+	01	0.83
Teachers encounter children with intellectual disabilities	Yes	106	88.3
	No	14	11.6

Source: Field Data, (2019)   n=120

As presented in Table 1, the results show that majority of the teachers were females (n=77, 64.2%). The males` public early childhood teachers in the Kumasi metropolis were the least (n=43, 35.8%). On the basis of educational level, most of the public early childhood teachers in the Kumasi metropolis teach with diploma degree (n=86, 71.6%).

In relation to the number of years of teaching, the results suggested that most of them had taught for 6-10 years (n=84, 70.0%). One had taught for 16 – 20+ (n=01, 0.83%). The results further confirmed that most of the teachers have had an encounter with children with intellectual disabilities (n=106, 88.3%).

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How the Descriptive Results addressed the Research Questions (RQ1-RQ4)

To gather evidence for the study, the selected 120 public early childhood teachers in the Kumasi metropolis were made to rate their responses using Strongly Agree, Agree, Disagree and Strongly Disagrees. Using means, the scales were scored as (Strongly Agree =4, Agree =3, Disagree= 2 and Strongly Disagree =1). The criterion score of 2.50 was established for the scales. To obtain the criterion score (CS=2.50), the scores were added together and divided by the number scales (that is…...4+3+2+1=   10/4=2.50).   To   understand   the   mean scores, **positive** items/statements on assessment practices of public kindergartens teachers in the Kumasi metropolis that scored a mean of **0.00 to 2.49** were regarded as low practice. Those items/statements that scored a mean from **2.50 to 4.00** regarded as high assessment practices. These analysis were done with the use of means, standard deviations and Kurtosis. These analysis and interpretation were applicable to all the research questions.
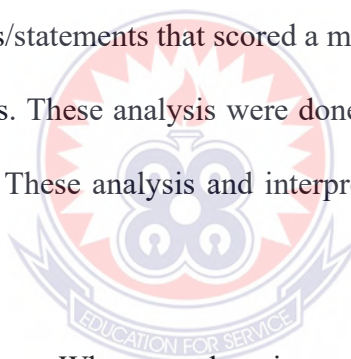
Research Question One: What are the views of teachers regarding assessment practices for children with intellectual disabilities in inclusive classrooms in the Kumasi metropolis?

Reading previous works, pieces of evidence suggest that public early childhood teachers could have some view about assessment practices and how they employ it in assessing children with intellectual disabilities in inclusive classrooms. This made the researcher ascertain how inclusive public early childhood teachers in the Kumasi metropolis viewed assessment practices and how they employ it in assessing children with intellectual disabilities in inclusive classrooms. The results for the study are presented in Table 2.

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Table 2: Views of Public early Childhood Teachers on Assessment Practices in the

Kumasi Metropolis.

Statements	MS	SD Std. Error	Kurtosis Statistic	MR
		Criterion Score =2.50		
I have adequate knowledge of testing and measurement for pupils with intellectual disabilities	3.88	.724	.101	1st
I view classroom assessment as an added requirement to my teaching profession	3.78	.687	.588	2rd
I am interested in assessing students' mastery or achievement and that performance assessment is used frequently	3.48	.631	.688	3rd
I have diverse assessment and grading practices for pupils with intellectual disabilities in the inclusive classrooms	3.17	.531	.620	4th
Assessment is a tool to improve effective teaching and learning in the inclusive classroom	3.14	.506	.189	5th
I do not follow many assessment practices recommended	1.74	.649	.147	6th

Source: Field Data (2019)   (RS=120)

Key: M= Mean, SD =Standard Deviation, MR=Means Ranking, RS=Retrieved

Sample

Table 2 presents results on public early childhood teachers and their view about

assessment practices and how they employ it in assessing children with intellectual

disabilities in inclusive classrooms. Starting with the Kurtosis values, the results show

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that the variables follow a normal distribution. This is based on the reason that the kurtosis values were within the acceptable limit for normal distribution of ±2 (George & Mallery, 2011). This indicates that the data was normal and as such the descriptive statistics were deemed appropriate for the analysis.

From the descriptive analysis, the results indicate that, generally, most inclusive public early teachers in the Kumasi metropolis have a positive view about assessment practices and confirm to employ it in assessing children with intellectual disabilities in inclusive classrooms.

For example, most of the inclusive public early childhood teachers in the Kumasi metropolis indicated that they have adequate knowledge of testing and measurement for pupils with intellectual disabilities *(M=3.88>CS (2.50), SD=.724, K=.101, n=120)* and this explains that most of the teachers have a positive view about assessment practices by having adequate knowledge of testing and measurement for pupils with intellectual disabilities.

In another results, most of the public early childhood teachers in the Kumasi metropolis pointed out they view classroom assessment as an added requirement to their teaching profession *(M=3.78 >CS (2.50), SD=.687, K=.588, n=120)* and this could elucidate that majority of the public early childhood teachers in the Kumasi metropolis see classroom assessment as an added requirement to their teaching profession and this could influence how they assess children with intellectual disabilities in inclusive classrooms.

The teachers were again of the view that they have diverse assessment and grading practices for pupils with intellectual disabilities in inclusive classrooms *(M=3.17 >CS*

(2.50), SD=.531, K=.620, n=120). It was again found that most teachers view assessment as a tool to improve effective teaching and learning in the inclusive classroom and this could have an impact on how they assess children with intellectual disabilities in inclusive classrooms *(M=3.14 >CS (2.50), SD=.506, K=.189, n=120).*

Lastly, it was found that few of the Inclusive public early childhood teachers in the Kumasi metropolis do follow many assessment practices recommended in assessing intellectual disabilities in inclusive classrooms *(M=1.74 >CS (2.50), SD=.649, K=.147, n=120).*

The results lend ample support to the work of Dean (1999), who asserted that most teacher education programs skim over classroom assessment, leaving early childhood teachers to assess in the way they were assessed when they were in school. Campbell and Evans (2000) evaluated pre-service teacher who had completed course work in educational measurement and found that early childhood teachers did not follow many assessment practices recommended. The National Council of Teachers of Mathematics, NCTM, (2000) held that assessment has the potential to enhance mathematics learning and to promote students' interest in mathematics.

Similarly, McMillan, Myran, and Workman (2002) in their study, aimed at describing the nature of classroom assessment and grading practices, found that early childhood teachers were most interested in assessing students' mastery or achievement and that performance assessment was used frequently. Morgan and Watson (2002) reported that most middle and high school teachers use teacher-constructed tests to assess students' achievement. In addition, Morgan and Watson found that most early childhood teachers view classroom assessment as an added requirement to their teaching job and not as a tool to improve their teaching.

Cooney (1992) reported a strong link between assessment and grading in the minds of high school early childhood teachers. That the latter is the product of the former. A study conducted by Gurski (2008) in Canada, examined secondary classroom early childhood teachers' assessment and grading practices in one urban school division. It compared the assessment practices of ten elementary early childhood teachers over a period of 11 weeks with Ohio's fourth and sixth-grade science Proficiency Tests. Evidence from the survey demonstrated that early childhood teachers in inclusive schools have diverse assessment and grading practices and that they have begun to explore the potential for assessment to assist all students in their learning

In another study, by Chapman (2011) in New Zealand, on the assessment practices of early childhood teachers in New Zealand outdoor education tertiary programs, it was found that early childhood teachers were generally highly skilled outdoor education practitioners; however, there were indications that there were gaps of understanding of theoretical assessment concepts. Early childhood teachers seemed to find summative assessment challenging but they routinely used formative assessment to promote learning and worked hard at providing quality opportunities for learning.

From the discussions above, the problem with early childhood teachers in inclusive classrooms has neither been the availability of a clear roadmap as to how to assess children with intellectual disability nor the lack of knowledge to effectively assess these children, but the will to put into action what has been learned in their colleges and universities. Though some tend to be selective with what they are capable enough of using, this however does not augur well for effective teaching and learning as a good assessment must be wholistic in nature and should not only take one form.

Again, many early childhood teachers in inclusive classrooms will trade *product* for *process*. Though the reverse will seek to serve the child well. Teachers are only interested in the performance of these young ones not paying much attention to the little progress chopped every day. The situation worsens when the results from these assessment are used for grading. Wherever there is grading, there is competition: wherever there is competition there is no serene atmosphere to bring out the best from the child with intellectual disability.

Research Question Two: What is the level of teacher knowledge about assessment practices in inclusive early childhood centres in the Kumasi metropolis?

It must be established that any teacher teaching in public early childhood teachers could have some education in assessment practices in inclusive education. This motivated the researcher to find out the level of teacher knowledge about assessment practices in inclusive early childhood centres in the Kumasi metropolis. The accumulated results are presented in Table 3.
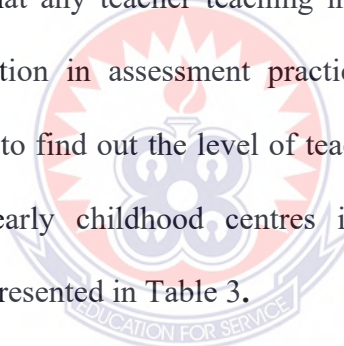
Table 3: Level of Teacher Knowledge about Assessment Practices in Inclusive
Education

Statements	MS	SD Std. E	Kurtosis Statistic	MR
		Criterion Score =2.50		
I am knowledgeable in the content area I teach, as I am able to set and apply learning intentions consistent with content and depth of the curriculum goals.	3.97	.671	.698	1st
My involvement in the design, use, and scoring of performance-based assessments has the potential to powerfully link instruction, assessment, pupils` learning, and teacher professional development.	3.86	.347	.588	2nd
I can use Assessment need to develop valid grading procedures for pupils with intellectual disabilities in the inclusive classroom.	3.84	.687	.138	3rd
I am skillful in analyzing assessment type methods, and skillful in providing meaningful feedback on pupils works in the inclusive classroom.	3.81	.565	.620	4th
I am aware that effective assessment depends on teachers' knowledge due to the continual interaction between teachers and pupils	3.77	.454	.101	5th
I am capable of choosing and developing methods appropriate for assessment practices suitable for pupils with intellectual disabilities in the inclusive classroom	3.69	.714	.171	6th
I understand the purposes of the assessment type, and am able to apply it	3.67	.501	.151	7th
I possess the strategies for communicating the expectations of the learning intentions to pupils with intellectual disabilities	3.59	.649	.147	8th
I am able to apply educational decisions made out from classroom assessments for pupils with intellectual disabilities	3.54	.449	.147	9th
I am capable of administering, scoring and interpreting assessment results for educational decisions	3.48	.671	.688	10th
I am able to communicate assessment information to pupils to motivate them to learn and understand the legal and ethical issues in the classroom assessment practices	3.44	.506	.189	11th

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I have the ability to develop scoring schemes to quantify pupils performance for making informed educational decisions, and skillful in administering external assessments and interpreting their results	3.24	.206	.123	12th
Mean of means/Std.D	3.66	.532	.313	

Source: Field Data (2019)   (RS=120)

Key: M= Mean, SD =Standard Deviation, MR=Means Ranking RS=Retrieved Sample

Table 3 depicts the results on the level of teacher knowledge about assessment practices in inclusive education. Reporting on the Kurtosis values, the results show that the variables follow a normal distribution. This is based on the reason that the kurtosis values were within the acceptable limit for normal distribution of ±2 as suggested by George and Mallery (2011). This indicates that the data was normal and as such the descriptive statistics were deemed suitable for the analysis.

Observing the descriptive analysis (Ms and SDs), the results give ample indication to settle that largely, most public early childhood teachers in the Kumasi metropolis have knowledge about assessment practices in inclusive education. This was evident after most of the items scored a mean greater than then Criterion Score (>CS).

Dwelling on the individual items, most of the public early childhood teachers in the Kumasi metropolis indicated that they are knowledgeable in the content area they teach, as they are able to set and apply learning intentions consistent with content and depth of the curriculum goals *(M=3.97>CS (2.50), SD=.671, K=.698, n=120).*

The majority further asserted that their involvement in the design, use, and scoring of performance-based assessments has the potential to powerfully link instruction, assessment, pupils` learning, and teacher professional development *(M=3.86>CS*

(2.50), SD=.347, K=.588, n=120). This explains why most of them have knowledge about assessment practices in inclusive education.

In another evidence, it was found that most of the Inclusive public early childhood teachers in the Kumasi metropolis can use assessment need to develop valid grading procedures for pupils with intellectual disabilities in the inclusive classroom *(M=3.84>CS (2.50), SD=.687, K=.138, n=120)*. This elucidates why most of them have knowledge about assessment practices in inclusive education.

The results further show that majority of the Inclusive public early childhood teachers in the Kumasi metropolis are skillful in analyzing assessment type methods, and skillful in providing meaningful feedback on pupils` work in the inclusive classroom *(M=3.81>CS (2.50), SD=.565, K=.620, n=120)*. This explicates why most of them have knowledge about assessment practices in inclusive education.

The teachers further confirmed that they are aware that effective assessment depends on teachers' knowledge due to the continual interaction between teachers and pupils *(M=3.77>CS (2.50), SD=.454, K=.101, n=120)*. Others were of the view that they are capable of choosing and developing methods appropriate for assessment practices suitable for pupils with intellectual disabilities in the inclusive classroom *(M=3.69>CS (2.50), SD=.714, K=.171, n=120)*.

The majority of the Inclusive public early childhood teachers in the Kumasi metropolis indicated they understand the purposes of the assessment type and are able to apply it *(M=3.67>CS (2.50), SD=.501, K=.151, n=120)*. Others were of the view that they possess the strategies for communicating the expectations of the learning

intentions to pupils with intellectual disabilities *(M=3.59>CS (2.50), SD=.649, K=.147, n=120).*

The results support the ideas of Brookhart (2011) who proposed assessment knowledge and skills for teachers by emphasizing that, teachers need to understand learning in the content area they teach, be able to set and apply learning intentions consistent with content and depth of the curriculum goals, and possess the strategies for communicating the expectations of the learning intentions to students.

Similarly, Brookhart (2011), pointed out that teachers need to also understand the purposes of the assessment type, and be able to apply it, be skillful in analyzing assessment type methods, be skillful in providing meaningful feedback on student work. Again, teachers need to have the ability to develop scoring schemes to quantify student performance for making informed educational decisions, be skillful in administering external assessments and interpreting their results. Furthermore, teachers need to be able to apply educational decisions made out from classroom assessments, be able to communicate assessment information to students to motivate them to learn, and understand the legal and ethical issues in the classroom assessment practices.

Recognizing the need for teachers to possess adequate knowledge in educational assessment, Plake and Impara (1992) developed an instrument titled the "Teacher Assessment Literacy Questionnaire (TALQ)" consisting of 35 items to measure teachers' assessment literacy. The TALQ was based on the Standards for Teacher Competence in Educational Assessment of Students (AFT, NCME, & NEA, 1990).

In his discussion of the assessment knowledge, Popham (2006) asserted the need for a continuous in-service assessment training aligned with the assessment realities. In a survey of assessment knowledge of purposively sampled 69 teacher candidates in Bangladesh by adapting Teacher Assessment Knowledge Questionnaire, Volante and Fazio (2007) found that the self-described levels of assessment knowledge remained relatively low for the candidates across the four years of the teacher education program.

From the foregone discussions, for a teacher to have adequate knowledge about assessment practices in inclusive classroom, he/she must possess some qualities and capabilities, as spelt out by Brookhart (2011). Among these qualities; teachers need to understand learning in the content area they teach, be able to set and apply learning intentions consistent with content and depth of the curriculum goals, and possess the strategies for communicating the expectations of the learning intentions to students. Evidence from the table shows that teachers in Inclusive public kindergartens in the Kumasi Metropolis possessed these qualities.

The capabilities on the other hand include; understanding the purposes of the assessment type, and being able to apply it, being skillful in analyzing assessment type methods, being skillful in providing meaningful feedback on student work. Besides, teachers need to have the ability to develop scoring schemes to quantify student performance for making informed educational decisions, be skillful in administering external assessments and interpreting their results. Furthermore, teachers need to be able to apply educational decisions made out from classroom assessments, be able to communicate assessment information to students to motivate them to learn, and understand the legal and ethical issues in the classroom assessment

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practices. Evidences from the table show that teachers from the inclusive public kindergartens in the Kumasi metropolis fell short of these capabilities as many of them were not able in applying educational decisions made out from classroom assessments for pupils with intellectual disabilities. Also, not capable of administering, scoring and interpreting assessment results for educational decisions and unable to communicate assessment information to pupils to motivate them to learn and understand the legal and ethical issues in the classroom assessment practices. Lastly, teachers inability to develop scoring schemes to quantify pupils performance for making informed educational decisions, and skillful in administering external assessments and interpreting their results.

Research Question Three: What are the problems faced by early childhood teachers in administering assessment tools on children with intellectual disabilities in public early childhood centres in the Kumasi metropolis?

Literature gives evidence to believe that pre-school teachers may face some problems in administering assessment tools on children with intellectual disabilities. This gave the researcher the urge to assess these challenges in the case of inclusive public early childhood centres in the Kumasi metropolis. The gathered results from the teachers are presented in Table 4.

Table 4: Problems Faced by early Childhood Teachers in Administering

Assessment Tools on Children with Intellectual Disabilities

Statements	MS	SD Std. E	Kurtosis Statistic	MR
	Criterion Score =2.50			
I am faced with limited materials/resources to conduct the assessment in schools	3.87	.714	.432	1st
I am not confident enough to try out authentic assessments like portfolios, learning logs, journals, projects graphic organizers, concept mapping and rubrics due to inadequate professional guidance	3.84	.575	.620	2nd
I am faced with limited time to create/develop authentic assessment tools like portfolios, learning, logs, journals, projects graphic organizers, concept mapping and rubrics	3.70	.832	.431	3rd
Assessments take more time to administer, score and report back the results.	3.62	.642	.505	4th
Portfolios, learning logs, journals, projects graphic organizers, concept mapping and rubric delay the pupils in completing topics in their syllabuses	3.54	.543	.612	5th
I am restricted to try other assessment tools like journals, projects, graphic organizers, concept mapping and rubrics due to examination policies in schools	3.37	.524	.643	6th
Some early childhood teachers have limited knowledge of different forms of assessment in the inclusive classroom	3.23	.635	.123	7th
Mean of means/Std.D	3.59	.637	.481	

Source: Field Data (2019)   (RS=120)

Key: M= Mean, SD=Standard Deviation, MR=Means Ranking, RS=Retrieved Sample

Table 4 shows results on problems faced by early childhood teachers in administering assessment tools on children with intellectual disabilities. Observing the Kurtosis values, the results show that the study variables follow a normal distribution. This is based on the reason that the kurtosis values were within the acceptable limit for normal distribution of ±2. This, therefore implies that the data was normal and as such the descriptive statistics were deemed right for the analysis.

Inferring from the descriptive analysis (Ms & SDs)**,** the results show that fundamentally, most inclusive public early childhood teachers in the Kumasi metropolis are faced with many problems that hinder them in their quest to administer assessment tools on children with intellectual disabilities. This was evident after most of the items scored a mean greater than then Criterion Score (>CS).

Considering the individual items on the challenges, most of the inclusive public early childhood teachers in the Kumasi metropolis averred that they are faced with limited materials/resources to conduct the assessment in schools *(M=3.87>CS (2.50), SD=.714, K=.432, n=120).*

In another results, it was espoused that most of the inclusive public early childhood teachers in the Kumasi metropolis do not have confidence enough to try out authentic assessments like portfolios, learning logs, journals, projects graphic organizers, concept mapping and rubrics due to inadequate professional guidance and pose a challenge and problem in their quest to administer assessment tools on children with intellectual disabilities *(M=3.86>CS (2.50), SD=.575, K=.620, n=120).*

In another result, it was found that most of the Inclusive public early childhood teachers in the Kumasi metropolis are faced with limited time to create/develop authentic assessment tools like portfolios, learning, logs, journals, projects graphic organizers, concept mapping and rubrics and this probably pose a challenge in their pursuit to administer assessment tools on children with intellectual disabilities *(M=3.70>CS (2.50), SD=.832, K=.431, n=120).*

Another challenge was that the assessments take more time to administer, score and report back the results *(M=3.62>CS (2.50), SD=.642, K=.505, n=120).* The inclusive public early childhood teachers in the Kumasi metropolis further shared the similar sentiment that Portfolios, learning logs, journals, projects graphic organizers, concept mapping and rubric delay the pupils in completing topics in their syllabuses *(M=3.54>CS (2.50), SD=.543, K=.612, n=120).*

Evaluating the teachers responses, it was shown that most inclusive public early childhood teachers in the Kumasi metropolis are restricted to try other assessment tools like journals, projects graphic organizers, concept mapping and rubrics due to examination policies in schools and this pose a challenge in their pursuit to administer assessment tools on children with intellectual disabilities *(M=3.37>CS (2.50), SD=.524, K=.643, n=120).*

Finally, it was asserted by the teachers that some early childhood teachers have limited knowledge of different forms of assessment in the inclusive classroom and this serves a challenge in their pursuit to administer assessment tools on children with intellectual disabilities *(M=3.23>CS (2.50), SD=.635, K=.123, n=120).*

The results from the present study lend support to the work of Eshun, Kankam, Bordoh, Bassaw & Korang,(2014) who conducted a study to investigate the influence of authentic assessment on classroom practices of early childhood teachers and the challenges they encounter in the Social Studies classroom in Ghana. The results of Eshun et al. (2014) found out that the forms of authentic assessment some early childhood teachers used in their classrooms were limited due to examination policies, time, resources and assessment methods employed by their schools. Furthermore, they revealed that most early childhood teachers they observed were not using assessment techniques that involved students in the teaching and learning process. Again, they indicated that some early childhood teachers revealed that using the authentic assessment would delay them in completing topics in their syllabuses given to them.

The results further agree with assertions of Segers, Dochy and Cascallar, (2003) who posited that assessment is challenged in terms of the knowledge required to learn and execute. As the role of student assessment is changing today, it is largely because today's children face a world that demands new knowledge and abilities, and the need to become life-long learners in a world that demand competences and skills not yet defined.

The results from this study confirms that of Reeves (2007), who indicated that assessment challenge, at both the district and school levels, is to develop the capacity of classroom early childhood teachers evaluation of students work in shared and common ways, often using established rubrics or scoring criteria to evaluate products and performances. The results are often complex and nuanced. The student's work on such tasks is typically neither right nor wrong, but rather, combines a variety of strengths and areas needing improvement. Such evaluations can inform summative

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judgments, but, most fruitfully, they provide formative instructional guidance, challenging early childhood teachers to use the results to help students take the next steps towards excellence.

In summary, a wholistic assessment takes time as it is not seen from only a facet, rather all facets. Hence, it demands time and patience. In spite of the evidence that teachers in inclusive public early childhood in the Kumasi metropolis face problems in administering assessment tools on children with intellectual disabilities, their main bane has been the strictness of following the curriculum without any room for adjustment or flexibility. Curriculum developers must see to it that there is always the need for adjustment tailored towards a wholistic assessment.

Research Question Four: What are the assessment tools teachers employ in supporting the learning needs of children with intellectual disabilities in inclusive early childhood centres in the Kumasi metropolis?

To achieve the purpose of the study, evaluating assessment tools teachers employ in supporting the learning need of children with intellectual disabilities in inclusive public early childhood classroom fit for the study. The collected results from the public early childhood's teachers in the Kumasi metropolis are presented in Table 5.

Table 5: **Assessment Tools Teachers Employ in Supporting the Learning Need of Children with Intellectual Disabilities in Inclusive Schools.**

Statements	MS	SD Std. E	Kurtosis Statistic	MR
			Criterion Score =2.50	
I use learning logs in assessing pupils with intellectual disabilities	3.64	.456	.451	1st
I use portfolios in assessing pupils with intellectual disabilities	3.43	.545	.455	2nd
I use paper and pencil test tool in assessing pupils with intellectual disabilities	3.34	.616	.545	3rd
I use projects in assessing pupils with intellectual disabilities	3.29	.824	.126	4th
I use graphic organizers in assessing pupils with intellectual disabilities	3.27	.707	.223	5th
I use journals in assessing pupils with intellectual disabilities	3.23	.356	.864	6th
I use rubrics in assessing pupils with intellectual disabilities	3.02	.746	.521	7th
I use concept mapping in assessing pupils with intellectual disabilities	2.92	.345	.534	8th
Mean of means/Std.D	3.59	.637	.481	

Source: Field Data (2019)   (RS=120)

Key: M= Mean, SD=Standard Deviation, MR=Means Ranking, RS=Retrieved Sample

Table 5 gives evidence to results on the assessment tools teachers employ in

supporting the learning needs of children with intellectual disabilities in inclusive

schools. Assessing the Kurtosis values, the results show that the study variables follow a normal distribution. This is grounded on the reason that the calculated kurtosis values in Table 5 were within the acceptable limit for normal distribution of ±2. This, therefore, implies that the data was normal and as such the descriptive statistics were deemed exact for the analysis.

From the descriptive analysis (Ms & SDS)**,** the results show that essentially, most inclusive public early childhood teachers in the Kumasi metropolis employ assessment tools in supporting the learning needs of children with intellectual disabilities in inclusive education. This was confirmed after most of the items scored a mean greater than then Criterion Score (>CS).

Narrowing the interpretation to the individual items, most of the Inclusive public kindergarten teachers in the Kumasi metropolis affirmed to use learning logs in assessing pupils with intellectual disabilities *(M=3.64>CS (2.50), SD=.456, K=.451, n=120).*

The majority confirmed the use of portfolios in assessing pupils with intellectual disabilities *(M=3.43>CS (2.50), SD=.545, K=.455, n=120).* Others confirmed they used paper and pencil test tool in assessing pupils with intellectual disabilities *(M=3.34>CS (2.50), SD=.616, K=.545, n=120).*

Another tool that was used was projects in assessing pupils with intellectual disabilities *(M=3.29>CS (2.50), SD=.824, K=.126, n=120).* The use of graphic organizers in assessing pupils with intellectual disabilities was not left out *(M=3.27>CS (2.50), SD=.707, K=.223, n=120).* Finally, it was asserted that they use

journals in assessing pupils with intellectual disabilities *(M=3.23>CS (2.50), SD=.356, K=.864, n=120).*

The results agree with the claims of Tamakloe, Amedahe and Atta (2005) who pointed out that assessment techniques include, but are not limited to paper and pencil tests and performance task. Other means of assessing students are through the responses of students in class, homework performance, and observation of students, interviews/conferences with students, students' presentations and portfolios.

In summary, evidence from this study shows that the least assessment tools employ by most teachers in the inclusive public early childhood in the Kumasi metropolis are the Concept mapping, rubrics, journals and graphic organizers. Possible factors may include; lack of adequate knowledge on the part of teachers to effectively employ these assessment tools in the inclusive public early childhood in the Kumasi metropolis. Also, time constraints. As these assessment tools will involve much time and patience. Besides, it could be that the curriculum was strict that teachers could not employ any of the above assessment tools in order to go against the curriculum.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

The concluding chapter of this study opens with a summary of the objectives of the study, its methodology and data analysis techniques. It proceeds with a summary of the key findings pertaining to each objective and the conclusions drawn from them. Specific recommendations from the findings and conclusions are made to stakeholders for decision making.

5.1 Summary of the Study

The study was a descriptive survey that investigated assessment practices kindergarten teachers employ in assessing children with intellectual disabilities in inclusive classrooms within selected early childhood centers the Kumasi metropolis. The study was primarily aimed at exploring the views of early childhood teachers regarding assessment practices in use in inclusive early childhood centres of the Kumasi metropolis. Also, examined the level of teacher knowledge about assessment practices in inclusive early childhood centres in the Kumasi metropolis. In concluding, examined the problems faced by early childhood teachers in administering assessment tools on children with intellectual disabilities in inclusive early childhood centres in the Kumasi metropolis and investigated the assessment tools teachers employ in supporting the learning needs of children with intellectual disabilities in inclusive early childhood centres in the Kumasi metropolis.

The study was conducted in the Ashanti Region of Ghana. A sample of 120 public early childhood teachers in the Kumasi metropolis was randomly selected from a total number of 71 public early childhood centres. The purposive sampling technique was

used to select the teachers. A self-developed questionnaire was the main instrument for data collection. The data collected were analyzed mainly by frequency and percentage tables and means and standard deviations.

5.2 Key Findings

From objective one, results gave evidence that generally, most public early childhood teachers in the Kumasi metropolis have a positive view about assessment practices and confirm to employ it in assessing children with intellectual disabilities in inclusive classrooms.

Assessing the objective two, it was evident that most public early childhood teachers in the Kumasi metropolis have knowledge about assessment practices in inclusive education.

In objective three, it was found that most public early childhood teachers in the Kumasi metropolis are faced with many problems that hinder them in their quest to administer assessment tools on children with intellectual disabilities in inclusive public schools. Some of which were the limited materials/resources to conduct the assessment in schools, the lack of confidence to try out authentic assessments like portfolios, learning logs, journals, projects graphic organizers, concept mapping and rubrics due to inadequate professional guidance and the limited time to create/develop authentic assessment tools like portfolios, learning, logs, journals, projects graphic organizers, concept mapping and rubrics.

Finally, it was revealed that most inclusive public early childhood teachers in the Kumasi metropolis employ assessment tools in supporting the learning need of children with intellectual disabilities in inclusive education.

5.3 Conclusions

It was evident from the findings of the study that Inclusive public early childhood teachers in the Kumasi metropolis were well equipped with assessment practices. Teachers having such a sensitive responsibility of assessing and making decisions concerning childrens' academic progress are expected to be professional in the process of achieving testing strategies. However, they were hindered by many factors that retired their assessment practices.

5.4 Recommendations

With respect to the findings resulting from the study, the following recommendation is made:

- More workshops and in-service training should be organized to inclusive public early childhood teachers in the Kumasi metropolis with respect to how to follow recommended assessment practices, choose and develop methods appropriate for assessment practices suitable for pupils with intellectual disabilities in the inclusive classrooms. This could be achieved through the collaboration of the ministry of education, the institute of education and other stakeholders of education.

- The teacher division should also make it a point to equip the teachers with skills with regard to their ability to develop scoring schemes to quantify pupils` performance for making informed educational decisions. This is because assessment practices form an integral part of the teaching profession since it is the most widely used as a channel for assessing students in Ghana.

- Teachers should also be sensitized on regular basis on the importance of their assessment practices with regard to construction, administration, and scoring of tests by the Teacher Education(TEd) and the Special Education(SpEd)

divisions. Teachers should know about the implication of their assessment practices and its effect on validity and reliability which will adversely affect how decisions are made on their students. This could be achieved through effective supervision from the office of the education directorate.

- Following most of the principles of assessment practices, teachers be made to employ extra time to enable them to assess their pupils. That is public early childhood teachers in the Kumasi metropolis should, therefore, be encouraged by the stakeholders` given allowances as a motivation to follow the right procedures. There is also the need to provide enough physical structures with respect to building classrooms, providing desks among others to aid effective administration of tests.

- Finally, there is also the need to employ more teachers at the various public early childhood teachers in the Kumasi metropolis to reduce the workload with respect to class size.
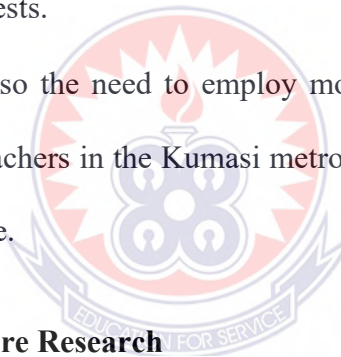
5.5 Suggestions for Future Research

The following are suggested for future research:

- A study needs to be carried out to look at the perception of teachers in assessment practices and their effect on their practices.

- A study can also be carried out to look at the perception of children and parents alike in teachers` assessment practices and their effects on these practices.

- A study can further be replicated to cover a wide range of the population to establish the extent to which teachers in Ghana follow the basic principles of test construction, administration, and scoring.

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APPENDIX A

UNIVERSITY OF EDUCATION, DEPARTMENT OF EARLY CHILDHOOD EDUCATION

QUESTIONNAIRE FOR TEACHERS OF PUBLIC INCLUSIVE SCHOOLS IN THE KUMASI METROPOLIS

Dear respondent, I am a student of University of Education, Winneba, offering M. Phil (Early Childhood Education) programme in the Department of Early childhood Education. I am conducting a study on the topic: Teachers' assessment practices for children with intellectual disabilities in inclusive classrooms in selected public inclusive schools in the Kumasi metropolis. I would be grateful if you could respond to the following items appropriately to enable me find answers to the study. The confidentiality and anonymity of your responses are assured. The information you provide will be used for academic purpose only. Thank you.

Section A: Background Information

Instruction: Please, tick (√) the response which corresponds with your background information.

1. Gender: Male [   ] Female [   ]

2. Educational level:

SHS [ ] Dip. [ ] B. Ed [ ] M. Ed [ ] MA [ ] MSC [ ] M. Phil [ ]

Any other? (Please specify)..

3. What class (es) do you teach? ....

4. Number of children with intellectual disabilities in your classroom................

5. Number of years of teaching in the inclusive classroom(s).

0 – 5 [ ] 6 – 10 [ ] 11 – 15 [ ] 16 – 20+ [ ]

6. Aside teaching hours, have you had any encounter with children with intellectual disabilities? Yes [   ]   No [   ]

Section B: Teachers' views regarding various assessment practices.

Instruction: Below is a table to be completed. It involves statements about your views regarding various assessment practices you employ in assessing children with intellectual disabilities in inclusive classrooms on a 4 point scale of SA, A, D and SD. The letters stand for the following; SA (strongly agree), A (agree), D (disagree), SD (strongly disagree)

For each of the statements, indicate with a tick (√) the one that best reflects your views.

	Statements	SA	A	D	SD
	I do not follow many assessment practices recommended				
	I have adequate knowledge of testing and measurement for pupils with intellectual disabilities				
	I am interested in assessing students' mastery or achievement and that performance assessment is used frequently				
	I view classroom assessment as an added requirement to my teaching profession				
	I have diverse assessment and grading practices for pupils with intellectual disabilities in the inclusive classrooms				
	Assessment is a tool to improve effective teaching and learning in the inclusive classroom				

Section C: Level of teacher knowledge about assessment practices in inclusive early childhood centres

	Statements	SA		D	SD
	I am capable of choosing and developing methods appropriate for assessment practices suitable for pupils with intellectual disabilities in the inclusive classroom				
	I can use Assessment need to develop valid grading procedures for pupils with intellectual disabilities in the inclusive classroom.				
	I am knowledgeable in the content area I teach, as I am able to set and apply learning intentions consistent with content and depth of the curriculum goals.				
•	I understand the purposes of the assessment type, and am able to apply it				
•	I have the ability to develop scoring schemes to quantify pupils performance for making informed educational decisions, and				

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	skilful in administering external assessments and interpreting their results			
	I am able to apply educational decisions made out from classroom assessments for pupils with intellectual disabilities			
	I am aware that effective assessment depends on teachers' knowledge due to the continual interaction between teachers and pupils			
	My involvement in the design, use, and scoring of performance-based assessments has the potential to powerfully link instruction, assessment, pupils` learning, and teacher professional development.			
	I am capable of administering, scoring and interpreting assessment results for educational decisions			
•	I am skilful in analyzing assessment type methods, and skilful in providing meaningful feedback on pupils work in the inclusive classroom			
	I am able to communicate assessment information to pupils to motivate them to learn and understand the legal and ethical issues in the classroom assessment practices			
	I possess the strategies for communicating the expectations of the learning intentions to pupils with intellectual disabilities			

Section D: Problems faced by teachers in administering assessment tools on children with intellectual disabilities in public early childhood centres

	Statements	SA	A	D	SD
	Portfolios, learning logs, journals, projects graphic organizers, concept mapping and rubri delay the pupils in completing topics in their syllabuses				
	Some early childhood teachers have limited knowledge of different forms of assessment in the inclusive classroom				
	I am faced with limited time to create/develop authentic assessment tools like portfolios, learning ,logs, journals, projects graphic organizers, concept mapping and rubrics				
	I am not confident enough to try out authentic assessments like portfolios, learning logs, journals, projects graphic organizers, concept mapping and rubrics due to inadequate professional guidance				
	I am restricted to try other assessment tools like journals, projects graphic organizers, concept mapping and rubrics due to examination policies in schools				
•	I am faced with limited materials/resources to conduct the assessment in schools				
•	Assessments take more time to administer, score and report back the results.				

Section E: Assessment tools teachers employ in supporting the learning need of children with intellectual disabilities in inclusive early childhood centres

	Statements	SA	A	D	SD
•	I use paper and pencil test tool in assessing pupils with intellectual disabilities				
•	I use portfolios in assessing pupils with intellectual disabilities				
•	I use learning logs in assessing pupils with intellectual disabilities				
•	I use journals in assessing pupils with intellectual disabilities				
•	I use graphic organizers in assessing pupils with intellectual disabilities				
•	I use rubrics in assessing pupils with intellectual disabilities				
•	I use projects in assessing pupils with intellectual disabilities				
•	I use concept mapping in assessing pupils with intellectual disabilities				
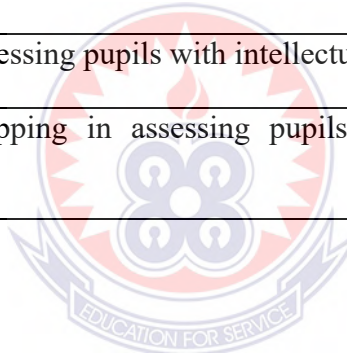
APPENDIX B

UNIVERSITY OF EDUCATION, WINNEBA
FACULTY OF EDUCATIONAL STUDIES
DEPARTMENT OF EARLY CHILDHOOD EDUCATION

P. O. Box 25, Winneba, Ghana ✉ ece-ir-uew.edu.gh
☎ +233 (020) 2041072

FES/DECE/S.6

The Director
Kumasi Metro Schools
Kumasi, Ashanti Region
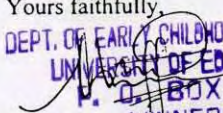...
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Dear Sir/Madam,

INTRODUCTORY LETTER

The bearer of this letter, Ms./Mr./Mrs./Rev./Sis./ NURUDEEN IDDRISS MUHAMMED with index number 8170190014 is a Second Year M.Phil student in the Department of Early Childhood Education, University of Education, Winneba.

He/she is to collect data for his/her research in your noble institution as part of the requirement in the University. I shall be grateful if he/she is offered the necessary assistance needed in that direction.

Thank you.

Yours faithfully,

DEPT. OF EARLY CHILDHOOD EDUCATION
UNIVERSITY OF EDUCATION
P. O. BOX 25
WINNEBA

SAMUEL OPPONG FRIMPONG (PH.D)
AG. HEAD OF DEPARTMENT

APPENDIX C

GHANA EDUCATION SERVICE

Tel: 03220 – 24571

REPUBLIC OF GHANA

METRO EDUCATION OFFICE
POST OFFICE BOX 1918
KUMASI

In case of reply the number and date
of this letter should be quoted

18th July,2019

Our Ref: 7/11/40
Your Ref..................................

HEADTEACHERS OF BASIC SCHOOLS
KUMASI EDUCATION DIRECTORATE
KUMASI

LETTER OF INTRODUCTION

Mr. Nurudeen Iddriss Muhammed is a Second Year M. Phil Student in the Department of Early Childhood Education, University of Education, Winneba and is undertaking a research on the Topic "Teachers assessment practices, for children with intellectual disabilities in Inclusive Schools" in the Kumasi Metropolitan Education Directorate.

He has therefore been granted permission to conduct the research in your school.

I hope you will accord him the necessary assistance.

Find attached list of schools with pupils with Special Needs.

I count on your co-operation.

MARTHA OWUSU AGYEMAN (MRS.)
METRO DIRECTOR OF EDUCATION
KUMASI

ccs:
- Mr. Nurudeen Iddriss Muhammed, University of Education, Winneba
  All Circuit Supervisor, MEO, Kumasi
  Basic School Coordinator, MEO, Kumasi

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APPENDIX D

NAMES OF SCHOOLS ACCOMMODATING SPECIAL NEEDS

1. ASEM BOYS M/A JHS
2. ABROTIA M/A BASIC
3. ST. AUGUSTINE ANG. PRIMARY
4. SANTASI M/A BASIC/KG
5. KOTEI DEDUAKO M/A JHS
6. PANKRONO R/C PRIMARY
7. OHWIMASE M/A KG
8. ST. ANTHONY R/C PRIMARY
9. KENTINKRONO M/A PRIMARY
10. OBENG FAITH EXPERIMENTAL BASIC
11. TAFO PANKRONO M/A 'B' JHS
12. AWERE M/A BASIC
13. CHIRAPATRE R/C 'B' PRIMARY
14. ROCKANJE PRESBY EXPERIMENTAL PRIMARY
15. CHURCH OF GOD
16. STATE BASIC 1
17. QUEEN ELIZABETH II M/A PRIMARY
18. WISE KIDS ACADEMY
19. GARRISON BASIC
20. UADDARA BASIC
21. KOKOBEN M/A BASIC
22. OLD TAFO METHODIST 'B'

Complied by

SPECIAL EDUCATION COORDINATOR
METRO EDUCATION OFFICE
KUMASI
(0244584560)