UNIVERSITY OF EDUCATION, WINNEBA

ENVIRONMENTAL INFLUENCE ON DRAWINGS OF CHILDREN IN LOWER PRIMARY: A STUDY OF SELECTED DISTRICTS IN GHANA

SUMAILA ISSAH

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ENVIRONMENTAL INFLUENCE ON DRAWINGS OF CHILDREN IN LOWER PRIMARY: A STUDY OF SELECTED DISTRICTS IN GHANA

SUMAILA ISSAH
(200021999)

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DECLARATION

STUDENT'S DECLARATION

I, Sumaila Issah, declare that this thesis, *Environmental influence on drawings of children in lower primary: A study of selected districts in Ghana* with the exception of quotations and references contained in published works which have been identified and duly acknowledged, is entirely my own original work, and it has not been submitted, either in part or whole, for another degree elsewhere.

SIGNATURE: ……

DATE: December 18, 2023

SUPERVISORS' DECLARATION

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

Dr. Ebenezer Kwabena Acquah (Principal Supervisor)

SIGNATURE: ……

DATE: December 18, 2023.

Prof. Patrique deGraft-Yankson (Co-Supervisor)

Signature: ……

Date: December 18, 2023.

DEDICATION

I dedicate this work to my beloved mother Ms. Florence Adwoa Boaduwaa of blessed memory, Mr. and Mrs Issah, Mr. Alhassan K. Halidu, Mr. Francis A. Adongo, entire family of Kabre and my lovely wife Ms. Rabbi Abu-Sadat.

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GLOSSARY/ABBREVIATIONS

AS -	Ashanti Region
BWD -	Bia West District
CA -	Creative Arts
EAE -	Environmental Art Education
EE -	Environmental Education
EI -	Environmental Influence
GES -	Ghana Education Service
GSS -	Ghana Statistical Service
GSSR -	Ghana Statistical Service Report
GoG -	Government of Ghana
KM -	Kumasi Metropolis
LTS -	Learning and Teaching Scotland
MoE -	Ministry of Education
NaCCA -	National Council for Curriculum and Assessment
QRP -	Qualitative Research Paradigm
RoG -	Republic of Ghana
RJ -	Reflexive Journal
SC -	Social Constructivists
SDG -	Sustainable Development Goal
SR -	Savannah Region
WNR -	Western North Region

ABSTRACT

Children's drawing activities continue to attract the attention of researchers globally. While a plethora of previous studies have examined the influence of children's drawing activities on their social and cognitive development, children's drawing activities and outcomes have also been interpreted by various studies. The current study examined the environmental influence on the drawings of lower primary school children (7-10 years) in selected districts, municipalities and metropolis in Ghana. It adopted qualitative inquiry approach guided by multiple case study design. Using expert, homogenous and heterogeneous purposive sampling techniques, the study gathered triangulated data from a total of twenty-four (24) informants comprising; school children, cultural coordinators, teachers and parents/adult caretakers. Data collection instruments included; semi-structured interviews, field observations, spontaneous and directed drawing activities. An in-depth thematic analysis of the data reveals that each of the different realities of the children's environment have some influence on their drawings, with the most obvious being the common reality as the drawings of the children mainly depicted tangible objects in their schools, home and immediate physical environment. Also, there was a variance across the districts indicating that children in different parts of Ghana have different capabilities in what they are able to draw. In conclusion, the study contends that children's self-efficacies and diverse environmental realities greatly influence their drawing capabilities and outcomes. The study, therefore, recommends that teachers and parents/caretakers in the study area should take note of children's unique self-efficacies and diverse environmental realities and provide the convenient environment that nurtures their drawing capabilities.

CHAPTER ONE

INTRODUCTION

1.0. Overview

This chapter is an introductory section to the research report on the environmental influence on drawings of children in the lower primary in selected districts in Ghana. It provides detailed information on the study's background and establishes a convincing research gap for the study through a constructive problem statement. The chapter also states the purpose of the study, the objectives of the study and their corresponding research questions, significance of the study, delimitation, used in the study, operational definition of terms as well as the organisation of the study.

1.1. Background to the Study

Drawing is regarded by many educationists and psychologists as one of the most fundamental activities in the learning process and intellectual development of children (Kayacan-Keser & Eren, 2015; Eisner, 2013; Finley, 2013; Fiske, 1999; Lowenfeld, & Brittain, 1970; Lowenfeld, 1947). The earliest expression of children's creativity and their level of mental development were manifested in the kind of drawings they were able to create and the pictures they painted (Farokhi & Hashemi, 2011; Lowenfeld, & Brittain, 1970; Lowenfeld, 1947). Many scholars have noted that children's drawings originate from their own lives and also that of their close friends, family and teachers as well as what is happening in their immediate social environment (Navei, Diabour & Akyem, 2022; Acquah, 2018; Avoke & Essel, 2017; Aryaf**,** 2016; Kayacan-Keser & Eren, 2015; Hsu, 2014; Duku & Kemevor, 2013; Biedinger, 2011; Farokhi & Hashemi, 2011; Oğuz, 2010; Wilson, 1997a; 1997b; Lowenfeld, & Brittain, 1970; Lowenfeld, 1947). Therefore, through drawing one can get a clue of what is going on in a child's life and the state of mind of the child. Stolley (2012) has observed that drawing pictures, for instance, reveals the self-expression abilities of children and also helps them to be able to relax and be happy.

According to Hortoványi (2017), the deep inner expression of a child is conspicuously made through drawings. Children often express their inner feelings

through the scenes or pictures they present in their drawings. Thus, drawing is not only a means of learning for children but also an effective medium of communication. According to Quaye (2009) and Cherney et al. (2006), children's drawings represent their thoughts, ideas, and ways of interacting and adopting to the world around them. It has been observed that children become extremely exhilarated during drawings and this is as a result of the fact that drawing helps them to express their emotions and thoughts whether sad or happy. The form and nature of creative self-expression offer a window into the background of the environment in which the child lives (Acquah, 2018) and also gives room to understand the range of personality traits that make children create pictures that are worth studying.

According to Oguz (2009), the child's characteristics alone are not enough to improve their drawings as their immediate environment has strong influences on their drawings as well. The environment consists of the external stimuli that are effective in every human development stage beginning from fertilization. The environment for children consists of their families, teachers, peer groups, socio-economic and cultural practices, and education-related information. According to Güngör *et al.* (2002), children draw an autocratic person in their family as a heavier, majestic and bigger figure in their drawings. Siren (2003) also noted that when children are exposed to negative parental attitudes, they often depict their parents with negative images in their drawings. For a family to contribute positively towards improving the child's drawing ability, the family must provide the child with memorized drawings and paintings and also an environment that is helpful in developing creativity and uniqueness.

In the school environment, the structure and extent of exposure to drawing and the delivery method are very important for drawing capabilities development (Wittber, 2017). Different schools have different dispositions, commitments and attitudes towards the teaching and learning of drawing by children. In some schools, drawing and artistic work are compulsory while some schools engage children in drawing at their leisure with no oppression and therefore serve as a means for relieving stress. In school, the sensitivity and appropriateness of content to developmental levels, interests, and needs

of children all influence the extent of development of the drawing capabilities of children (Oğuz, 2010). The availability of ample spaces to work, appropriate tools and materials, sufficient time and supervision within the school environment are all conditions that are necessary for the development of the drawing skills and capabilities of children.

Evidence from many studies from the foregoing discourse suggests that besides the children own individual characteristics, environment is very critical in supporting the development of creativity and interest in drawings (Navei, Diabour & Akyem, 2022; Acquah, 2018; Avoke & Essel, 2017; Aryaf**,** 2016; Duku & Kemevor, 2013; Eisner, 2013; Finley, 2013; Wilson, 1997a; 1997b; Lowenfeld, & Brittain, 1970). Thus, improving children's drawing capability requires manipulation of the environment of the child to create the atmosphere necessary to challenge, intrigue and support drawing and other creative expressions of children. It is often expected that the formal education system provides the support in terms of the guidance and provision of a variety of materials needed for children to express their artistic creativity through the use of crayons, water-colours, pastel colours, soft dark black pencils, various papers, and drawing boards (Artut, 2004). Artut (2006) has indicated that early childhood education provides the appropriate conditions for young children to gain artistic skills and knowledge and these conditions may not be provided by families. In a developing country such as Ghana, there is disproportionate access to the materials needed for drawing and then also, supervision at school by teachers and the general supporting environment for children is unconducive (Mbiti, 2016). In this case, the influence of the environment on children's drawing and their drawing capabilities are magnified.

The child's environment goes beyond the formal educational environment to include their interaction with conditions at home, cultural artefacts and activities outside the immediate environment of the school (Allen, Kelly & National Research Council, 2015). This suggests that both the internal and external environmental conditions of children have a great influence on their overall learning including the development of their drawing capabilities. In Ghana, the difference in tangible environmental and cultural components such as technology, architecture and art as well as intangible

components such as social behaviour and norms, knowledge, beliefs, laws, customs, and habits vary across the sixteen (16) regions and over two hundred (200) districts, municipalities and metropolis in the country (Anquandah, 2013). The wide difference in the social, cultural and environmental context on how children are raised presents an opportunity for a larger influence of the environment on children, which however has not been adequately addressed or studied.

1.2. Statement of the Problem

Research in the area of children's drawing has been inspired by two major issues: the first is the concern that drawing activities have the potential to influence the social and/or cognitive development of the child and the second is that children's drawing may give a clue about the social and cultural environments as well as state of mind of children (Navei, Diabour & Akyem, 2022; Acquah, 2018; Avoke & Essel, 2017; Aryaf**,** 2016; Kayacan-Keser & Eren, 2015; Hsu, 2014; Duku & Kemevor, 2013; Eisner, 2013; Finley, 2013; Biedinger, 2011; Farokhi & Hashemi, 2011; Oğuz, 2010; Wilson, 1997a; 1997b; Lowenfeld, & Brittain, 1970; Lowenfeld, 1947). Thus, by studying children's drawing activities, capabilities, and artefacts, researchers seek to unearth the intellectual development of children as well as unravel the social realities of their lives. Therefore, since children across the world are raised in different cultural, social, and environmental settings, which influence what they see, what they draw, and how they learn to draw, it is expected that the cultural, social, and environmental conditions of children are consciously well structured to play an important role in the development of drawing capabilities of children.

With specific reference to Ghana, there is high heterogeneity in terms of the culture and artistic expressions of people across the many different districts, municipalities, metropolis, and regions of the country. Since children's drawings inherently reflect their social and physical environments (Navei, Diabour & Akyem, 2022; Acquah, 2018; Avoke & Essel, 2017; Aryaf**,** 2016; Kayacan-Keser & Eren, 2015; Hsu, 2014; Duku & Kemevor, 2013; Eisner, 2013; Finley, 2013; Biedinger, 2011; Farokhi & Hashemi, 2011; Oğuz, 2010; Wilson, 1997a; 1997b; Lowenfeld, & Brittain,

1970), the cultural and artistic heterogeneity of Ghana have the potential to influence what children draw, how they draw, and their general drawing capabilities. A study conducted by Abadzivor (2006) reveals that children's access to drawing materials and objects varies in Ghana resulting in the exhibition of heterogeneous drawing capabilities by children across the country.

From the foregoing discourse, it is expected that by studying the drawing abilities of Ghanaian children within the context of their varied social and physical environmental settings, one is likely to gain insights into how the artistic and drawing skills of children across different parts of Ghana are developed and possibly suggest appropriate strategies for improving their drawing capabilities. It is against this backdrop that a plethora of studies that abound in Ghana have variously examined Visual Arts education in Ghana as well as children's artistic activities from divergent perspectives (Navei, Diabour & Akyem, 2022; Acquah, 2018; Avoke & Essel, 2017; Duku, Owusu-Ansah & Aidoo, 2018; Duku, 2017; 2009; Duku & Kemevor, 2013; Awunyo, 2010; Quaye, 2009; Adu-Agyem, Enti & Peligah, 2009; Abadzivor, 2006).

From an assessment and/or evaluative perspective, Duku, Owusu-Ansah and Aidoo's (2018) descriptive survey evaluated the teaching and learning of Creative Arts in Kindergarten (KG) schools in the Cape Coast Metropolis of Ghana. Although Duku et al. (2018) reported that the KG pupils in the schools studied in the Cape Coast Metropolis were generally equipped with the necessary creative skills and new knowledge, the authors did not provide an evidential report on the specific capabilities attained by the pupils since the Creative Arts subject taught at the basic school level in Ghana is multidisciplinary in scope. This beacons the need for further assessment to be conducted on specific aspects of the multidisciplinary Creative Arts subject taught in Ghanaian basic school schools to concretely reveal the specific capabilities acquired by pupils in view of their artistic development. However, similar evaluative studies have been conducted on children's artistic activities but in special school settings in Ghana (Navei, Diabour & Akyem, 2022; Duku, 2009) focusing on the teaching and learning of Creative Arts as well as also offering an in-depth interpretation of basic school children's

artworks in Ghana (Navei, Diabour & Akyem, 2022). Besides their special school context, (Navei, Diabour & Akyem, 2022; Avoke & Essel, 2017; Duku, 2009), it is imperative to have an expanded study across Ghana with a specific focus on assessing children's drawing capabilities to establish a holistic understanding of children's progressive artistic development in the country. Also, Duku and Kemevor (2013) adopted a mixed approach to identify and describe art teachers' assessment practices in early childhood classrooms and their impact on children's artistic development in Ghana. This study by Duku and Kemevor introduces some novelty as it ably outlines ways of overcoming the prevailing trend and pattern of discrepancies associated with teachers' assessment behaviour when assessing (assigning marks, grades or praises) children's artworks. As profound as Duku and Kemevor's (2013) study may be, its scope was delimited to the assessment of children's artworks (products) with no focus on the artistic process. To be able to monitor the progressive artistic development of pupils, assessment of children's artistic capabilities should focus on the process and product as well as the stage of artistic development of the child. To fill this assessment-related gap herein established, objective one of the current studies seek to specifically assess the drawing capabilities of children with reference to the Visual arts component of the creative arts subject taught in the study area to establish the children's levels of artistic development. This includes conducting a thorough assessment of children's drawing capabilities from the viewpoint of the creative processes on one end, and the end product on the other end.

On the influence of children's environment on their drawing outcomes in the Ghanaian context, a study conducted by Acquah (2018) presents a qualitative report of drawings of children between the ages of eight to ten years in the Kumasi Metropolis in the Ashanti region of Ghana. With children's drawings as the principal instrument for the data collection, Acquah found that children have a natural inclination for self-expression through drawing, and that, drawing offers a means for children to express their feelings, moods, behaviour, and personality traits. Highlighting the influence of children's environment on their drawing outcomes, Acquah recommends that teachers and curriculum developers must consider the environment of various communities

within which the schools are situated when interacting with pupils in the classroom. As insightful as Acquah's (2018) study may be, its scope was delimited to only three schools in the Kumasi Metropolis thereby creating geographical and contextual gaps in the remaining districts, municipalities and metropolis in Ghana. Also, an aesthetic appreciation of artefacts produced by hearing-impaired primary pupils of Tetteh Ocloo State School for the Deaf in Accra - Ghana, revealed that the works represented the oral accounts of the pupils' worldview of salient experiences in their immediate social and physical environments (Navei et al., 2022). Since differences abound in children's social and physical environments across Ghana, the current study has a widespread scope focusing on the influence of children's environment on their drawing outcomes in districts, municipalities, metropolis across Ghana. In addition to the widespread scope of the current study, a premium is placed on children's primary and contextual perspectives about their artworks instead of relying on the researcher's subjective interpretations that may not really represent the actual meanings of the works as in the case of Acquah's (2018) study. Also, Quaye's (2009) thesis geographically and contextually delimited its scope to examine the drawings of children between the age range of 5-7 in Ridge and Kwame Nkrumah University of Science and Technology Primary Schools, both in Kumasi in the Ashanti Region of Ghana, found that most of the drawings executed by the children reflected their cultural identities, their lifestyles, and gender. In filling the geographical and contextual gaps associated with Quaye's study, the current study takes a critical consideration of the environmental influence on the drawings of lower primary learners with an age range of 7 to 10 in multiple districts, municipalities, metropolis and regions in Ghana. This introduces new insights as districts, municipalities, metropolitan and regional perspectives as well as ethnic diversities and their influence on children's drawings are pivotal to the current study.

One other grey area that exists regarding the study of children's artistic expressions in Ghana is the influence of self-efficacy (past experience, facilitation/evaluative feedback & physio-emotional status) on children's drawings. In as much as the results of Adu-Agyem, Enti and Peligah's (2009) study recognised that

children in four schools (two public and two private) in the Kumasi Metropolis in Ghana expressed their psychological well-being (emotions & experiences) through drawing, conducting further studies in other parts of Ghana is plausible since cultural, social and environmental diversities abound in Ghana. In view of that the current study has an expanded focal lens seeking to examine the influence of children's self-efficacy in their choice of drawing materials, the drawing process itself, and the emotional schemas represented in children's drawings from multiple districts, municipalities, metropolitan and regional perspectives in Ghana. This has implications for practice and policy decisions for the promotion of effective art education as the Creative Arts curriculum implemented at the basic school level in Ghana places a premium on the need for art educators to consider the emotions of children during art activities (NaCCA, 2019; Acquah, 2018).

Another important element associated with the study of child art is the role art educators have to play in facilitating children's artistic development (Lowenfeld & Brittain, 1970). Although the findings of few previous studies conducted on children's artistic activities in Ghana generally recognise the role of art educators, parents, and guardians in children's artistic development (Navei et al., 2022; Acquah, 2018; Adu-Agyem, Enti & Peligah, 2009; Quaye, 2009), the absence of an in-depth study on the specific roles teachers need to pay before, during and after art practical sessions to facilitate children artistic development, presents a gap that needs to be filled. In an attempt to fill this gap, the current study seeks to draw field experiences of art educators in multiple basic schools selected from different districts, municipalities, metropolis and regions in Ghana to bring to bear the diverse roles art educators play or need to play in the implementation of the Creative Arts curriculum to promote children artistic development.

To address the research gaps identified in the foregoing empirical discussion, many unanswered questions with regard to children’s drawing in Ghana need to be addressed. For instance, questions such as: What do children from different parts of Ghana draw when offered a free choice to draw anything? How do popular culture and

immediate environment including peers, recent in-school experiences or recent out-of-school experiences influence their drawing? What teaching strategies and methods do art educators use during drawing sessions? What roles should art educators play to be able to effectively facilitate the artistic development (drawing capabilities) of children in the implementation of the Creative Arts curriculum at the basic school level in Ghana? Answers to these questions are expected to enhance teachers and educational policymakers' understanding of the extent to which the immediate environment in which the Ghanaian child lives influence their drawings, how much attention has the newly implemented Creative Arts curriculum given to children's drawings, how do children express their cultural identities in their drawings and even the challenges they may face in drawing which could be a major tool for children artistic development in Ghana.

1.3. Purpose of the Study

The purpose of the study is to investigate the environmental influence on the drawings of children in lower primary schools from selected districts, municipalities, metropolis in Ghana. It, therefore, aims to find out the environmental influence on children's drawings highlighting the challenges and the dynamics involved in children's holistic artistic development in Ghana.

1.4. Objectives of the Study

The main objective of the study is to examine the influence of environmental influence on the drawings of children of lower primary from age seven (7) to ten (10) years in selected districts, municipalities, metropolis in Ghana. The specific objectives of the study included the following:

- Assess the drawing capabilities of children within the age range of 7 to 10 in the study area to establish their levels of artistic development.

- Examine the influence of the children's environment on their drawing outcomes.

- Find out how self-efficacy (past experience, facilitation/evaluative feedback and physio-emotional status) influences the drawing of children in the study area.

- Explore the role educators can play in providing a convenient environment to enhance the drawing capabilities of children.

1.5. Research Questions

The following research questions guided the study:

1. What are the drawing capabilities of children within the age range of 7 to 10 in the study area?
2. How do the children's environment/realities influence their drawing outcomes?
3. How does self-efficacy (past experience, facilitation/evaluative feedback, and physio-emotional status) influence the outcome and drawing capabilities of children in the study area?
4. What role can educators play in providing a convenient environment to enhance the drawing capabilities of children?

1.6. Significance of the Study

The findings of the study would contribute to policy, practice and knowledge dissemination in Art education in Ghana. In the first place, by examining the influence of the environment on children's drawings from selected districts, municipalities, metropolis in the country, brings divergent insights on children's drawing activities. This has the tendency to inform policy and practice decisions to promote effective art education in Ghana for children's artistic development. The findings of the study would also inform policies regarding art education (Creative Art) in Ghana. In particular, it is expected that the findings of this study would be informative for stakeholders of the educational sector including curriculum development, implementation and monitoring units (at the National Council for Curriculum and Assessment) and the Ministry of Education to recognise the value of environmental and cultural difference in shaping the drawing abilities of children.

The illustrations made by children from different cultural backgrounds expose the elements of culture and environment and their influence on children's drawings. On the basis of this, the study may also influence and contribute to the development of

cultural policy in Ghana that would take into consideration how culture can be integrated into the teaching and learning of art in schools.

Lastly, since the study provides new insights or knowledge on the environmental influence on children's drawings from diverse cultural backgrounds in multiple districts, municipalities, metropolis in Ghana and ways of promoting children's artistic development, it would serve as a useful reference material for future scientific inquiries on child art.

1.7. Delimitation

The study seeks to examine the influence of children's environment on their drawing capabilities using data that were collected from selected Districts in Ghana. Geographically, the study focused on the Republic of Ghana but covered some selected districts, municipalities and metropolis. The study participants are children from age 7 to 10 years who enrolled in schools in the selected districts, municipalities, metropolis as well as cultural coordinators, teachers and parents of the children. The districts, municipalities, metropolis included the Kumasi Metropolis in the Ashanti Region, Bia West District (BWD) in the Western North Region (WNR), Tempane Municipal in the Upper East Region and Keta Municipal in the Volta Region. The selected Districts are located in geographically distinct areas and were expected to have different cultural and environmental conditions that may influence drawing abilities.

In terms of context, the study focused on children's drawing activities (choice of drawing materials, drawing process, types of shapes/ schemas drawn and their contextual meanings) from four selected basic schools, the influence teachers and school environment have on children drawing activities, home environment and cultural settings influence on their drawing and how current educational structures and contents in Ghana reflect the environmental settings of children. The analysis was limited to their drawing abilities, teaching strategies and methods employed by the facilitators and not areas such as their numeracy skills, reading and comprehension among others. As a descriptive-analytic study, the analysis was limited to information obtained from the

responses of the study participants and observations were made from the drawings. The duration for data collected was limited to six months; thus, December 2021 to May 2022.

1.8. Operational Definition of Terms

Environmental influence: It refers to contributing factors that shape the children's drawing abilities.

Positionality: This relates to how the researcher identify construction, cultural background and experience that influence the way the real world is perceived and portrayed in the study.

Reflexivity: This refers to the researcher's role in the conduct of the study and the way this is influenced by the object of the research, enabling the researcher to acknowledge the way he affects both the research processes and outcomes.

Reflexive journals: These are written records by the researcher himself throughout the research process which includes the details of what he did, thought, and felt while analysing the data.

Social constructivists: This refers to participants' activeness in the creation of their own knowledge through drawing by influence of other environmental factors.

Self-efficacy: This is how an individual's motivation to undertake a certain task is informed by their confidence or their ability to execute the task or behaviour. In this study, two pathways are conceptualised for achieving self-efficacy for drawing by children viz. past experience of the child and facilitation and evaluative feedback from teachers and parents.

Triangulation: This refers to reliance on multiple sources of databases, methods, and theories to address the research questions.

1.9. Organisation of the Study

The study is organized and presented in five (5) chapters. The first chapter which is introductory in nature covers the background to the study, the problem statement and research purpose, the objectives as well as the significance of the study. The second chapter covers a review of relevant literature on the children's drawing capabilities of children, covering the individual, teacher and school environment factors that influence children's drawing, sociocultural and environmental influences of children's drawing from a global perspective and local perspective as well. Furthermore, the conceptual and theoretical frameworks that explain the foundational and fundamental understanding of how the environment influences children's drawings are presented.

In the third chapter (Chapter Three) of the study, the methodology highlighting the research philosophy, the research design, paradigm and approaches are outlined. The chapter also covers the sampling and data collection techniques, reflexivity and positionality of the researcher and respondents as well as how data is collected and analysed. The findings that are obtained from the analysis of data collected are presented in Chapter Four with the discussion of findings. Chapter Five presents a summary of the main findings of the study, the implications and conclusions drawn from the findings and makes recommendations. The Chapter also highlights the contribution of the study to knowledge and practices as well as policy formulation.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0. Overview

Visual arts, such as drawings, are attractive to most young children and marks left on paper by young children contain meaning. It has been observed that many young children like making marks on paper and that they enjoy the activity (Anning & Ring, 2004). It is also known that children's drawings are vehicles for expression and communication. However, extensive research in this area has begun to emerge. This chapter examines the existing literature on the influence of the environment on children's drawings in lower primary schools, both globally and locally. The chapter includes an empirical review of related concepts that bother on the influence of the environment on children's drawings in the lower primary. The chapter consists of five distinct sections. The conceptual review is discussed in Section, 2.2, which addresses issues such as culture, environment, school, and drawings. Although these terms have widely accepted theoretical definitions, they are used contextually in this study. Section 2.3 provides a comprehensive theoretical review underpinning the study. Theories reviewed include the theory of children's artistic development, the theory of realities, and, social cognitive theory and self-efficacy. Section 2.4 takes a look at empirical review which includes the influence of the school environment on children's drawing capabilities development, the concept of drawing and drawing capabilities development of children among others. A review of related works is also provided to enable the survey of literature on the subject. Section 2.5 outlines the identified research gap that provides justification for this work. Finally, the chapter ends with section 2.6 focusing on the discussion of the proposed conceptual framework that has been developed to achieve the study objectives. The conceptual framework shows the relationship among the study variables.

2.1. Conceptual Review

The main concepts driving the study are discussed. The concepts that are considered relevant for this study include drawing, school, environment, culture, history of children's drawing, and children's perspectives on drawing among many others. These are further explained in detail.

2.1.1. Drawing - A means of expression.

Within the visual arts, drawing is one of the oldest forms of human expression. It is primarily concerned with the accurate representation of the visual world on a plane surface through the marking of lines and areas of tone onto paper/other material. Drawing has been defined in a number of ways. Drawing, according to Puglionesi (2016), is a form of visual art in which a person makes an image on paper using various drawing instruments. Drawing can be described as a meaning-making activity that occurs in particular sociocultural contexts in order to discover evidence for its communicative potential and the relationship between thought and drawing in early childhood (Papandreou, 2014). Hopperstad (2008) pointed out that drawing is

> a meaning-making process in which children draw signs to express their understanding and ideas in a visual-graphic form and it is always meaningful for the child that makes it (a drawing), reflecting the child's interests and intentions and conveying meaning in a form the child finds suitable (p. 134).

Wood and Hall (2011) confirm the above stating that children's drawings "are a form of cultural transmission of their everyday knowledge, their imaginative capabilities and their invented meanings" (p. 270). Since drawing can be used as a simultaneous whole, Brooks (2019) proposes that drawing can be a visual representation of thoughts, distinct from speech (oral or text). Comparably, Eisner (2013) recognises drawing as an "elementary form of expression" that allows children to develop their imagination, emotional responses and personality in a creative way (p. 13). Moreover, drawing can be "understood as enacting science learning and reasoning because this kind of activity is consistent with how knowledge is developed and communicated in the science community" (Prain & Tytler, 2012, p. 2757).

In general, the art or technique of making images on a surface, generally paper, using marks made with ink, graphite, or chalk, pen, various paints, inked brushes, coloured pencils, crayons, charcoal, chalk, pastels, erasers, markers, styluses, and various metals are each considered as drawing. Drawing may also involve the use of a computer, which is known as digital drawing. In this study, drawing refers to only the traditional method of marking object(s) on the surface of paper or other medium using traditional instruments such as pencil, chalk or crayon.

2.1.2. Environment in perspective

Environment refers to circumstances, objects, or conditions from which one is surrounded. According to Mullai, Mozhi and Ravichandran (2013), it could also be the complex of physical, chemical and biotic factors (such as climate, soil and living things) that act upon an organism or an ecological community and ultimately determine its form and survival. The concept "environment" is commonly used in reference to "nature", or the natural world, which includes both living and non-living (Mullai et al., 2013). The environment is also directly connected with notions of wilderness and pristine landscapes that have not been influenced or, at the very least, have been imperceptibly influenced by human activities, by both living and non-living objects. Many other people, on the other hand, consider the term 'environment' to include human elements to some extent. Many people would consider agricultural and pastoral landscapes to be part of the environment, while others go much further and regard all elements of the earth's surface to be part of the environment, including urban areas. As a consequence, the term "world" has become synonymous with a multitude of symbols and is linked to a number of unspoken yet strongly held perceptions and values. Both of these applications, however, have a common assumption: that the 'environment' has some kind of relationship with humans. The environment serves as the 'backdrop' to the unfolding narrative of human history, as well as the habitats and resources that humans exploit, the 'hinterland' that surrounds human settlements, and the 'wilderness' that humans have yet to domesticate or dominate (Mullai, et al., 2013). However, in the literal sense, the environment refers to the 'surroundings' (environs) of an individual, object,

element, or system, and thus includes all other entities with which it is surrounded (Seymour, 2016).

Individuals, objects, elements, and systems rarely exist in isolation in reality; instead, they interact with their environments to varying degrees. As a result, conceptualizing the "environment" without incorporating some notion of relationship is not particularly useful. Individuals, objects, elements, and systems all have an effect on their surroundings and are in turn influenced by them. Indeed, the networks of relationships that exist between different entities may be extensive and complex in some cases. Therefore, the 'environment' may be conceived of as a 'space' or a 'field' in which humans connect through networks of relationships, interconnections, and interactions. Ecologists are concerned with both the biotic (living) and abiotic (non-living) components of environmental systems - and particularly their relationships - so such a conceptualization would be familiar to those who have studied the science of ecology (Seymour, 2016). In this study, however, the term environment was limited to the artificial surroundings of people in terms of culture and artefacts and all the objects and activities that engulf the daily life of people.

2.1.3. Culture - contextual understanding

Culture relates to the behaviour and norms found in human societies, as well as the knowledge, laws, abilities, beliefs, arts, customs and habits of the people that make up these groups (Macionis & Gerber, 2011). Culture is one of the most often used concepts in sociology but is commonly considered to be synonymous with higher mental pursuits such as art, literature, music, and painting. However, sociologists believe that it goes beyond those activities. Cultural sociology is one of the American Sociological Association's most important and popular areas. The intersection of sociology, as shaped by early theorists like Marx, Durkheim, and Weber, and the rising specialization of anthropology, where researchers lead the way in an ethnographic approach for unfolding and examining different cultures around the world, contributed significantly to the sociology of culture (Macionis & Gerber, 2011).

Although culture and society are conceptually distinct, the two concepts are strongly intertwined. A society is a system of interrelationships that connects individuals together. The fact that their members are organized in formal social relationships according to a particular tradition binds all societies together. Without societies, no cultures could exist. No society, on the other hand, may exist without culture. Humans would not even be 'normal' in the way that they generally understand terms without culture. There would not be a way of expressing ourselves, no feeling of self, and the human ability to think and reason would severely be limited (Itulua-Abumere, 2013). Culture is made up of both material and immaterial components. The material culture of a society consists of physical expressions of culture such as technology, architecture, and art, whereas the intangible cultural heritage of a society consists of immaterial elements of culture such as social organisation principles and science. The immaterial culture often has cultural norms that codify appropriate behaviour in society; they act as a standard for behaviour, dress, language, and demeanour in a situation, and they serve as a template for societal standards. The use of culture in this study would encompass both material and non-material aspects.

Culture has an influence on people's thoughts and behaviours, not only in terms of ethnic diversity, but also in terms of religion, and socioeconomic status (Bradley & Kibera, 2006). Chen-Hafteck (2007) states that "culture has a strong influence on child development" (p. 141) and as young children give meaning to objects, images, events and people as representations of their culture, their visual arts education should be considerate of their cultural heritage (Lind, 2005). Educators need to be aware of each child's cultural associations when teaching the arts so that they can benefit from art opportunities. Childhood can be seen as a "social construction within a cultural-historical context" (Richards, 2007, p. 23) therefore a child's context must be acknowledged as learning occurs through social, cultural and historical influences (Plows, 2014). Culturally familiar art activities that relate to children's stores of knowledge can engage their interest, hence benefiting their artistic learning as infants and toddlers take solace in the familiar things (Ministry of Education, MoE, 2017).

Local culture (a form of micro-culture) may also be considered when it comes to ethnic culture, and educators should give children opportunities to see and understand objects and artefacts that are important to the community's cultures so that they can become familiar with them (Terreni, 2010; Plows, 2014). Visual art allows children to connect, recognise, and construct their cultural identity through learning and events that are relevant to their interests and experiences, encouraging their development and participation in art (Fuemana-Foa'i et al., 2009; Grierson, 2011). Artistic development and learning can be influenced and thereby promoted through recognizing an individual's knowledge resources. Learning in and through the arts is especially relevant "given the contexts in which children understand and make meaning of the world around them" (Barton, 2015, p. 63; Fuemana-Foa'i et al., 2009), therefore children's cultural cultures must be well-represented in art opportunities when teaching arts education.

2.1.4. School

A school is a type of educational institution that provides learning spaces and environments for the teaching of students (or "pupils") by teachers (Roser & Ortiz-Ospina, 2016). The school is a unique social space where suitable teaching techniques, adequate physical space, and a favourable psychological environment are used to develop and run the education, training, and personality development of children who are the community's potential assets (Raccoon Gang, 2018). The degree to which students' learning can be enhanced is partly determined by their location within the school premises, the structure of their classroom, and the availability of instructional accessories and facilities. Through supporting effective teaching and learning, it is assumed that a school with an adequate learning environment tends to stir up expected learning outcomes that will facilitate good academic performance (Duruji et al., 2014).

According to Rahmatullah et al. (2022), the use of the term school varies by country, as do the names of the various levels of education within the country. In the United Kingdom, the term school refers primarily to pre-university institutions, and these can, for the most part, be divided into pre-schools or nursery schools, primary schools (sometimes further divided into infant schools and junior schools),

and secondary schools (Burke & Grosvenor, 2008). In certain parts of the world, schools apply to primary education that lasts between four and nine years, depending on the country. In North America including the US, the term school refers to any educational institution at any level and covers all of the following: preschool, kindergarten, elementary school, middle school, high school college, university, and graduate school (Burke & Grosvenor, 2008). In West Africa, there are other forms of school such as Quranic schools, or apprenticeships which are different from formal schools (Ogunaike, 2020). In this study, school refers to formal education at all levels.

2.1.5. History of the Study of Children's Drawings

Most works of art will either include the representation of an image on paper or canvas or will work from sketches of the artwork. Drawing is one of the most basic forms of art. The Industrial Revolution, which lasted from the late 18th century to the early 19th century, necessitated the development of design skills to sustain the growing manufacturing activity. As a result, the value and importance of introducing drawing skills to children became widely recognized. Early drawing education was based on breaking down subject matter elements into lines, and only after the child had learned this skill could they begin to represent subject matter from life (Ashwin, 1981). For example, the courses developed by Walter Smith, an Englishman who not only developed the first drawing curricula introduced in America in 1870 but also educated teachers in how to deliver it. Smith's courses consisted of a set of exercises that began with drawing a straight line without using a ruler and reflected his belief that drawing should be mastered through drill, practice and imitation (Chapman, 1978).

Henry Pestalozzi was another early art educator who had a significant influence on other European theorists. His approach was similar to Smith's; with children initially completing repeated geometric exercises with increasing complexity (Aswin, 1981). Although Smith's and Pestalozzi's materials seem to be very limited in comparison to more modern, westernised art educational programmes, their legacy lives on in step-by-step books and cultures where explicit drawing instruction is given.

2.1.6. Children and Drawing

Drawing is something that children all over the world love doing. This is due to their inner imagination expressing itself through visual cues, motor, cognitive, and emotional development. For children who do not yet have the ability to express themselves verbally, drawing is a particularly important activity. They express both joyful and disturbing issues as valuable and important aspects of their lives through drawing. To date, numerous studies on children's drawings have been conducted in Turkey (Ahi, Cingi & Kldan, 2016; Akbulut & Saban, 2012; Daglioglu, 2011; Guven, 2017; Hicyilmaz, Inci & Seven, 2015; Kesicioglu & Deniz, 2014; Ozsoy & Ahi, 2014; Seker & Sine, 2012; Temel & Gullu, 2016). Yalcin Teachers, violence, news, doctors, televisions, families, environments, physical education teachers, school principals, science, and nature were among the images formed in the minds of the children in these studies. Children, especially those in their early years, enjoy drawing. The majority of them love drawing and do so often in order to serve a variety of purposes during their play or other daily activities at home and at school (Brooks, 2009a; Hall, 2009).

Children's drawings may depict important events from their experiences, aspects of what they have seen that they value, and what they have learned, remembered, and valued at the time of drawing. Thus, drawing helps children to express something emotional and meaningful they have not been able to categorize or verbalize yet (Frederiksen et al., 2014). Drawings of children are largely viewed as a natural activity that they enjoy (Katz & Hamama, 2013). As a result, children's use of drawings as a simple means of expressing themselves to adults and peers develops in tandem with their cognitive and affective development. Drawing does not need verbal expressions since children learn to draw before learning verbal expressions in their native languages (Ligorio et al., 2017). As such children with limited vocabulary and vocabulary can express themselves effectively through drawings. In this context, drawings of children may be important tools to know them very well (Ligorio et al., 2017).

Individuals in reality do not only express themselves by speaking and writing (Alerby & Bergmark, 2012). When children's drawings are combined with other

methods such as speaking and writing, it is possible to understand their emotions, thoughts, and perceptions about everything (Ozsoy & Ahi, 2014). Drawings, according to Diem-Wille (2001), are more powerful than words in determining people's beliefs, attitudes and perceptions. Furthermore, modern society offers many opportunities for children to be exposed to and manipulate visual, graphical, and pictorial signs from an early age (Jolley, 2010). Bland (2012) gathered detailed information about children's imagined and ideal learning environments through freehand drawings. Pictures leave traces of tools that aid in the social development of children. These tools are linked to social power (Seven, 2013). In the literature, the concept of social power is referred to as social tools or social agents. Family, peers, school, and the media, according to Seven (2013), are essential tools in the socialisation of the individual. The human factor can be included in the socialisation of individuals, while the environment or a functional object can also be included (Seven, 2013). Given that socialisation is a process, determining the social powers that are effective in this process is essential in order to raise people who are compatible (Seven, 2013).

The development of children's drawing skills is related to their cognitive (thinking, problem-solving, and remembering) and emotional development. It requires the ability to translate thoughts into deliberate hand movements and the ability to understand and position a drawing tool (Kortesluoma, Punamaki & Nikkonen, 2008). In eliciting young students' perspectives on matters, drawing is a useful tool. Children's drawings have been shown to be reliable sources of information on a variety of topics, including stereotypes (Räty et al., 2012), prejudice (Campbell et al., 2010), person perception (Yedidia & Lipschitz-Elchawi, 2012), emotions (Misailidi et al., 2011), emotionally laden experiences such as war (Ben-Asher, 2016), various types of peer relationships (Cannoni & Bombi, 2016), and social relationships in general are all emotionally charged experiences (de Rosa, 2014).

Drawings are seen as primary symbolic activity in which the child expresses his or her own means of expression, such as thoughts, feelings, and interpretations of life experiences. Adults can give knowledge into young children's thoughts and how they

form them through their drawings, which can serve as a bridge between the child's inner world and the world of communication and sharing ideas (Brooks, 2009a). Children are usually completely engaged in the subject being displayed when they draw (Brooks, 2009b).

Research suggests that drawing is an effective strategy for eliciting children's thinking about concepts and phenomena from the natural world, and for involving them in scientific thinking acknowledging that children often have ideas and unspoken knowledge, and therefore know more than they say (Delserieys et al., 2017; Ehrlén, 2009; Kampeza & Ravanis, 2012; Papandreou & Kampeza, 2012). Children may draw during classroom inquiries to display previous or current understandings, as well as to record their observations, measurements, and other amount of information gathered during learning experiences (Chang, 2012; Kampeza & Delserieys, 2019).

2.1.7. Benefits of Drawing

Drawings of children revealed diverse ways that children represent complicated concepts or explanations of science, suggesting that drawing can help children understand science as they progress from informal and intuitive signs to formal symbols and abstraction. The ability to imagine thoughts, concepts, and challenges is critical in assisting children in moving from simple recitation to higher levels of thinking (Brooks, 2009a). Every child's drawing is unique, and their contents, as well as the ways in which they are drawn and coloured, reflect important emotions, thoughts, and fears, other important elements, the ability to regulate emotions, as well as perceive and draw the human figure (Drake & Winner, 2013).

Children's drawings can be used as diagnostic and therapeutic measures in a variety of settings, including therapeutic, developmental, and dental services, starting school, classroom observations, and others (Aminabadi et al., 2011; Lesinskien, et al., 2013; Einarsdottir et al., 2009; Early et al., 2010). According to research, as people get older, they grow more complex and symbolic representational strategies, and their reference points become more gender-specific (Cherney et al., 2006).

Drawing has become a more common strategy in research with younger children because drawing enables researchers to understand young children on their own terms (Tay-Lim & Lim, 2013). Drawing is a typical kindergarten activity that is used in many of the learning experiences that young schoolchildren engage in. The majority of children enjoy drawing and use it for a variety of purposes in their daily lives at home and at school (Hall, 2009). For many parents and educators, however, drawing is mostly regarded as a prewriting activity that reinforces the development of fine motor skills, "a low status, time-filling occupation" that fills gaps in the daily schedule, serves to decorate the classroom, illustrates children's versions of stories, or simply a way to relax and have fun (Papandreou, 2014). Wood and Hall (2011) propose that "drawing is much more than a pre-writing skill or a developmental transition from 'drawing things to drawing speech' (p. 270).

Drawing is more than just a means for children to express themselves visually. Children's observation of the world is guided by drawing, which lets them explore and understand it (Hall, 2009), elaborate and organize their experiences, and develop their thinking. It can be found that their relationships with their immediate environment, attitudes, intelligence, and personality characteristics are reflected in their painting performance in terms of composition, colour preferences and content selection when children's drawings are examined (Yldz, 2012). Children may use drawing and painting to sort out relationships, experiment with concepts, and communicate what they think, according to Wu (2009). It is considered that, when drawing, children are reconstructing their thinking and representing their own mental images" (Villarroel & Infante, 2014, p. 120).

Usually, children combine their own symbols and they obtain conventional graphic symbols (e.g. letters, numerals, signboards) from their daily lives which they can use to communicate their messages in their own way (Papandreou, 2014). Children's drawings are often known as reference data, or signs or symbols that relate to and refer to something they have saved (Everts & Whithers, 2006). This is why drawing is often combined, as in the case of this project, with further elaboration by the children, either

written or oral. This enables the children to relate to their drawings and have further explanations (Driessnack & Furukawa, 2012). In this way, considering the fact that the causes of the children's concerns were diverse, the use of drawings served as an immensely useful support for conversations with the children about difficult and taboo subjects.

The use of the symbol techniques helps children to provide a different perspective on the meanings and meanings and in remembering particular incidents or moods as they associate with the circumstances through drawing than interviews or questionnaire responses (Driessnack & Furukawa, 2012; Gross et al., 2009). Similarly, these drawings may serve as a nonverbal step in childhood experience and emotion (Jolley, 2010), and follow-up conversations about their families can generate familial knowledge of the children's relationship experiences (Gernhardt et al., 2013). Brooks (2009b) observes that "through drawing children are not only able to see what they are thinking, they are also able to play around with and transform their ideas" (p.319). The constant drawing enables children to re-examine and assess their thinking process, to talk about it with others, to exchange thoughts (Hopperstad, 2008) and to increase their awareness (Brooks, 2009b). This suggests that processes of reflection performed by drawing activities help children organize their experiences, organize events and build structures and patterns in order of time.

While parents do not place as much emphasis on drawing as they do on other things that their children participate in, they do acknowledge several advantages of it. Jolley, for example, found that 49% of the parents cited satisfaction and pride as a benefit of drawing; relaxation and enjoyment (33%) with expression (46%), (Jolley, 2010). The children who explained drawing as an opportunity to release emotions and express themselves (12%), as relaxing (11%) and enjoyable (10%) experiences have been expressed in the views of Jolley (2010). Learning to draw allows children to appreciate and express themselves by means of a tangible form and individuality (Keinanen et al., 2010). Children do not only practice hand-eye coordination, but they also learn to study their subjects carefully, resulting in the development of visual sensitivity when children

start drawing from real life. Having greater insight into the world around them, they may ignore what is simply superficial as they learn to see in more specific ways, becoming more sensitive to the more subtle qualities and changes of form (Barnes, 2008). Children will learn how to make choices about what to depict and how to depict it when they are encouraged to draw.

Drawing, rather than most symbolic systems, according to Golomb (2004), is a truly creative activity for the children who have at the very least reinvent, or invent a basic vocabulary of graphic shapes across cultures and generations. Emerging literature shows that drawing may play an important role in science education, improving pupil engagement, communication skills, and their ability to understand and reason about the subject matter that they are learning, according to Ainsworth, Prain, and Tytler (2011). Tyler, et al. (2018) found that students who drew in class engaged more in class, debated at a higher level, and performed more in their workbooks in an initial evaluation of the Role of Representation in Learning Science. However, Tyler et al., (2018) suggested that further evaluation of such programs is required, preferably using pre- and post-test designs with a control group to fully evaluate the influence of drawing on the understanding and learning of pupils.

Some studies have attempted to relate the effects of drawing on cognitive development. For example, Kozblet and Seeley (2007) attempted to evaluate the frequently made anecdotal comments that artists have superior visual perception and intelligence using examples and evidence from psychology and neuroscience and 'perceive the world differently than non-artists' (p.80). They address a rising influence of evidence that suggests that being able to draw accurately is related to being able to visually see objects more accurately (based on evidence from eye tracking and fMRI studies) and that these sensations are less distorted and how things should look by pre-existing schemata. A study of four-year-old children by Lilliard and Peterson, 2011 found that after spending 9 minutes drawing, children performed significantly better on the Tower of Hanoi task and a backwards digit period test compared to children who had

spent 9 minutes not drawing but either watching an educational television programme or a fast-paced television cartoon.

2.1.8. Children's Perceptions of the Value of their Drawings

During the childhood years, a child's interactions with his or her peers and other people in the environment help them develop a variety of positive and negative behaviours, skills, manners, and opinions. This serves as the foundation for their value judgments. Though a person's entire life is spent studying about values, the first information is gained in childhood (Davies, 2004; Uyank-Balat & Balaban-Daal, 2009; Dereli-man, 2014). The concept of 'value' has been defined in a variety of ways. Values are generally understood to consist of objectives produced against the backdrop of the ideas, standards, and targets adopted by a group, or behavioural patterns organized so that the individual can maintain his or her existence within the group in accordance with the standards that are considered right by a group, despite the fact that it is generally defined as an important criterion within cultures and societies (Türk, 2009; Veugelers & Vedder, 2003).

Values may also reflect common feelings, or generalized ethical principles or beliefs that are considered right and useful by the multitude of members of a social group or society in order to maintain that group's or society's existence, unity, and continuity; they may also reflect common feelings, or generalized ethical principles or beliefs that are considered right and useful by the majority of members of a social group or society in order to maintain the existence, unity, and continuity of that group or society (Türk, 2009; Veugelers & Vedder, 2003).

Values education research in Turkey and around the world has centred on issues such as providing values, implementing values education programs, and the family's effect on values education. Existing research involving teacher or family interviews and surveys has appeared to dismiss drawing as a method of determining children's expectations (Husu & Tirri, 2007; Richardson, Tolson, Huang & Lee, 2009; Uyank et al., 2011). Pictures, on the other hand, provide children with the opportunity to express their worldviews through their responses to being told a story, relaying metaphors, and

both the description and their own descriptions. When drawing, a child synthesizes his or her feelings and thoughts about the subject with his or her observations and expresses them using colours, shapes, and lines (Malchiodi, 2013).

Children use their pictures to synthesize their observations from life and their opinions and to draw on what happens in their world as they see it. For children, drawing a picture is both a fun hobby and an effective instructional tool (Hayes, et al. 1994; Johnson, 1993). Although children are often unwilling to answer interview questions, they readily provide the same detail when prompted to draw a picture (Lewis & Greene, 1983). Drawing is also used as a means of expression for children who are unable to communicate verbally (Chambers, 1983; Rennie & Jarvis, 1995). If children's drawings are properly analyzed, they can provide researchers with more detailed information about their experience and development than written or verbal texts (Yavuzer, 1997). In the fields of psychology and picture therapy, aspects of psychology have been setting the stage (Malchiodi, 2013). The objects that children draw, the colours they use, and the art tools that they use can all provide important diagnostic and therapeutic clues.

It is against this backdrop that studies affirm that children's motivations for drawing are varied, as are the stimuli for the production of children's drawings. In view of this, Duncum (1992) propounded the grid model of spontaneous drawing types (Figure 1) to bring clarity to some of the influential factors underpinning children's drawings. Although it is acknowledged that every child has a different purpose for drawing, Duncum's grid model classifies children's spontaneous drawings into three major types with six sub-divisions such as factual/fictional, narrative/separate object, and self-generated/borrowed as observed in figure 1.

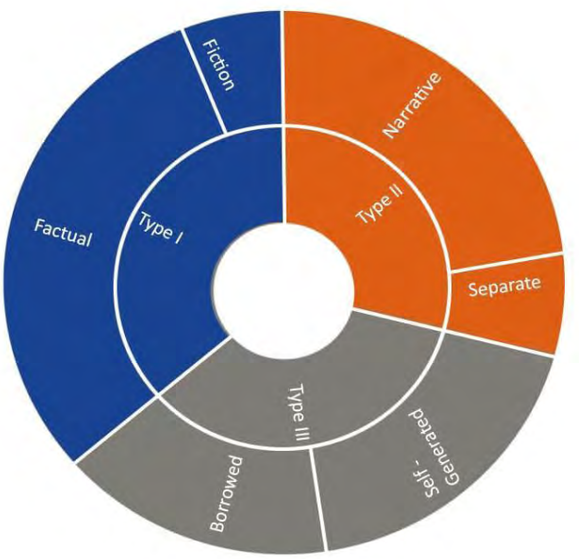

Figure 1: Classification of Spontaneous Drawings of Children
(Source: Adapted from Duncum, 1992)

Duncum explains that the factual/fictional types of drawings can be based on real events (factual) or invented by the child (fictional). Also, the narrative/separate object types of children's drawings can have a story created around them (narrative) or can be an object with no narrative dimension (separate object). And lastly, the self-generated/borrowed types of children's drawings can be generated by the child (self-generated) or can be copied from another source (borrowed). Per this, it suggests that when interpreting children's drawings, six influential sources such as factual, fictional, narrative, separated, self-generated or borrowed ought to be taken into critical consideration. Therefore, the conceptual underpinnings of Duncum's (1992) grid model of spontaneous drawing types, as herein espoused, provides a befitting framework to the current study which sought to examine the environmental influence on drawings of children in lower primary schools in Ghana.

2.1.9. Preschool Teachers' Roles, Views, Experiences and Approaches about Children's Drawings

The literature on the role between classroom quality and educational attainment in children has produced mixed findings (Sanders & Howes, 2013). According to studies, early childhood teachers with a bachelor's degree outperform teachers with a high school

or associate degree on global indicators of classroom consistency, offer more explanations to children's questions and are more attentive to the needs of children (Burchinal, Cryer, Clifford, & Howes, 2002; Phillips, Fox & Gunnar, 2011). A body of evidence shows that the level of teacher instruction in early childhood classrooms has a profound effect on young children's social, language competencies and academic as well as developmental outcomes (Early & Winton, 2001; Ritblatt et al., 2013; Saracho, 2013).

Barnett (2011) argued that it is especially important for early childhood teachers to consider how experiences in the classroom influence patterns of change in children's cognitive development or thinking though they are expected to learn a lot (Bjorklund, 2012). In a developmental-appropriate manner, teachers must also be able to extend their understanding of cognitive learning to classroom activities. Early childhood teacher education programmes can immerse their students in these subjects, and field-based work is one way to do so (Macy, et al., 2009). According to Horowitz et al. (2005), understanding cognitive development is crucial for all educators, but it is especially important for early childhood educators. An early childhood teacher that has a basic understanding of human development is more able to sequence, schedule and develop experiences that best fit children's learning needs. Teachers, according to Artut (2013), should create appropriate environments for children to express their feelings and thoughts by bridging the gap between children's drawings, their lives, and imaginary worlds. Teachers, according to Yavuzer (2014), should allow children to maintain their own expressions rather than force them to behave in accordance with their own norms. Teachers' positive responses to children's drawings give them a sense of accomplishment and help them develop a positive self-perception (Fox & Schirrmacher, 2014). Teacher attitudes that place no value on original thoughts are emotionless and does not value children's work may suppress children's creativity and minimize their interest in drawing on the other hand (Artut, 2013). Providing corrective feedback to children's drawings, according to Artut (2010), could interfere with the inner world of the child.

Positive reactions from teachers to children's drawings, either verbal or nonverbal, inspire creativity whilst still reinforcing the child's sense of accomplishment. Positive responses, on the other hand, should be carefully chosen. Expressions like "well done" "congratulations" or "wonderful" may inhibit creativity by making the child dependent on external compliments. Adults should form sentences that show they are concerned about and appreciate a child's drawing instead of using those terms (Yolcu, 2009). Teachers should pay attention to children's small muscle development as they draw, contribute to their cognitive development by discussing the various concepts they use in their drawings, and help their social-emotional and language performance by providing them to display their drawings in a variety of ways, including presentation, drama, and dance. Furthermore, teachers may help children develop their creativity by encouraging them to use their imagination and supporting them with the appropriate approaches (Yolcu, 2009). Respecting children's products, reflecting on children's feelings and thoughts, proposing alternatives when children pause, guiding children, and understanding children's efforts are among the values that Isenberg and Jalongo (2006) recognize when reacting to children's art products.

The most meaningful way to react to young children's drawings, according to Isenberg and Jalongo (2006), is to discuss the colours, texture, arrangement, lines, and shapes that constitute the artistic elements. Teachers must verbally define the art elements, shapes, and objects in children's drawings, talk with them about what they drew, ask them questions about the process, ask them open-ended questions, and use expressions that appreciate and support their efforts, according to Fox and Schirrmacher (2014). These strategies are part of the educational approach (Fox & Schirrmacher, 2014). The conversation in this approach aims to develop an artistic perspective and aesthetic awareness suitable for the child's developmental characteristics, stresses the process over the product, and incorporates artistic elements (Bolattaş et al., 2017). When drawing, children should be able to explore artistic elements with their teachers and peers (Wachowiak & Clements, 2006).

Anning (2002) investigated the effects on the drawing activities of children of teachers and parents' opinions on children's drawings in the North of England. According to the findings, preschool teachers are unaware of the strategies that can be used to inspire young children to draw. They could not also react to the drawings of children. Teachers stressed the role of drawing in a child's development process in research undertaken by Rose et al. (2006) and mentioned that they were not judgmental of children's drawings and that they allowed children to draw. In a study conducted by Garvis and Pendergast (2011) with Australian preschool teachers, it was found that more than half of the teachers were not efficient in encouraging visual art activities. Özkan and Girgin (2014) evaluated preschool teachers' visual arts practices and concluded that most teachers do every day visual artwork. According to the teachers of the study, visual art education improves children's psychomotor skills and creativity and is not necessary for their art education during their studies. Ten percent of preschool teachers reported that the methods for teaching the Visual Arts were not appropriate in the study conducted by (Şahin, Kartal & İmamoğlu, 2013).

Similarly, research by Dilmaç et al. (2008) revealed that pre-service teachers want to use different methods and strategies in the course, which investigated the perception of preschool teachers regarding drawing. In addition to these studies, there are scale studies that examine the attitudes and implementations shaping the drawing action of children at home or at school (Burkitt, et al., 2010) and that determine the approaches of the teachers towards children's drawings (Bolattaş et al., 2017).

2.1.10. Child Development in Art

Comprehensive studies in the areas of art education, psychology for learning and child development have different perspectives on the importance of the arts in education and how arts have an effect on children's development. When young children undergo various stages of development, they learn different skills and master different levels of each development field (Squires & Bricker, 2009; Voress & Pearson, 2013). Similarly, children through various stages of art development and, in turn, the arts contribute to the development and mastering of different skills.

Lowenfeld and Brittain (1970) investigated the cognitive, physical, and social/emotional development of children at each stage in relation to the emerging artistic skills at each stage; they consider art to be a means of expression for young children that not only becomes their language of thought but also facilitates adults' understanding of children's development. Consequently, researchers propose that "the arts constitute a tool to explore pre-verbal functioning, both to gauge psychological well-being and to interact with the inner world through the playful and spontaneous possibilities for self-expression that the arts can enable" (Atkinson & Robson, 2012, p. 1349). Others argue that the arts can help children develop skills in a variety of domains, especially in terms of supporting social-emotional development by increasing motivation and interpersonal skills (Brown, 2013; Brown & Sax, 2013), encouraging communication (Chang & Cress, 2014; Duh, 2016), and promoting cognitive development (Chang & Cress, 2014; Duh, 2016); (Baker, 2013; Lowenfeld & Brittain, 1970). "The arts provide children with experience, meaning, and development of thought and in particular; they create meaningful links with concepts being taught through active learning activities" (Baker, 2013, p. 2).

2.1.11. Learning through Visual Art in Early Childhood

Early childhood education and care is a term that refers to an educational system that supports children from birth to the age of eight. It is also known as childcare, childcare, early daycare, childhood education, and a variety of other terms (Rhodes & Huston, 2012). Many of these early childhood environments have a positive or negative impact on children regardless of the label (Sanders & Howes, 2013). Many findings show that the quality of early childhood education has a direct effect on children's developmental outcomes as well as their language capacities academic and social (Ritblatt et al., 2013; Saracho, 2013). The literature that emerges from these studies serves as a catalyst for advocating for higher-quality early childhood education and care for young children (Whitebook et al., 2009b). Children learn through exploration and investigation in art media, much as they do in free play. Terreni (2010) states that art is "often identified as a distinct area of play" (p. 2) and that by engaging in and with various arts during early

childhood, infants, toddlers, and young children will not only be able to achieve present learning outcomes but will also be able to develop behaviours and attitudes that will promote future learning (Vecchi, 2010; Barton, 2015).

While also fostering creative abilities and knowledge, learning and participating in the arts, whether in music, dance, visual art, or drama or promoting a child's holistic development. Educators in early childhood education must recognize that arts education is a creative environment where children can discover their identities and worldviews while advancing holistically (Grierson, 2011). In the end, arts education should encourage the balanced development of infants, toddlers, and young children by promoting their learning and aesthetic enjoyment in a free-play creative environment with supervised support if required, while engaging them in culturally relevant activities that attract and sustain their attention. Ultimately, arts education should be a stimulating, soothing, and enjoyable subject in which children can develop, learn, and develop as artists. Since it encourages learning and contributing to and advancing their holistic development, infants, toddlers, and young children benefit from arts education (Grierson, 2011).

The arts are an important part of a child's early development since they help them improve their cognitive, social, problem-solving, and personal competencies, as well as their physical, verbal, and emotional development (Danko-McGhee & Slutsky, 2007; Barton, 2015; Duh, 2016). As a result, arts education and activities for toddlers, infants and young children would benefit them in a multitude of ways, shaping and enhancing their physical, cognitive, social, and emotional abilities at the same time. Arts curriculum is a key opportunity for children's general learning and development, therefore providing them with a diverse range of artistic experiences and opportunities is critical. Infants are constantly growing and developing skills, constructing ideas about how things work, and toddlers are increasingly improving their physical, social, cognitive, and language capabilities in early childhood (Schwarz & Luckenbill, 2012; Ministry of Education, 2017). Participating in developmentally appropriate activities will improve their holistic skills, which will help them learn more effectively in the future.

Young children also have capabilities to understand, symbolize and represent, and they need artistic opportunities that promote their holistic development and learning skills and thus benefit from them (MoE, 2017). When teaching arts education, educators must be conscious of how children can be better supported in their holistic development, which necessitates knowledge of child development. In visual arts, children and toddlers are developed with cognitive thought and language and their fine motor skills. Among young children their markings (scribes) mean more to them when they make cognitive connections between certain symbols and identified items, whereas a child's scribbles are all about the visual perception as they produce them (Bhroin, 2007; Richards, 2007).

Teachers engaging an individual child, promoting the use and exploration of new words relating to their art in discussion, and presenting them with a way to use language meaningfully may also be explored and inspired by participation in the visual arts (Chang & Cress, 2014; Danko-McGhee & Slutsky, 2007). Arts education is becoming more relevant in early childhood, and its goal is to not only stimulate general growth but also to offer ample and developmentally suitable opportunities that will continue to enhance a child's holistic development and learning. Based on the principle of art play, it is critical to allow infants, toddlers, and young children the freedom and unrestricted enjoyment of experimentation and exploring within the arts and when one is being imaginative, it can be seen as the same features that are seen when playing (Burrill, 2005).

With regard to learning in the arts, it is clear that the main task is to offer children the freedom to discover, explore, imagine, and experiment on their own. Furthermore, they will be forming their cognitive, psychological, and emotional thoughts and feelings about their art experiences, whether consciously or subconsciously. Young children can use art media to communicate and interact with the world in visual art practices, individually drawing on their experiences and constructing their own theories about everything (Knight, 2009). However, particularly in visual arts education, teachers may often put a greater emphasis on art media and technique, limiting and hindering a child's

creativity processes with adult-imposed expectations or objectives (Plows, 2014; Vecchi, 2010; McWilliams et al., 2014). Achievement learning agendas in the arts should be discouraged by parents, educators, and schools.

A discussion was also held on the rhizomatic space and process where children have a flexible opportunity to connect freely and ceaselessly with components and concepts on a continuous basis that are not governed by a set of rules (Knight (2009; Lind, 2005). Restricting the exploration and experimentation of the child as well as pre-determining their learning direction and advancement in the arts, does not help to foster their imagination and creativity, as it limits their rhizo thinking and space. It prevents conceptual connections from being made across cognitive boundaries, obstructing the "endless possibilities for approaching any thought, activity or concept" (Sellers, 2010, p. 560). Toddlers and children should be encouraged to easily discover and explore materials and opportunities while engaging in the arts, cultivating inspiration to develop more with their creativity and ideas. This will also encourage them to share their feelings about the environment, which will aid in their general development and learning (Terreni, 2010; Grierson, 2011).

Similar to when they are free-playing, young children would not become bored, stressed, or passive if they participate in art activities that allow for freedom, experimentation, and discovery in a no-fail environment when the atmosphere is relaxed and allows for creativity and free expression. Even with infants, parents and caregivers can give them opportunities for exploration in the arts, as even though they are young, they are still developing rudimentary theories of the world through hands-on play (Schwarz & Luckenbill, 2012; MoE, 2017). Teachers can promote the use of a variety of art media without adversely affecting a child's artistic development or expression by providing children with art environments that do not have a definite format and exact learning or target goals, allowing for individual or collaborative creativity (Terreni, 2010; Fuemana-Foa'I et al., 2009; Novakovic, 2015). This would encourage infants, toddlers, and young children to pursue and become interested in the arts on their own terms, rather than being limited by preconceived notions of how art can be studied and

taught in early childhood. The goal of arts education is to inspire, instruct, and promote knowledge and interest in the arts, rather than to impede it.

Children's creativity in the arts leads to "inspiring and inspired teaching which, in turn, motivates students to learn" (Gibbs, 2005, p. 2). This encourages educators to play a crucial role in a child's artistic development. As a result, guided participation and scaffolding are critical components in maintaining children's interest in the arts. If art experiences are too difficult for infants, toddlers, or young children, they may lose interest, which can influence their willingness to participate in future projects, especially in the visual arts. Visual arts are an important aid in promoting a child's development, and educators in an early childhood environment should be available to help a child with their artwork on an as-needed basis (Terreni, 2010; van Kuyk, 2011).

Both guided participation and scaffolding assist in the learning of the arts, but scaffolding is more likely to help young children. Their independence in the arts, coupled with their increasing curiosity in exploring and playing with a variety of materials, should be encouraged (MoE, 2017). Producing art is a means for infants and toddlers to make sense of their worlds; guided participation during art opportunities would always enable them to take the lead in artistic experimentation, but mentors can still actively encourage and facilitate learning experiences when necessary (McWilliams et al., 2014; MoE, 2017). Plows (2014) noted that "guided participation fosters the realisation of children's artistic potential" (p. 47) and through scaffolding a teacher can help the child reach a higher level of development in their arts (van Kuyk, 2011). Without any guided participation in arts, infants, toddlers, and young children can become unresponsive and passive in their art experiences. Since the goal of arts education is to foster motivation and participation in the arts, educators must offer adequate guidance as needed (Veale, 1992). Toddlers should be able to work unattended while studying the arts, practising their talents at their own pace and asking for help if necessary. Infants should also be given opportunities that push them beyond their comfort zones, inspiring them to do new things (MoE, 2017).

Furthermore, educators in the arts should conduct research into children's desires in order to assist them in expanding on their explorations with directed guidance, allowing them to reach their full potential in their artistic journey (Danko-McGhee, 2007). Young children are becoming confident enough in their learning to risk disappointment and try again, so art experiences should be offered with little or no scaffolding by the tutor, with an emphasis on observing how a child handles and learns from their work. Despite the fact that many early childhood teachers lack sufficient knowledge and training on how to teach the arts and lack confidence in planning art activities with young children, art opportunities that are designed to engage the children's interests whilst allowing free range for experimentation can capture and maintain their attention, inevitably building upon their learning, and if needed, the teacher can be free to give basic instructions (Mages, 2016).

In early childhood, it is crucial that art education helps children increase their artistic capabilities when and where necessary to provide proper support, which does not interfere with their natural development or obstruct it but provides them with assistance and subsequently benefits from their arts. Art education is designed to capture and maintain interest in learning and thus, when developing appropriate art activities, a child's knowledge fund - the relevant previous knowledge - should be considered such that they can link up to a child's culture to experiences and use his imagination in such artistic games to explore his culture and identity (Richards, 2009; Esteban-Guitart & Moll, 2013; MoE, 2017). Richards and Fleer have noticed that if behaviours are related to children's desires and identified with a topic, they would have more chance of dealing with the materials in the light of their personal experiences during their earlier childhood (Richards, 2009; Fleer, 2012). Children may be uninterested in art experiences that have little or no meaning to them and, even if the events are fun, following them may seem futile if they cannot make positive connections to their lives. Art experiences are essential for a child's development, with artistic thinking having a unique perspective on life. As a result, just as children create understanding through play, their artistic

learning and activities must make sense to them, based on their own experiences (Vecchi, 2010; May, 2013; Barton, 2015).

When it comes to encouraging holistic development and learning of the arts, cultivating artistic appreciation is critical. For children to appreciate, maintain curiosity, and thereby strive to pursue more on their own artistic journey, they must recognize what they feel aesthetically appealing (whether in sight, tone, or movement). Aesthetic appreciation should be encouraged and learned in order to further a child's holistic development and interest in the arts, as well as to foster personal conceptions in what they consider and define as "pleasing" art. More importantly, teaching and developing artistic appreciation promotes personal pride and pleasure with personal artwork, as well as supporting what a child finds aesthetically pleasing (Vecchi, 2010; May, 2013; Barton, 2015).

According to Bhroin (2007), young children's art holds a lot of value for them, so in an early childhood environment, educators must build a sense of artistic appreciation in a child's personal work by motivating them to explore and criticize it, thus improving their critical thinking and reflection skills. Since toddlers and young children will have many chances to experience other people's work, they must not be discouraged by feelings of contrast with their own work. To Richards (2007), there are many myths about child development and creativity, one of which is that the art processes are more significant than the outcomes. When it comes to visual art, though, as toddlers and small children make a piece that is important to them and aesthetically appealing, they do not want to throw it out or ignore it; instead, they want to save it for personal reasons, such as showing their parents. Consequently, educators play an important role in guiding art opportunities to further a child's artistic understanding, such as exploring and viewing artworks in a museum, discovering pleasing music pieces, or attending a play that the whole class can watch (Plows, 2014; Novakovic, 2015; Duh, 2016).

Children can reflect on what they find aesthetically appealing through contemplation, and these observations can ideally shape their own artistic journey

through inspiration. Toddlers and young children learn from this in terms of their developing artistic appreciation and sensitivity to fresh ideas, since as they recognize what art is aesthetically pleasing to them, they will discuss their thoughts while still objectively reflecting on their observations, using this art to guide their present and future work (MoE, 2004; Duh, 2016; Plows, 2014). The researcher is of the view that, although children are too young to be taught artistic appreciation, promoting and teaching toddlers and young children aesthetic appreciation can inspire their work, allowing them to continue to mature and learn in the arts holistically. Children must have the same freedom to explore and experiment in the arts that they do in free play, whether drama, dance, music, or visual art. Furthermore, since infants, toddlers, and young children are all at various stages of development, the arts enable each stage to further their holistic development and art learning while also encouraging their individuality. Arts education in a culturally sensitive and exploratory environment should promote holistic development, and provide guidance, if necessary, to help to explore and facilitate what a child considers aesthetically pleasing.

2.1.12. Benefits and Intrinsic Nature of the Arts in the Early Years

Early childhood education has always included the arts (McArdle & Wright, 2014). Early childhood art proponents often argue that the arts are a significant, if not crucial, building block in children's development (Wright, 2012). On the other hand, there continues to be a tendency to downplay the perceived importance and role of the arts in early childhood development beyond a minor effect on engaging young learners since the arts are not considered as a "more formal" curriculum material seen on standardized tests (Barton et al., 2013). However, over the last decade, a growing body of research has emerged pointing to specific benefits for early learners that go beyond the mere idea of making artwork for the sake of making art - a "fun thing to do". Early childhood arts learning and practices of drama, dance, music, and visual arts have been found to affect the achievement of identified learning outcomes as well as enabling attitudes and behaviours that promote later learning (Eisner, 2002; Gardner, 1980). These beneficial influences include:

- Social interaction through experiences of sharing resources, assuming different roles in the art-making process, and helping others, differentiating one's work from others, questioning, considering, evaluating and appreciating the work of others.
- Physical development through hand-eye coordination and fine-motor skills acquisition and refinement.
- Expressive qualities including the ability to communicate concepts and ideas. Young learners may not have the language to describe sufficiently their experiences.
- Imagination, creativity and experimentation through trialling techniques, methods and materials and sequencing them in ways meaningful to the early learner, as well as linking one's own behaviours and actions with creative results.
- Cognitive development through arts-specific language use, exploring and connecting concepts and objects to symbols, making choices over subject matter, different media, materials, and methods to produce art and;
- Problem-solving skills which are often embedded in arts education such as producing a play, working out what colours or medium to use in visual arts, or deciding what sounds work together in a performance (Kindler, 2010; Mace, 1997).

What other scholars refer to as a deficit education, children who do not have access to arts-based learning are at risk of having an education that is not holistic in nature since the handlers ignore a variety of learning styles and approaches (Barton et al., 2013; Ewing, 2010). Ewing (2010) for example believes that the arts have the potential to transform "learning in formal educational contexts and ensure that the curriculum engages and has relevance for all children" (p.1). Given the ways in which children understand and make meanings of the world around them, learning in, by, and through the arts is especially critical in the early years. This is often accomplished by the use of signs and symbols, as well as a variety of representational modes. Children would be less likely to achieve the skills mentioned above if they do not have consistent

and high-quality access to arts-based learning opportunities. Sinclair, Jeanneret and O'Toole (2010) acknowledge the integral aspect of early learning through play, creativity and imagination.

2.1.13. Children's Development of Drawing and Creative Skills

Children use colours and lines to reflect their imagination and creativity on paper, maximizing their creativity and freedom (Fox & Schirrmacher, 2014). Drawing is a free-form practice that a child can do without the assistance of another person (Yolcu, 2009). Young children, according to Buyurgan and Buyurgan (2012), do not mind the aesthetics of their drawings. What matters to them is that they enjoy drawing. Drawing allows children to improve their imagination and creativity while also having emotional relief and freedom (Ayaydn, 2011). Drawing also helps children develop their perceptual sensitivity, as well as their knowledge and skills related to concepts (Zupani et al., 2015). Adults are particularly interested in children's drawings in order to further understand their inner worlds and world perceptions, advance their educational development, follow their linear development, assess children, and assist them in gaining an artistic perspective.

The child assimilates to achieve emotional and cognitive balance, according to Yavuzer. In consequence, games and drawings that are considered games need assimilation. Drawing, according to Yavuzer, is an effort to reflect the outside world, and hence the emergence of mental images (Yavuzer, 2014). Giving children experience in a range of fields during their childhood years is critical for their overall development. "Listening to music, for example, the child develops her or his ear, repeats the words they hear, and probably also moves with this, thus developing many diverse abilities. Listening to fairy tales and watching illustrations children develop their vocabulary, they develop imagination and the capacity of longer concentration" (Duh, 2013, p. 33). There are many ways to use diverse styles of expression to support a child's cognitive, affective, and psychomotor development. It is up to the teacher to determine whether children will know how to analyze, interpret, perceive, and thereby improve their competencies; reach their full capacity through imaginative creative activity and whether

they will learn new skills through a variety of approaches and modes of learning. When observing works of art, the teacher's guidance is especially important (Duh & Kljaji, 2013). Children describe everything they see around them, not just anything relating to works of art. Teachers should use this as a stimulus by offering children with new experiences, allowing them to develop and widen their words in a systematic way. Teachers should help children recognize the importance of objects and lead them actively and attentively from articulating their feelings to developing an appropriate vocabulary for describing these feelings (Duh & Zupani, 2013).

A child's drawing is an exploration of an object's characteristics, role, function, and manifestations in its physical environment, rather than just an imitation of reality. Children may use art to explore their own thoughts and share such ideas with other children and adults either alone or in groups. By using a variety of resources and techniques; Children grow their artistic ability through art experiences; develop visual sensitivity, specific art-expressive possibilities, visual-spatial intelligence, imagination, and aesthetic perception (Kindler, 2010; Vecchi, 2010). Experiential learning is how children develop the aforementioned abilities. They do it by playing, in which they express their interests and desires, shape their attitudes, and suggest solutions to challenges (Tomi Erkez & Zupani, 2011).

Drawing is a part of a young child's meaningful, playful, and multi-modal engagement with the world. It enables them to hold ideas in their minds to communicate them to others and to themselves (Ring, 2010). This implies that many processes are taking place at the same time, such as the construction of concepts and knowledge and their communication by drawing. As a result, drawing may be used to help a child make logical sense of an experience once he or she has reached a level of understanding.

What children feel, experience, know, understand, or may imagine serves as the raw material for their drawings (Nielsen, 2012). Children learn to articulate themselves using visual cultural codes as they draw at home and in daycares, as well as encounter and use other visual cultural idioms, such as colloquial language, body language, and media images. In particular, children's drawings are affected by the type of relationship

the children have with the adults issuing the instructions, the context and surroundings in which they are created, as well as the instructions associated with the activity (Nielsen, 2012). Drawing is classified as a multimodal activity because it is frequently accompanied by other actions such as narration, singing, writing, sound effects, gestures, movements, and dancing (Hall, 2009).

When children draw gathered around a table in early childhood classrooms, observation reveals that they use a wide range of communicative practices, which usually reflect the specific learning culture of each classroom (Ring, 2010). They agree or disagree about what to draw and how to draw it, discuss and share ideas about the drawing subject, inform others about the content of their drawings and the meaning of their symbols, occasionally copy others' symbols, narrate stories and guess the meaning of their peers' symbols (Soundy & Drucker, 2010).

2.1.14. How Creativity Evolves in Childhood.

Humans are born into a socio-cultural environment and attempt to adapt to it from birth. Throughout the child's development, this effort of adaptation continues. As in all aspects of development, the base of a child's social and emotional development is built in the first years of life (Günindi, 2011). Therefore, early childhood is the most crucial stage in development in terms of instilling values that children will need later on in life.

Since children in this period are in the midst of the most accelerated stage of development, as their identities are developing, they are highly influenced by their immediate environment and are responsive to all kinds of training. As a result, timely and effective interventions can support their development. A child tends to follow the value judgments of the immediate society, as well as the behaviours and habits that conform to the cultural texture, between the ages of zero and six (Günindi, 2011). The 21st century has given children access to resources that enable them to work at levels of expertise formerly reserved for professionals, and the word "art" has undergone significant change. The elements of context and dialogue in their shared experience are brought to life in Eckhoff's (2012) study on the relationships between adult artists and young learners. Children in the 21st century, according to Eckhoff, are no longer seen as

passive listeners but as active partners. Their artistic drive can find meaning and placement as they are exposed to meaningful and challenging environments. This is only possible in the 21st century. The tipping point, according to Gladwell (2015), is the moment when an idea, human behaviour, trends, tips or hits a threshold and spreads like wildfire.

According to Vecchi (2010), the young artist is exposed to the learning processes and is able to form cross-disciplinary relationships, providing a natural flow of understanding between theory, research and experimentation. Human evolution includes the act of making the first mark, the desire to experiment with a drawing tool, and the desire to imprint a trace of presence. The first line became visible as men became conscious of seeing objects that were not there and recorded them by recollection and imagination (Solso, 2005). As a result of the emergence of consciousness, symbolic expression emerged, which is the desire to communicate "outside the box" as Solso (2005) puts it. Language and art, Eisner assumes, developed together, creating metaphors through abstract linguistic symbols, and art started as a result.

In metaphor, the "outside the box" refers to how the environment collaborates with cognition to achieve higher levels of knowledge and expertise. In this situation, the collective unconscious develops into collective consciousness and learning (Eisner, 2011). Teachers have played a number of roles in developing creativity skills in children, such as encouraging children to look closely at themselves through mirrors, which enables them to mix different paints to find the nearest colour match with their skin. This was a long investigation process, but one that allowed the children to think deeply about what they were doing. Children are able to

> "explore and re-see" their skin colour due to the colour mixing and through discussion, thoughtful deliberation and self-discovery, they moved from describing themselves and others as monotone pink, white, black or brown to using more sophisticated language to describe their skin tone (Wright, 2014, p. 7).

Ellen Winner, a Professor of Psychology at Boston College and Senior Research Associate at Project Zero, Harvard Graduate School of Education found that the

spontaneous works of preschool children are unique and engaging pieces with impressive use of colour and shape, according to Turgeon (2017) in her description of the development of creativity in art. She has discovered that children have an aesthetic sense and have ideas about their work. Humans save ancestral knowledge in their unconscious, according to Rhoda Kellogg, who adopted Carl Jung's theories, and this unfurls in the early years, demonstrating the theory of a saved collective unconscious database (Eisner, 2011). Rudolf Arnhem (who was a German-born author, art and film theorist, and perceptual psychologist) instead, sees the development of children's art as an ability in perception; this follows a set of defined stages common to all children. The artwork gain's structure and detail as the quality progresses, and a gradual broadening of knowledge in the search to master illusion begins to take root (Eisner, 2011).

Children's intentions in creating art, according to Malin, are to find meaning in their socio-cultural environments (Malin, 2013). She maintains that knowing their works requires a cultural context and that they are products that make life meaningful. Children develop relationships with their art as a connection between their inner world, their environment, and their intentions, and they own their work according to Malin (2013).

According to Kindler (2010), humans have long abandoned the interpretation of visual realism as a means of understanding children's creations and can now focus on the quality of thought. The child's ability to engage with ideas, materials, and techniques constantly characterizes artistic creations, which are no longer just two-dimensional. During an art lesson, art is no longer created for the sake of art, but as part of a learning process that requires the ability to apply knowledge from one area to another (Kindler, 2012). Children are natural learners, according to Robinson (2015), and their potential is enormous; they are artists in their own right. Robinson is unconcerned about whether or not creativity is an instinct and he recognizes the value and richness of creativity for future generations. For Kindler (2010), artistic development is dynamic, often reflecting the present moment and ready to move forward, redefining itself through the child's interaction with the environment and visions. According to Owen (2017), creative children demonstrate a number of interesting traits:

- Always come up with ideas and find solutions to queries.
- They make presumably unusual associations between ideas and concepts.
- Have a vivid imagination
- Stick to their ideas and prove their points
- Juggle and change elements to suit their theories
- Have a great sense of humour.
- Are interested, committed, passionate and original.
- Question with an insatiable curiosity
- Challenge existing ideas and concepts with eccentric proposals

2.2. Theoretical Framework

The theoretical foundation and understanding of the origin of children drawing and the factors that underpinned both their interest and capabilities in drawing has been an area of scholastic exploitation by psychologists and educational researchers over the years. Many of the seminal documentations in the area of children's drawing have advanced a number of theories in an attempt to explain what children draw, why they draw and the factors that influence both their interest and capabilities in drawing. Although none of the theories has received unanimous acceptance, some have wider acceptance and most appropriately explain certain concepts better than others. In this study, the theory of children's artistic development; the theory of realities and the social cognitive theory, and self-efficacy theory were employed in explaining various aspects of the study. A brief description of the theories and their application in this study are herein espoused.

2.2.1. The Theory of Children's Artistic Development

In the field of Art Education, Viktor Lowenfeld, through a series of abridged editions of his Creative and Mental Growth book, is noted for providing in-depth theoretical insights on children's artistic development (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987). Lowenfeld and Brittain (1987) stress that children's artistic (drawing) activities should be seen as a process that is in sync with children's behaviour and growth patterns best categorised under five stages such as; Scribbling Stage (2 - 4

years); Pre-schematic Stage (4 - 7 years); Schematic Stage (7 - 9 years); Drawing Realism (9 - 12 years), and Psuedo - Realistic Stage (12 - 14 years) (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987). For each of the afore-stated stages, Lowenfeld outlines some drawing activities expectantly engaged by children largely stemming from their psychological, social, and physical environmental peculiarities. Therefore, since the current study sought to investigate the environmental influence on drawings of children between the age range of 7 - 10 in lower primary schools of selected districts in Ghana, it is imperative to situate the study within the specific stages that relate to Lowenfeld's theory of children artistic development (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987). In view of that the theoretical review specifically provides insights on the Schematic (7 - 9 years), and the Drawing Realism (9 - 12 years) stages of Lowenfeld's theory of children's artistic development which two stages are in synch with the age range (7 - 10 years) of the children under consideration by the current study.

Schematic Stage (7 to 9 years)

At this stage of children's artistic development, schemas are evidently observed in children's drawings. Schemas are symbolic forms that children make to represent many generic types of figures and objects (Lowenfeld & Brittain, 1970; 1987). It is explained that schemas are stable concepts that remain constant and unchanging until a child requires another mode of representation, at which time, through experimentation and observation of the environment, a new schema will be developed (Lowenfeld & Brittain, 1970; 1987). For example, ovals, triangles, squares circles, rectangles, or irregular shapes are used as schemas for the human body although all kinds of shapes can represent aspects of a human figure. At this stage, an attempt is made by the child to represent all human body parts including clothing and facial features (eyelashes, earrings, and various details). Also, although hands and feet are mostly observed in human figures, they are not always present in all drawings of children. This is because, the child is not attempting to copy a visual representation of human figures but the child arrives at a concept through a combination of many factors, his/her awareness of his own feelings, and his/her development of perceptual sensitivities (Lowenfeld & Brittain,

1970; 1987). Another schema that becomes apparent at this point in children's drawing is the "space schema" where the children find new relationships between themselves and other objects (Lowenfeld & Brittain, 1970; 1987). No longer do objects seem to float around in space in a child's drawings as there is the presence of a "baseline" on which all objects in the child's schema will be placed (Lowenfeld & Brittain, 1970; 1987). Another observable characteristic in children drawing at the schematic stage is that the child has not developed the awareness of the three-dimensionality of space, but basically, the schema is usually a representation of two dimensions. One of the insightful drawing discoveries is that there is a definite order in spatial relationships where the space schema is entirely abstract and only has an indirect connection with nature. Another interesting feature of children's drawing at this stage is that the internal components of objects are shown as X-ray pictures. For instance, the internal parts of a building, structure or human figure are simultaneously drawn with the outer parts (Lowenfeld & Brittain, 1970; 1987).

Some motivations and implications associated with children's artistic activities at the schematic stage are that; the child's consciousness of being a part of his environment should be encouraged by art educators, parents, guardians, and caretakers. Also, art educators need to pay constant attention to children with an encouraging attitude as children engage in their artistic activities. Art educators should also provide a wide range of themes for children to draw to enable each child to have the opportunity to identify with his/her particular interests. Importantly, art educators should provide a variety of art materials and tools for children at this stage for their rigorous artistic activities.

Drawing Realism (9 to 12 years)

Drawing Realism also known as the Gang Stage begins at age nine (9) and ends at age twelve (12). At this stage, the child becomes more aware of him/herself, and this is evident in their drawings (Lowenfeld & Brittain, 1970; 1987). At this point, the drawing is small and contains more details. The child is no longer eager to explain his or her drawings. One of the outstanding characteristics of this stage is that the child realizes he

or she is part of a society of peers, and so, learns to cooperatively work in groups with their peers, which is why this stage is also referred to as the gang stage. The word gang is not used negatively here but with reference to children's desire to hang out with friends in groups since they share similar interests, secrets, and the pleasure of doing things together. Children at this stage show increasing interest in "social independence" from adult interference, learning about social structures in a personal way. Children may hide their drawings from inquisitive adults who may make some remarks about their efforts. Children of this age have a strong desire to produce naturalistic or photographically real pictures. Although their experiences have much to do with their artistic expressions, they are easily frustrated if their works do not appear the way they think of them. The schema is no longer adequate to represent the human figure during the gang age. The concept of the human figure as expressed during the schematic stage will give way to differentiation between male and female in much more detailed drawings. This is the stage when the baselines will no longer sufficiently express their understanding of the world. The change from a single baseline to the discovery of the plane is usually a rapid one. The skyline is no longer drawn across the top of the page but now extends all the way down to the horizon. Also, the child has not yet developed the conscience of visual perception of depth, but he or she has taken the first steps toward such awareness. The child will begin overlapping objects to show their relationship to one another in space. Also, there is a greater ability of children to use multi-media tools and materials from their immediate environment for their artistic creations.

The insights shared on the drawing or gang stage of children's artistic development present an opportunity for art educators, parents, and guardians to encourage children to improvise art materials independently since at this stage, children have become sensitive to the qualities of the materials and tools in their immediate environment. Also, emphasis should be placed on how children manipulate and explore tools and materials with less focus on the finished product. Since boys and girls have a preference for tools and materials, art educators should ask the children what tools and materials they are interested in working with and provide enough variety to involve all

of the children to make drawing sessions more creative and enjoyable. Also, art educators should have patience with children at this age since they are their own worst critics, and adult interference can only cause more frustration to the child. Importantly, art educators should always give group projects to the children since they enjoy working with their peers.

2.2.2. Theory of Realities

The theory of realities was advanced by Wilson and Wilson (1982) to explain the motivation of children in drawing. Wilson and Wilson (1982) proposed that children's drawings represent their experimentation with different realities. The theory proposed four (4) different realities children's drawings represent namely the common, projected/anticipated, normative, and prophetic realities. The common reality represents the experience and immediate environment of the child which consists of people and objects. Thus, children representing their drawings with common realities would capture the objects from their domestic experiences, outings, and school environment among others. The common reality also referred to as the 'real' reality is the real adults can relate to and often try to convince children that the common reality is the only reality (Wilson & Wilson, 1982). The normative reality represents an expression of judgment of right and wrong or bad and good emphasized in the child's drawing. The projected/anticipated realities represent the child's experimentation of themselves with the various alternative ways they could be such as superheroes, spies, and dancers among others while the normative reality closely related to the projected/anticipated realities refers to the child's reinvention of good and bad people or things; appropriate and inappropriate behaviour. The prophetic reality, on the other hand, represents drawing depicting the child's prediction of their future and that of the world (Wilson & Wilson, 1982).

The child's environment and the realities they find themselves in is an important consideration in this study. In examining the motivation of the children and how the environment influences the child's drawing, the different realities that each child's drawing depicts, are important in understanding how the different realities influence

their drawings. In this study, the theory of realities was employed to understand the different realities (the common, projected/anticipated, normative, and prophetic realities) that children's drawings depict and then analyse how the child's environment influences the reality they seek to depict with their drawings. In applying the theory of realities, the children's spontaneous drawings were examined coupled with an interview with them to find out the kind of reality viz the common, projected/anticipated, normative, and prophetic reality they represent with their drawings.

2.2.3. The Social Cognitive Theory and Self-efficacy

In the early 1940s, Miller and Dollard proposed a theory for studying human learning and imitation behaviour called 'the theory of learning' (Pajares, 2002). Miller and Dollard's theory rejected the claim that learned behaviour is associated with drive reduction principles. However, two decades after the existence of Miller and Dollard's theory of learning, Bandura and Walters writing on 'social learning and personality development' noted that the theory of learning proposed by Miller and Dollard failed to take into account the creation of novel responses or the processes of delayed and non-reinforced imitations (Bandura & Walters, 1963). In response to this, Bandura and Walters attempted to broaden the frontiers of the social learning theory by adding observational learning and vicarious reinforcement. In the 1970s however, Bandura further became aware that certain key elements were still missing from not only the prevailing learning theories of the day but also his own social learning theory. Therefore, in a publication titled "Self-efficacy: Toward a Unifying Theory of Behavioural Change," he added self-efficacy to his previous theory of social learning. The social cognitive theory holds that part of human learning and knowledge acquisition can be achieved from observing others within the same social interaction context, experiences, and outside media influences. Self-efficacy is, on the other hand, the trust an individual has in him/herself on whether they have mastered a particular knowledge and skill or not. Self-efficacy beliefs, therefore, tend to be the most important determinant of human motivation which operates on action through motivational, cognitive, and affective intervening processes (Bandura, 1989).

The theory of social cognitive and self-efficacy over the years has been applied in diverse fields such as medicine, athletics, media studies, business, social and political change, psychology, psychiatry, and education. In education, Arievitch and Haenen (2005) noted that learning or education, in general, is socially manifested and that students learn from their teacher through a socially interactive environment with the teacher as the model and facilitator of the learning process. They, therefore, suggested that interpersonal social interaction with teachers and peers is a prerequisite for every learning or educational encounter (Arievitch & Haenen, 2005).

The preponderance of literature has shown that Bandura's social cognitive and self-efficacy theory has been widely used and has gained widespread acceptance in studies of educational constructs, especially on academic achievement, attributions of success and failure, goal setting, social comparisons, memory, problem-solving, career development, and teaching and teacher education (Graham and Weiner, 1996; Pajares, 2002; Arievitch & Haenen, 2005). The general conclusion reached by most educational researchers using the social cognitive theory and self-efficacy is that self-belief, behaviour changes and academic achievement are highly correlated. The depth of this understanding prompted Graham and Weiner's (1996) conclusion that self-belief/efficacy has proven to be a more consistent predictor of behavioural outcomes and performance than any other motivational constructs.

The implication of self-efficacy in academic performance is very obvious. As Shunk (1990) noted, people with high self-efficacy are more likely to show more determination in completing a task and are known to persist longer in their efforts than their counterparts with low self-efficacy. Self-efficacy determines how active and persistent an individual can be towards an issue or subject (Bandura, 1977). Individuals with low self-efficacy tend to have lower motivation towards learning an unfamiliar subject and therefore put in less effort in studying or learning such subjects. A study on science students in Australia revealed that students with high self-efficacy performed better in academics than those with low self-efficacy (Vialle, 2000). Vialle noted that self-confidence typically takes control of every learning experience, students with high

self-confidence (high self-efficacy) participated actively in class and preferred hands-on learning experiences while those with low self-efficacy shied away from academic interactions. The relationships between the variables in social cognitive theory and how self-efficacy influences academic performance is presented in Figure 2.

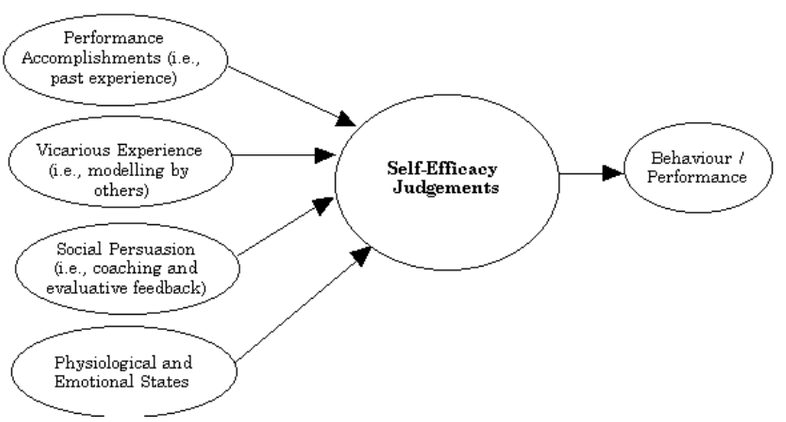

Figure 2: Bandura's Social Cognitive and Self-Efficacy Theory Concept (Source: Bandura,1977).

In this study, the application of the social cognitive and self-efficacy theory will explain the learned drawing of children from their school environment. Art which includes drawing is a skill and therefore can be learned from imitation of others within the social environment of schools and homes. In applying the social cognitive and self-efficacy theory, the study will explain how teacher and school environment including social interactions influence children's drawing capabilities development in the selected districts in Ghana and then also how home environment and cultural settings contribute to children's drawing abilities and capabilities.

2.3. Empirical Review

In this chapter, the empirical literature review covers drawing capabilities of children, the influence of teacher and school environment on children's drawing capabilities development, how home environment and cultural settings contribute to children's drawing abilities and capabilities and also explores how educational content and structure can be made to reflect the environmental setting of children. Key literature under each of the above thematic areas are presented as follows;

2.3.1. The Concept of Drawing and Drawings Capabilities Development of Children

Farokhi and Hashemi (2011) published "the study of children's drawings: social, emotional, physical, and psychological aspects" in the Procedia-Social and Behavioural Sciences, which presents the concept of children drawing. Children's drawings, according to Farokhi and Hashemi (2011), have a developmental order that correlates to the development of motor skills, emotional development, psychosocial development, and vision development. Children express themselves through drawing "what they know" in their own unique style. To put it another way, the perception, sensibility/emotions, and motor functions interact, and then the social experience factor is added, and the picture is drawn on paper.

The skilled control and development of the fingers are necessary to draw what one is thinking. Children also draw what they are familiar with. What they feel and what they want to say to others are expressed by the child's personal style, not only how they are seen. Thus, the degree to which a child is conscious of his or her surroundings, or the breadth of the child's world vision, has a significant impact on the drawing's content. Furthermore, in order to draw something, one must be interested in familiar events and matters (Farokhi & Hashemi, 2011). The drawing activity is enhanced by sensitivity to matters, things, and feelings such as joy, anger, sadness, and contentment, as well as the development of emotions (Farokhi & Hashemi, 2011). The development of drawing activities is profoundly influenced by the development of various skills, as well as the fulfilment of life experience and the expansion of worldview. By expressing these ideas in pictures, the child's consciousness develops; it enriches the world of creativity and broadens the scope of everyday life. Correlative effects emerge as a result which develops the child's drawing skills (Farokhi & Hashemi, 2011).

Many other studies, such as Wimmer's (2015) book The Complete Guide to Children's Drawings, attempt to explain the meaning and interpretation of children's drawings. Wimmer discovered that many parents are concerned with their children's social functioning. Some of the most common subjects assessed by drawings are social

abilities and skills. Perhaps one of the reasons seems to be that drawings enable parents and see what their children are going through behind the kindergarten or school gate, directly after they depart for work, and for hours thereafter. Since most early childhood experiences, including learning experiences, are social experiences dependent on peer group contacts, assessing social skills is important. The child learns more about himself and his environment from these experiences than from any other social interaction with adults or from books (Wimmer, 2015).

Naturally, parents must assist their children in making their first steps beyond the family greenhouse. What is the best way to do this? Popularity means being able to stand out for some parents. They will encourage their child to show off his or her abilities whenever possible. These children's drawings will often reflect this parental tendency, in that they may continue to emphasize their skills as though they are their entire personality rather than just one part of it, even though it means sacrificing their spontaneity and freedom of expression (Wimmer, 2015). One of the most interesting things about children's drawings, according to Wimmer (2015), is that the transition is always indicated on the page before it appears in real life. It seems that children want to express their changes in nonverbal ways first, and only express them verbally and behaviourally later.

Other studies looked at the social/emotional, physical, and intellectual development of young children by observing and analyzing their drawings (Kayacan-Keser & Eren, 2015; Eisner, 2013; Finley, 2013; Fiske, 1999; Lowenfeld, & Brittain, 1970; Lowenfeld, 1947). Early childhood development is dependent on social and emotional development. These cognitive and emotional skills are related to the ability to communicate with others both within and outside of the classroom (e.g., teachers and peers). Children's social and emotional skills influence how they interact with others, deal with their emotions, and react to events in their environment. Furthermore, these social and emotional skills are related to the ability to properly express emotions including sadness, happiness, nervousness, and anger, as well as determining how to respond while feeling one of these emotions. Moreover, by learning cognitive and

emotional skills with their peers and teachers, children can learn about their own feelings and identities.

Wu et al., (2018) define social and emotional competence as the ability to socialize with others and promote positive interaction through the use of acceptable behaviour. All teachers are available to help their children in developing cognitive and emotional capabilities on a regular basis. As a part of the teacher's support, Lippard et al. (2018) conclude that children are more likely to engage in constructive actions and are less likely to misbehave as they mature in class. Lippard et al., (2018) study discovered that, as teachers focus on support, children's positive results increase and their cognitive abilities develop. Similarly, positive or cordial teacher-child relationships, as per Breeman et al., (2015) findings, improve the psychosocial abilities and motivation of the child to communicate in the classroom.

Negative teacher-child relationships, on the other hand, have an effect on children's behaviour and make them dislike interacting with their classmates in the classroom (Breeman et al., 2015). According to Breeman et al. (2015), negative peer communication has an effect on children's emotional, social, and behavioural skills. Lippard et al., (2018) research demonstrated that the teacher-child partnership affects all children in the classroom equally. Lippard et al. (2018) also concluded that, when children interact with the same teacher in the same classroom, they will have different experiences. However, Cadima, et al. (2016) found no connection between self-regulation and the teacher-child relationship among young children.

But Cadima et al., (2016) discovered that because each student has a distinctive relationship with the teacher, children have unique classroom experiences. Sutherland et al. (2018) established that children with problematic behaviours are more likely to have developmental challenges in childhood and adulthood. Sutherland et al. also predicted that behavioural issues at a young age are strongly linked to adolescent behavioural challenges (drug use, violence, and dropping out of school). When it comes to changing children's behaviour in early childhood, Sutherland et al. (2018), highlight the importance of interventions (such as classroom activities). Children who lack social

skills, behavioural competence, or emotional skills are also at a disadvantage in the classroom, according to Sutherland et al (2018).

Young children therefore require more assistance than older children. Furthermore, attempts to raise a healthy adolescent or adult must begin in childhood. Due to this, preschool and kindergarten are important for children's development because they ensure that they have a strong foundation of cognitive, emotional, and behavioural skills. Early childhood teachers are responsible for assisting children in improving their social, emotional, and cognitive skills hence teachers must be aware of their students' characteristics and use a variety of activities to help them grow into healthier adolescents (Ng & Bull, 2018). Excellent teachers promote cognitive and emotional development through small-group activities, according to Ng and Bull (2018) and one-on-one interaction with children is also beneficial to their development.

Some studies have focused on the school environment, suggesting that children undertake a series of pictorial tasks. Drawing "something about school" (Dockett & Perry, 2015), "experience of the first year at school" (Einarsdottir et al., 2009), or "your classroom" (Einarsdottir et al., 2009) were among the requirements in some studies (Longobardi et al., 2017). Other drawings indicated a specific task, such as representing only the teacher (Ahi et al., 2016; Arslan-Cansever, 2017; Martikainen, 2019) or both the teacher and the pupil (McGrath et al., 2017).

2.3.2. Influence of School Environment on Children's Drawing Capabilities Development

This theme covered an empirical review of studies that looked at how the school environment including teachers and peers influences what children draw and how they draw it. When children learn how to communicate symbolically, drawing instruction is an integral part of their education, and accepted cultural models are necessary. Independent drawings by children use graphic sources from culture as models for production and use for making art. "The cultural styles that most children attempt to achieve demand that they overcome many of their intrinsic biases. In the absence of

good instruction, students often become discouraged and, as a result, stop most of their drawing activity" (Szekely, 2006, p. 21).

Drawing should be used to recall and express previous experiences and knowledge, as well as to elaborate new information and organize it. Perhaps this is why drawing activities have been successful in exploring young children's ideas in various areas of the curriculum and, in some cases, enhancing learning in areas such as natural phenomena (Papandreou & Terzi, 2011; Robbins, 2009), concepts, math symbols, processes, and problem-solving strategies (MacDonald & Lowrie, 2011), as well as personal and social issues (MacDonald & Lowrie, 2011); (Einarsdottir, Dockett, & Perry, 2009).

Children's expressions are characterized by drawings (Ouz, 2010). Children reflect their thoughts and knowledge through their depictions and drawing activities (Couse & Chen, 2010), and drawing-based research techniques have proven to be useful in gaining insight into children's views, experiences, and perceptions about the world around them (Einarsdottir, 2010; Noonan et al., 2016). Scholars have been particularly interested in various facets of young children's drawings, such as the content of the illustrations that they make (Ahi, 2017), the palette of colours that they use while colouring their illustrations (Villarroel, 2016), and the geometrical forms that they openly portray in their representations (Villarroel & Sanz, 2017). Burns-Nader, 2017; Söküt Açar et al., 2018) refer to drawing activities as an important way to encourage children to express their thoughts and feelings. Some of the influences of the school environment on children's drawing capabilities development are discussed below:

Motivation: Motivation arises as a result of the organism's needs, and it prompts the organism to take action. The child's desire for success, for example, drives him to win a drawing contest. Stimuli can also motivate a child, and the possibility of receiving a prize at the end of the contest can make him happier. Furthermore, a child is motivated by his routines and remains committed to the goal of "drawing pictures every morning". Affective factors in a child's painting are his or her interest in artwork and ability to devote time and attention to drawing pictures. Other indicators of a child's inner drive

include happiness, enjoyment, and a desire to create something as a result of drawing pictures. The prizes and reinforcers of drawing contests, which may also be held in classrooms, offer external motivation (Gungor et al., 2002). Moving trace objects (pencil, pastel, etc.) on a surface and drawing offers all children a great deal of pleasure.

Physiological status: A stable physiological structure is important for individuals. Disorders of the sensory organs (e.g., visual and auditory impairments, etc.) as well as chronic conditions (heart failure, diabetes among others) have a detrimental effect on a child's ability to draw (Ouz, 2010).

Prior experiences: Prior experiences influence our lives in both positive and negative ways. Prior interactions will help in learning if they are accepting of new learning. This is often named a "positive transition". Children who receive early childhood education, for example, are more likely to succeed in primary school than their counterparts who do not receive early childhood education. However, in some situations, prior experience may have a negative impact on new learning, a phenomenon known as "negative transfer". A person who learned to type on the F keyboard, for example, would not be able to type at the same speed on the Q keyboard. Therefore, school-based art activities must serve as a foundation for future art activities and have a meaningful effect on future painting activities (Ouz, 2010).

Individual differences: These differences between children in the same age group are mostly due to differences in intellectual capabilities. Children of average intelligence develop more quickly than children with learning disabilities (Ataman, 2004). A child with a high quantitative IQ score can reason, group, sort, and abstract, as well as think scientifically and calculate easily. A child with a high visual (spatial) IQ score, on the other hand, learns through visualization, imagination, colouring, drawing, drawing, and being receptive to colours, shapes, and lines (Ouz, 2010). Children's drawings may vary between those of the same age group and those of different age groups. Each child, for example, produces a drawing of a house with its own set of characteristics. They often draw houses with a triangular roof and two windows, and other times they draw houses with flat roofs and single windows. They do remember to

have a chimney and blackening smoke in their pictures (Artut, 2004a). Another individual difference that influences children's drawings is their gender. Girls, for example, tend to use more colours in their drawings than boys. Warm colours (yellow, orange, and red) are preferred by some children, whereas cold colours (black, blue, green, or brown) are preferred by others (Ouz, 2010).

Child psychology: In their drawings, children can express their heartbreaks, jovial feelings, and aggressive feelings. The personality structure of a child can be seen in his drawings (Atan, 2006). Drawings should be used as a release mechanism for adolescents who struggle to integrate their inner and outer worlds. A child with a rich and complex universe, for instance, cannot be required to draw. Children should draw as long as they feel able to express themselves and use their creativity (Ouz, 2010). During the drawing process, the child's psychological state is essential. For example, a child who is afraid of going to school can draw his mother, father, and himself in a closed room; a child who has trouble communicating with his mother and father and is beaten by them can draw his father's beating hand carefully or not at all. In his drawings, the child can draw boundaries between himself and his father. He has the ability to add tails and long ears to his father figure. When a child has negative feelings toward his brother or sister, he often does not include them in his drawing and does so in a clumsy and awkward manner. If he draws himself together with his father on the sofa and his mother serving them coffee and tea, it may be his declaration of himself in the family (Ouz, 2010). It is possible to identify the stage in the child's development where egocentrism disappears and feelings of belonging to larger groups emerge from the child's drawings (Yavuzer, 2007). Children's drawings are used by researchers to determine what the children consider important, as well as to demonstrate the child's knowledge and experience in the classroom (Farokhi & Hashemi, 2011). Educators, psychologists, and artists have all been interested in children's drawings, which have been examined in a variety of cultures (Arapaki & Zafrana, 2007).

2.3.3. Home Learning Environment and Cultural Influence on Children's Drawing Abilities

The search and literature that were considered under this theme addressed the cultural elements of children's learning and how the environment of the child and socialization influence their drawings. Notable studies that were reviewed included Donnell and Rinkoff's (2015) study on the influence of culture on children's relationships with nature published in Children, Youth and Environments journal; and Gernhardt, et al.'s (2015) study on the cultural perspectives on children's tadpole drawings and the interface between representation and production among many others.

At every given moment, a parent's role in the life of a child cannot be underestimated. The home is inextricably linked to a child's well-being and success later in life. The family is the primary social unit in which a child's upbringing must begin as soon as he is born when he is still in the cradle (Hugo, 2012). The many components of a child's learning experience are often related to their academic achievements. The most influential informal learning situation in which families, especially parents, act as educators is the home environment. The family is traditionally the first and most important learning environment in which very young children develop information, vocabulary, skills, and behaviour. This has the potential to influence their school readiness, attitudes toward learning, and educational success in the future. Kapinga (2014) discovered that home environmental factors (such as parents' educational level, occupations, income, learning environment within the home, parental motivation, and availability of learning facilities at home such as books, tables, and maps) have a significant impact on the learner's academic performance.

A study by Hill (2014) showed that because it offers a foundation for learning, a home environment for children has important implications for learning and school performance. In Australia, student performance was linked to the family's housing type, which includes those who live in public housing and those who live in private housing. According to Kamuti (2015), child developmental outcomes such as cognitive ability, school readiness, academic achievement, and emotional adaptation are all influenced by

the home environment. When it comes to environments, Vecchi (2010) mentions that when creating learning contexts, the continuous connections between the mind and the environment that create complex thought patterns must be considered. Interdisciplinary thinking must be proposed and promoted by the environment. Baker and Iruka (2013) found that the home learning environment mediates the relationship between maternal psychological functioning (risk experiences in terms of parental stress and maternal depression) and children's math achievement preparation in school. The findings suggest that the home learning environment (as measured by literacy-related items, physical activity-related items, and creativity-related items) is a significant mediator between maternal parental stress and kindergarten math achievement. Lehrl and colleagues (2012) discovered that the home learning environment (measured as home literacy) mediated the effects of family social background factors (socioeconomic status and parental native language) on children's emergent literacy competencies based on a German longitudinal study.

The Learning and Literacy subscale of the Home Observation for Measurement of the Environment (HOME) found that the home learning environment was positively correlated with preschool students' vocabulary and letter-word identification skills (Chazan-Cohen et al., 2012). A composite score of preschool students' reading, math, and vocabulary assessments was positively linked to home language stimulation (also assessed by the HOME) (Mistry et al., 2010). Over and beyond a set of control factors, Hindman and Morrison (2012) found that children of parents who were more interested at home in teaching about letters and words made higher strides in comprehension abilities during preschool, which are used to make sense of written words.

Hindman, Miller, et al. (2012) have found that parents who participated in more home learning experiences (such as teaching letter sounds and names, reading words, assisting children in drawing, and participating in math games and activities) had preschool children with better alphabet knowledge and decoding skills. Kindergarten students' reading performance was positively related to family involvement at school (Galindo & Sheldon, 2012). Parental involvement at school was positively related to

students' social skills and negatively related to students' good behaviour (generally reported as a negative correlation with problem behaviours) (Powell et al., 2010).

On the contrary, both Galindo and Shelden (2012) and Powell et al. (2010) asked parents how often they were involved in educational activities with their children, such as telling a story, teaching letters, words, or numbers, teaching songs or music, playing counting games, playing with blocks, playing with puzzles, playing with shapes, and counting different things. Neither study found a relationship between parent-reported involvement in their children's lives at home and preschoolers' math scores (ECLS-K math; Woodcock-Johnson Applied Problems). Informed parents and/or children's preschool teachers may facilitate and/or direct early learning experiences at home. The findings indicate that parents participate in reading readiness activities for their children regardless of their financial situation and that a large proportion of parents were uncertain about the right way to engage in such reading-related activities for their children at various ages and grade levels. Still, more parents were uncertain about how to interact with their children during math activities (Pan, Gauvain, Liu, & Cheng, 2006), particularly when math is taught differently unlike how it was taught when the parents were in school.

According to several studies, almost all parents agreed that teachers should provide more and better guidance on how to support their children at home with specific skills as they progress through the grades (Epstein, 2011; Van Voorhis, 2011). Parents of preschool children are worried about these concerns because they know that their children's early education determines whether or not they can excel in kindergarten (Weigel, et al., 2006). Binder and Kotsopoulos (2011) looked at the relationship between drawings and development, as well as how they reflect a child's culture and environment. It was discovered that children's drawing skills are influenced by their background. Researchers consider children's drawings to be a basic childhood practice and mode of communication (Farokhi & Hashemi, 2011). Drawing has been discovered to be an important aspect of literacy development and is most certainly the first step in learning to write (Hopperstad, 2008). According to research, children like to draw

whatever they like (Sal, Akyol, & Baran, 2014). Children may draw what they have seen or what they wish had happened (Merriman & Guerin, 2012).

The influences on what a child draws include, but are not limited to, the child's family, school, and cultural environment (Soundy, 2012). Drawings can represent commonplace things that a child sees and are inspired by what the child knows and enjoys (Shaban & Al-Awidi, 2013). Matsaridou (2015) discovered that cartoons, sports, and characters from animated TV shows made up about a third of children's drawings. Coursebook review of culture basic elements (Arslan, 2009; Çakır, 2010) and practice-oriented recommendations for culture integration (Turkan & Elik, 2007) are the subjects of research on culture and curriculum/course book.

Furthermore, Arikan (2005) examines how age, gender, and social status are represented in textbooks, pointing out the "imbalance" (p.38) in how they are viewed. Teachers' behaviours toward the target culture, for example, show varying degrees of integration, according to research. Furthermore, Yazc, et al. (2009) report in their study of teacher attitudes toward multicultural education that some teachers see students in a class as the "same" or "indistinguishable" in terms of cultural identity. Language teachers stated that they did not have enough instructional time to spend on cultural issues in another study (Çakır, 2010).

Preschool is a developmental stage that deals with the recognition of gender, race, physical status, and cultural identity (Divrengi & Aktan, 2011; Kanka, et al., 2013). In terms of diversity awareness, Divrengi and Aktan (2011) outline the preschool developmental stages. Children as young as two years old may recognize gender roles in their game and toy preferences. The next developmental stage, between the ages of 3 and 4, introduces differences in children's agendas, and between the ages of 5 and 6, children begin to develop cultural awareness and ethnic group identification. Subsequently, children between the ages of 6 and 8 realize that certain racial and cultural elements are permanent. They further emphasize the importance of addressing diversity challenges with age-appropriate content at an early age, an approach that promotes the development of positive self-concept, empathy, analytical thinking, and respect and

understanding. Hence, teachers are encouraged to use visual images and hands-on activities to incorporate songs, stories, and folk tales from diverse groups and cultures (Divrengi & Aktan, 2011).

In a similar vein, Wan (2006) took a positive view and used books and children's literature to address diversity challenges in early childhood. Such children are expected to first know their own identity and become mindful of other cultures and identities in order to cultivate a healthy self-concept, sensitivity, and analytical skills in the midst of prejudice (Divrengi & Aktan, 2011). Cultural differences in the perspective on the child's uniqueness and autonomy versus his interdependence with family members are expressed in the size of self-drawings, according to Rübeling et al., (2011) and Gernhardt et al., (2014b) studies. Taller figures were observed in different cultures that value independence and uniqueness.

2.3.4. Reflection of Educational Structure and Content on the Environment of Children

The implementation of practices that can improve rather than overshadow young children's ability to relate meaningfully to their own learning and growth is a major challenge for researchers working with young children. Learning is seen as occurring within a sociocultural framework through children's involvement in different events and practices of their families, school, and community, together with social relationships and cultural resources that serve as mediating elements that transform knowledge and create meanings, rather than transmit knowledge (Robbins, 2005; Rogoff, 2009). This viewpoint stresses that development occurs as a result of contexts, behaviours, meanings, and participation in group activities (Robbins, 2005). Children are seen as active participants as well as "experts in their own lives" (Clark, 2010), and their daily activities are given meaning and status by participatory learning. This suggests that educators and researchers need to use learning mechanisms that encourage children to engage by enhancing their thinking, talking, interacting, and making decisions on subjects that affect their daily lives.

Children use drawings to understand and reflect on important aspects of their knowledge and experiences. Children may develop their skills as "multimodal text makers" when learning about the formal synthase of school-based literacy and numeracy while drawing is prioritized in the curriculum (Kress, 2010). Drawing is also useful for young children who may not be fully fluent in English and often unable to communicate effectively, since it provides a realistic tool for addressing certain limitations and facilitating communication, and problem-solving and meaning making (Brooks, 2005). Kaguo (2011) found that education systems are not supportive, and that there are not enough classrooms and qualified teachers in the majority of neighbourhood and government-built schools. The academic performances of the students were affected by all these factors.

2.3.5. The Effect of the School Learning Environment on a Child's Behaviour and Performance

The learning environment is a combination of human practices and material environments, as often as ecology combines living and physical conditions (Balog, 2018). The learning environment consists of certain elements which affect the learning curve of the student. People; teaching materials, technical tools, and learning resources; curriculum, training, and instruction; and physical environment/learning space, according to Balog (2018). People are those who have an effect on a student, either directly or indirectly, through a connection or relationship, and who can help them develop and succeed in their careers. Teaching materials, technical tools, and learning resources are materials, advanced tools, or other instructional resources that are compatible with the curriculum and used to facilitate student learning. The core foundations of the learning process are curriculum, training, and instruction; they affect one another and play a critical role in facilitating the flow of knowledge and delivery of instructional content/curriculum. The learner's physical area/learning room refers to the physical environment of the learner's environment which could evoke positive responses and hold the interests of those who live there (Balog, 2018).

The physical environment in a school setting includes things like school facilities, equipment, and school practices like making facilities available, allocating

staff to teach primary education, and promoting participation (Bary, 2005). The learning environment in this study is characterized as resources, facilities, or equipment found in schools or areas of study that assist teachers and students in the acquisition of social studies knowledge, skills, and attitudes. Learners in a modern environment need learning environments that cater to both their individual and collective needs. To meet this challenge, educational leaders need to create empowering and engaging physical and cultural environments (Orlu, 2013). In formal education settings, the teaching-learning process cannot take place in a vacuum. It happens as a result of interactions between different components of the learning environment. Teacher, students, content, learning process, and learning situation are all elements of the teaching-learning process in the classroom (Lawrence, 2012).

In order to improve their success, students in the process of socialization need a positive atmosphere and role models (Gilavand, 2016). For this reason, learning environments which are clean, quiet, and comfortable are important. Furthermore, every concerned educationalist should make creating an ideal learning environment a priority because comfort should be a combination of many factors such as temperature, lighting, and noise control, among others (Murugan & Rajoo, 2013). Children usually use their own symbols for those that they get through their everyday life (e.g. letters, numerals, signboards), and/or traditional visual symbols, that they may use to communicate their ideas themselves (Papandreou, 2014).

Mondal (2012) identified a number of important factors that can influence the learning process, including the intellectual factor, which refers to the mental level of the individual. Learning variables are those that may impair the learning process due to ineffective work or research approaches or limited experimental experience. Health, nutrition, physical development, visual and physical defects, and glandular abnormality are also physical factors. Mental factors are attitudes that are significant in the formation of personality, such as interest, cheerfulness, and open-mindedness. The complex psychology of motivation is closely related to personal factors such as instincts and emotions and social factors such as cooperation and rivalry. The teacher is an important

factor in the learning process as an individual person hence the way in which his/her personality interacts with the personalities of the pupils helps to determine the kind of behaviour which emerges from the learning situation (Brown, 2015).

Physical conditions for learning include classrooms, equipment, textbooks, school supplies, and other instructional materials, among other items (Mondal, 2012). Students must feel safe, both physically and emotionally, before they can excel academically, and in order to have a safe learning environment, students must feel welcomed, supported, and respected according to Waldman (2016). Personalising learning helps students develop skills such as working collaboratively, critical thinking, communicating effectively, developing academic mindsets and using knowledge and information to solve complex problems, all of which help students become more engaged (Raccoon Gang, 2018). Students must also feel close to their teachers, staff, and classmates. Schools may help students build these connections by emphasizing social and emotional learning (SEL). For a higher academic achievement, students must feel supported by all those involved with their learning experience, such as classmates, teachers, administrators, families and community members (Waldman, 2016).

It would not happen by accident that conducive learning environments exist. They should be created through conscious procedures such as positive interactions with students and positive behaviours, among other things, that encourage learning activities in the classroom (Becton, 2017). Linda's (2007) study on learning environments suggests that teachers should be knowledgeable about the subject matter and then use a combination of teaching tools to engage students in the learning process. In South Africa, Umameh (2011) discovered that the abundance or lack of key school services was related to better mathematical educational outcomes. According to research conducted by Dadzie (2010) in Ghana, unequal distributions of resources in schools and inadequate educational infrastructures have a negative impact on educational quality. In a study titled The Effect of Environmental Factors in Teaching and Learning in Primary and Secondary Schools in Edo State, Nigeria, Eimuhi and Ogedegbe (2016) looked at environmental factors to determine the outcome of teaching and learning at all times and

in all places and found that the more enriched the learning environments are, the greater and more widespread the benefits for acculturation are. In addition, Ezike (2018) looked at the classroom environment and students' academic interests as predictors of achievement in Senior Secondary Chemistry students in Ibadan, Oyo State, Nigeria. The findings revealed substantial relations between classroom environment and academic achievement, as well as significant contributions from both classroom environment and academic interest.

Similarly, Odeh, et al. (2015) conducted research with the goal of determining the effects of the school environment on secondary school students' academic achievement. The findings of the study revealed that school environment, discipline, and physical facilities have a significant effect on secondary school students' academic achievement in Benue State, Nigeria. This means that schools that do not have the necessary learning facilities and do not create a favourable environment for teaching and learning are unlikely to get the best out of their students, especially in terms of academic achievement.

2.3.6. Attitudes and Perceptions Relevant to Children's Drawing

In international studies, it was observed that the subjects investigated included matters, such as children's perceptions of classrooms (Farmer, et al., 2018), children's perceptions of the use of digital media in preschool education (Mertala, 2016), children's perceptions of determining their own learning processes (Ligorio et al., 2017), children's perceptions of the use of digital media in preschool education (Mertala, 2016), children's perceptions of the use of digital media in preschool education (Hsieh & Tsai, 2018) or determining children's understanding of learning science by the drawing method (Hsieh & Tsai, 2017). Almost all of these studies demonstrated the value of drawing in exploring children's perspectives of different situations of children's drawings in school (Blaauw, 2016; Hall, 2017; Pearce & Wood, 2019). The number of national and international studies focused on children's drawings has been increasing, according to these numerous studies.

Children were asked to compare and depict school situations with opposing valence by some scholars (Maxwell, 2015; Pinto & Di Prospero, 2000). Pinto and Di Prospero (2000) requested 100 children (ages 6 to 10) to create two drawings, one portraying "harmony" and the other mimicking "disharmony" between themselves and one of their teachers. PAIR (Bombi et al., 2007), a system of research dedicated to evaluating different qualities of illustrated interpersonal relationships, was used to score the drawings. In disharmony contexts, Pinto and Di Prospero (2000) discovered a substantial discrepancy between drawings in terms of a higher number of pictorial indices of psychological width, presumably signalling a defensive need for more personal space. Maxwell (2015) asked 72 children (ages 9 and 10) to portray themselves in two different school situations, one "happy" and the other "unhappy". In this vein, the author used a phenomenological framework of analysis to generate categories of themes that are most representative of drawing contents; in this vein, he did not include a statistical analysis, but one can discern clear variations in each of the four categories identified from the raw frequencies reported: scene environment (happy scenes are mainly outside; sad scenes are mostly inside); subject's behaviour (happy: equal frequency of active and passive; unhappy: mainly passive); participation of other people (happy: mostly informal; unhappy: mostly formal); environment (happy: mostly informal; unhappy: mostly formal); the presence of other people (happy: mostly informal; unhappy: mostly formal); (typically, peers in both situations, with teachers very rarely represented in the happy situations, and a little more frequent in the unhappy situations).

Pupils' perceptions of their relationships with teachers, in particular, can differ from those expressed by teachers, providing valuable insights to those concerned about children's well-being. Maxwell (2015) explores how children use pictures to represent positive and negative school situations. According to Burkitt (2017), the richness of information obtained from children's drawings is enhanced by clarity of communication. As Burkitt (2017) writes:

> When communicating how they feel about themselves and other people, children alter the literal and abstract aspects of their drawings when they are explicitly instructed that an audience will need to understand whether they feel positively or negatively towards a drawn figure (p. 221).

Children are expected to draw situations in which positivity and negativity are dependent solely on teachers' behaviour toward the pupil, or the reverse, or both, and to change their perception of school as they progress from lower to upper grades, because subjects to be studied become more difficult (Bennett, 2019), requiring increased commitment, which inevitably modifies the balance between a positively and negatively attitude toward school (Schwinger et al., 2016). Teachers' relationships change as well, particularly as children reach puberty and the resulting changes in emotional needs in the upper grades of primary school (Heatly & Votruba-Drzal, 2019).

Gender is a source of differences in children's perspectives, according to some scholars (Spinath et al., 2014; Siddiq & Scherer, 2019). Girls are now generally more successful in school (Spinath et al., 2014), and their intellectual superiority spreads to predominantly male fields such as informatics, according to a new meta-analysis (Siddiq & Scherer, 2019). This difference seems to be at least in part due to gendered achievement goals: boys tend to be more interested in comparing their results to those of their peers, whereas girls appear to be more intrinsically motivated (Jones & Mueller, 2017). Boys in Italy have higher dropout rates than girls (Colombo, 2015), as well as poorer relationships with teachers, characterized by lower affection and higher conflict (Molinari, 2009). Furthermore, Italian schools have been "feminized" for nearly a century, with a growing number of female teachers (Pak, 2012; Ministero della Pubblica Istruzione, 2007). This is a world-wide phenomenon which has promoted a variety of studies on the differential effect of the teacher's gender on boys' and girls' school performance, with uncertain results: in general some studies found an advantage of gender match, at least for girls (Lim & Mee, 2017), while other studies on the contrary did not confirm this advantage (Spilt et al., 2012; Puhani, 2018).

2.3.7. The Value of Art in Environmental Education

In early childhood education, the arts are significant. They are an effective means of communication, especially when words are inadequate or unavailable (Wright, 2007). They are considered important for helping children participate in concepts of making and creating as they explore the world through their senses. The essence of the meaning of young children is a combination of thought, body and emotion (Wright, 2007). Many signs, words, graphic devices, onomatopoeia, drawings, and gestures/postures that stand for or represent other things are used in children's rich and integrated creations (Wright, 2007). It is also not enough, according to McArdle and Wong (2010), to observe children from afar and plan learning programs based on assumptions of what they are doing and thinking. Pramling Samuelsson et al., (2009, p. 133) suggest that "children are creative and masters of play, but in order to become aware of distinctions, variation and invariance of the phenomena of the arts, children must be challenged by the teacher in order to clarify and develop their thought".

Environmental Education (EE) programmes help children acquire essential knowledge and skills through a range of fields by fostering connections between children and nature, nurturing healthy environmental attitudes and awareness, and assisting them in developing important knowledge and skills (Paterson, 2010). To ensure that EE programs are meeting these objectives, effective evaluation methods and materials are also needed (Inwood 2008a). Art also inspires emotional attachments and affective relations to things and environments, enhancing the personal, exciting, and memorable nature of experiences (Song, 2012). Artists, musicians, dancers, and playwrights have been inspired by the natural world to raise awareness of environmental challenges by inventing creative, aesthetic, and ecological alternatives to environmental problems (Inwood, 2012). Given the importance of art and environmental education in today's culture, it is no surprise that the merging of these two fields has been dubbed "environmental art education" (EAE) or "eco-art education" (Inwood, 2012).

Preservation, conservation, restoration, and biodiversity are only a few of the environmental concepts and topics that EAE integrates knowledge, pedagogy, and

narrative from these fields to develop awareness of and interaction with (Inwood, 2012). EAE has been characterized as "purposeful creativity" aimed at reuniting children with their environment through positive, restorative, and spiritual methods, resulting in changes in environmental attitudes and behaviours (Inwood, 2012). EE helps to offer people the knowledge, skills and experience necessary to conserve and preserve the ecosystem for all living beings and future generations (Moseley, 2010). According to studies, incorporating EE into the school curriculum increases student performance on standardized examinations and enriches science courses, leading to increased student interest and participation (Paterson, 2010). Larson, Green, and Castleberry (2010) compared pre-test and post-test scores between children (ages 6-13) in the EE summer programme and those in a non-EE after-school programme to examine how one-week EE graduate assistantships at the State Botanical Gardens of Georgia affected children's environmental orientations and knowledge.

Pre-test scores indicated that both classes had equal environmental awareness at the beginning, although post-test scores revealed that children participating in the EE summer program significantly improved across environmental orientations and knowledge (Larson et al., 2010). Non-formal outdoor programmes, according to the findings, were suitable opportunities for stimulating positive environmental orientations in a number of children (Larson et al., 2010). While still being multi-dimensional through the 'teaching-and-learning' process, this and other studies point to the advantages of informal EE as a way to make environmental learning more engaging, fun, and enjoyable (Larson et al., 2010).

2.3.8. Other Similar Studies Conducted

Debates within art education have much in common with those within the other arts. Tensions can be observed between child and subject-centred approaches, and between advocates of education in art and education through art (Hickman, 2005). A number of related works have been done on environmental influence on drawings of children. The researcher hereby presents some of these empirical studies as follows;

Ahvaz, et al. (2016) investigated the effect of educational space colour on learning and academic performance of elementary school students. A total of 210 students were randomly selected as study participants in a cross-sectional study. Cluster sampling was carried out using appropriate allocation, and questionnaires were given to students at random. Hermance's achievement motivation questionnaire and a researcher-created questionnaire (observation checklist to examine the physical parameters of learning environment colouring) were used to collect data, as well as interviews with students. The SPSS-21 software was used to analyze the study's data. The findings revealed that the colour of the educational environment has an influence on the learning and academic achievement of Ahvaz Elementary School pupils.

Noorbakhsh (2005) examined the impact of indoor lighting on students' learning performance in learning environments from the perspective of knowledge internalization. This research was a comprehensive review of the literature on the impact of indoor lighting on students' productivity and performance, especially students' learning and drawing ability. The findings of this study indicated that enhancing lighting in learning environments is essential to improving pupils' learning performance and motivating them to learn more. The researcher assessed the effect of lighting on students' learning performance in this study using the Pulay (2010) survey. In a Malaysian Alpha course, data was gathered from a survey of 150 respondents. Lighting quality had a major effect on students' learning performance, according to this study, which is substantiated by interview experts. The research by Safak (2014) focused on the role of daylight in preschools and its social and cognitive effects on children. The research study consisted of a correlation study assessing the psychological and emotional development of children and daylight for drawing in pre-school classrooms.

In Van, Turkey, 69 children, 30 boys and 39 girls, aged 4-5 years, participated in a two-way early childhood school (Yacan, 2014). In preschool schools, the social and cognitive abilities of preschoolers were believed to be associated with daylight. According to Yacan (2014), the results indicate that in preschool classrooms a decisive link occurs between the social activity of preschool students and cognitive abilities and

daylight. The findings indicate that the social behaviour of students with daylight in classrooms and the drawings were significantly correlated. It was also hypothesised that the social skills of students correlate with daylight conditions.

Using the descriptive survey method, Ahmadi et al. (2014) conducted a literature review on factors necessary for creating a happy environment at schools in order to investigate research questions. Data was collected from 200 people using a standardized questionnaire. According to the findings, education facilities focused on building open spaces within schools have the greatest influence on creating a happy environment in schools in the minds of both instructors and female students. As a result, the study's main achievement was proposing do's and don'ts in planning school environments given the existing limitations and facilities to modify improper approaches and move toward an optimal approach to create a happier environment.

The article by Malone and Tranter (2003) examined school grounds as areas to play and learn about the environment. 50 children aged eight to ten years old from five Australian primary schools took part in a three-year project. Children's play map was analyzed, interviews with children and teachers were conducted, and children's drawings of their school grounds were examined. Especially in the forms of play and environmental learning that children participate in, the results revealed significant differences between the schools. Variations in the physical qualities of the school grounds accounted for these variations.

One of the few opportunities during the year that children are free to engage in free play and physical activity outside school is vacation. In this regard, Barros, et al. (2009) compared the classroom behaviour of children who receive and do not receive regular vacation in the United States. In both public and private schools across the country, the researchers looked at data from over 10,000 third-graders. A wide range of data, including interviews with children and surveys of parents, teachers and school administrators, were obtained as part of the study. Barros, Silver and Stein (2009) discovered that 30% of children had no recess or had less than a 15-minute daily break after analyzing the data. Children who had less than 15 minutes of recess a day were

more likely to be black or Hispanic, live in a big or medium-sized city, live in the South, attend public school, and come from families with lower income according to the researchers. Teachers' ratings of overall classroom behaviour were higher for children who had some recess relative to those who had none/minimal recess, according to Barros, et al. (2009). Though the frequency and amount of recess were not significant, data from teachers may be biased due to their feelings about recess, this study offered useful information about the amount of recess obtained by 8- to 9-year-old children and its correlation with classroom drawing behaviour.

Dyment (2005) presented findings from a 2003 study she undertook at 45 elementary, middle, and high schools in the Toronto District School Board on the consequences of green school grounds initiatives. Dyment surveyed approximately 150 parents, teachers, and principals on the effect of greening initiatives on a number of outcomes, including curriculum delivery, student learning and academic achievement, teaching practices, and student behaviour, as part of this research. In addition, the author undertook in-depth interviews with 21 respondents from five different schools. Dyment discovered a variety of common greening benefits, despite the large variety of schools surveyed. About 70% for example, said that teaching on green school grounds increased their motivation for teaching and 90% of respondents stated that teaching on green school grounds improved student interest and involvement in learning relative to teaching indoors.

In terms of green school ground initiatives, Dyment also asked participants about major challenges and areas for change. The lack of resources, as well as sufficient logistical and human resources, was cited as barriers. Professional development and training opportunities, assistance with physical planning, and additional financial resources for the construction and maintenance of the school environments were among the recommendations made by respondents. Importantly, this study indicates that the advantages of school ground greening initiatives are various and varying and that different schools may benefit from a range of greening projects. To help Ontario schools

successfully implement and reap the full benefits of school ground greening initiatives, Dyment wrapped up the study with a series of high-level policy recommendations.

In the United States, Blair (2009) also reviewed studies on school gardening and its effect on children's learning and behaviour. Including providing children with opportunities to interact with natural environments, improving their knowledge of food systems, assisting children in developing environmental attitudes and behaviours, and acting as a foundation for experiential learning, Blair realised that school gardens operate for a variety of purposes. On the effects of school gardening on children's learning and behaviour, Blair continued to look out for more quantitative and qualitative findings. She discovered that 9 of the 12 quantitative studies she analyzed found significant and positive impacts of gardening on research indicators such as children's science achievement and food intake behaviour. Blair uncovered a variety of commonalities in the findings of the seven qualitative studies she studied, including that gardening enhanced student bonding, teamwork, and learning opportunities, students enjoyed and were highly motivated by gardening; students demonstrated improved school attitude and pride in the garden.

Blair (2009) likewise looked at research that looked at how principals and teachers felt about school gardens. Blair determined that, overall, recent evidence shows that gardening may have a positive impact on student performance and behaviour based on her study of the literature Greening school grounds to diversify children's play experiences, such as through the planting of trees, the creation of ponds, and the development of vegetable gardens, has been increasingly popular in recent years. By submitting questionnaires to a number of Canadian schools that had greened their school grounds, Dyment and Bell (2008) studied how green school grounds influence the physical activity of elementary school children. 105 respondents from 59 schools who were involved with their school's greening initiative filled out questionnaires. Dyment and Bell discovered that green areas were an important place for physical activity when they analyzed the research data: 66% percent of students said they used green areas for active play. Green areas, in contrast to traditional turf and asphalt areas, tended to

support more moderate to light activity. According to Dyment and Bell, about half of the respondents said that greening their school grounds encourages more vigorous activity, while about 70% said it encourages more moderate and/or light physical activity.

The researchers furthermore discovered after greening that, 85% said their school grounds now promote a wider range of play activities; 84% said their school grounds now facilitate more exploration of the natural environment and 90% of respondents said their school grounds appeal to a broader range of student interests. Although the study's limitations stem from its focus on retrospective self-report, it gives valuable insight into the advantages of green school grounds and their possible role in improving the amount and standard of elementary school children's physical activity and complementing more traditional school grounds. With a focus on studies involving children's drawings, Muoz (2009), on the other hand, reviewed the literature on the correlation between spending time outside and wellbeing. Before delving further into issues related to children's use of the outdoors and their health, she studied literature and policy relating to outdoor use and health in general. Research relating children's time spent outside to greater physical activity, balanced development, and general well-being were among the specific topics Muoz examined. She also studied research into access to natural surroundings, factors which constrain children's outdoor play and how it enables it to be played, children's playground design and the use of the open air in children's education and research on people. Finally, Muoz identified methodological considerations, research gaps, and recommendations for furthering knowledge in this area as she wrapped up her literature review. A correlation between outdoor time spending, drawing and health was found through Muñoz (2009) study.

Lester and Maudsley (2006) provided a comprehensive review on the interplay of nature on drawings of children. The authors first studied the relation of human beings to the natural world, the importance of playing and direct interaction with the physical environment in the drawing of children. The major opportunities that natural play offers, such as the creation of special places and the numerous documented and possible

benefits of children's play in natural environments, including developing a sense of self and independence, were reviewed by Lester and Maudsley. The authors discussed evidence suggesting a variety of recommendations for enhancing children's opportunities to play in natural settings, ensuring adequate access to parks and nature reserves, a reduction in children's proximity to and opportunities to play in natural spaces, as well as the construction of appropriate playgrounds, school grounds, and outdoor play projects.

Learning and Teaching Scotland (LTS) commissioned Dan Daviesa (2013) to conduct a systematic review of 210 pieces of educational research, policy, and professional literature pertaining to creative learning environments in schools. The reviewers discovered only a few observational studies conducted between 2005 and 2011 that included results related to the review objectives despite the abundance of scholarly literature in this area. However, in supporting the development of creative skills in children and young people, there was a reasonable weight of research evidence to support the importance of the following factors such as: working outside of the classroom/school; flexible use of space and time; availability of appropriate materials; respectful relationships between teachers and students and 'playful' or 'games-based' approaches with a degree of learner autonomy. There was also evidence of the effect of creative environments on pupil achievement and the development of teacher professionalism, according to the study. The review was intended to be used by LTS to make proposals to Scottish schools on how to encourage innovation as part of the Programme for Excellence. The review's findings, as well as the methodological gaps in the studies examined, have international implications for policy, practice, and research.

Involvement in the visual arts is often stated as a way to promote general artistic development in emerging creative thinking skills. Moga, Burger, Hetland, and Winner (2000) looked into this topic by reviewing ten studies that were found after a thorough search. The first meta-analysis, which was based on four correlation analyses, found a small correlation ($r = 0.28$) between learning the arts and creative thought. Nevertheless,

students chose to study the arts for themselves, so it was possible that those with "better" creative thinking chose to study the arts in three of the studies included. When analyzing the experimental experiments on arts engagement and figural creative thinking (r=.15), there was some evidence for a causal relationship. On verbal/conceptual creative thinking, no substantial difference was found between those who participated in visual arts programmes and those who did not (r=.003). As a result, when a more comprehensive research design is used, no evidence for this premise is found, though correlation studies suggest that there could be some transference from art experiences to artistic thought, and the direction of such transference if it exists, is also unclear. The use of only pencil and paper tests to determine creative thinking was another limitation of this field of study. More qualitative measures of creative thinking could yield different results such as open-ended problem solving, according to the authors.

Watts (2005) concentrated on primary schools that used the National Curriculum in Australian schools. About their views on the importance of art, Watts asked 316 children aged 6 to 7 years. By themes of communication (23%) and aesthetics (21%), personal development (25%), enjoyment (6%), and reasons related to money (7%), the children's responses were dominant However, Watts also asked the children why they thought that they, children, made art and why adults made art. The study came out that, because it was fun whereas adults made art because it made them money (23%), was fun (19%) or for personal development (17%), the majority of pupils (57%) suggested that they made art.

Burkitt, et al. (2010) conducted a large-scale study to examine the perceptions and behaviours of teachers, parents, and children toward drawing in Australian National Curriculum Schools. Two hundred and seventy children and 44 of their teachers were questioned, and their parents returned 146 self-completed questionnaires (Burkitt, Jolley & Rose, 2010). Including the value and advantages of drawing, the survey inquired about a number of topics relating to children's drawing. Questions were either open-ended or required a Likert scale response. Teachers and parents were asked to rank the importance of children's art education in the context of their education quality on a scale of a ten-

14-point (ten being “extremely important”). According to the findings, whereas children recognize drawing for these benefits but also acknowledge that drawing is essential in and of itself, i.e. to learn drawing skills, parents and teachers consider drawing mainly for the benefits it provides in other domains, such as cognitive, emotional, and personal development. As the majority of pupils reported that they enjoyed drawing ‘a lot’ and the majority of teachers reported that ‘almost all the pupils in their class enjoyed drawing’, further support for children’s enjoyment of drawing came from this survey study (Burkitt, Jolley & Rose, 2010, p.261).

These results are similar to those of Richards (2003), who used questionnaires, interviews, and observations to study 136 4- to 9-year-olds and discovered that their comments were mostly based on visual realism or the size and content of the drawing, colouring correctly, staying within the lines, drawing things the ‘proper way,’ and making ‘mistakes’. Furthermore, several children commented that scribbling is a bad drawing, and schoolchildren commented on the importance of effort, ability, and persistence for successful drawing (Richards, 2003). To give more comprehensive responses, Hoffman (1992) conducted a survey of open-ended questions that encouraged parents. The questions are based on their views of their child’s artistic endeavours, the art experiences available to their children, their perspectives on the role of art activities in young children’s learning as well as the assistance given. These were completed by 82 parents of 4-year-old children in the United States on their own. The findings indicate that they expect childcare centres can support their children’s art efforts and learning and that, parents value their children’s art activities and they enjoy their children’s art creations.

Potter and Eden (2001) found no signs of any age-related variations in children’s demonstrated enjoyment of drawing in questionnaires completed by 48 5- to 10-year-old children. Similarly, Potter and Eden did discover, though, that younger children reported being good at drawing more frequently than older children and there were no age-related disparities in children’s drawing mastery (focusing on self-improvement and skill development) versus performance goals (achieving to impress others).

Further research by Bonoti and Metallidou, (2010) and Flannery and Watson, (1991) also affirmed these findings, which are seen as a decrease in drawing competence with age. The bulk of these reports concentrated on children under the age of ten, while older children's experiences and behaviours must be addressed in order to gain a more complete and consistent understanding of any age-related reduction. Wetton and McWhirter's (1998) early work, which looked at the emotional literacy of children, aged 7 - 8 by participatory drawing, found that children could not express emotionally or in writing but were able to express emotions visually. Wetton and McWhirter concluded that "The children differed only from adults in that they did not have the vocabulary to express themselves" (p. 273). Wetton and McWhirter did note, however, that there are substantial variations in the drawing abilities of children of different ages when it comes to expressing themselves through drawing.

Merriman (2004) used drawings to investigate the career aspirations of children living "on the street" and "off the street" (i.e., in religious institutions) in Kolkata. Participants were divided into two groups: orphaned children in urban boarding schools and street children enrolled in an educational programme. The latter project takes in orphaned street children who are still living on the streets with the intention of incorporating them into mainstream education. There were 85 girls (56.3%) and 66 boys (43.7 %) among the 151 participants in this study. They were between the ages of eight and fifteen (M = 11.34, SD = 1.4). The directors of the orphanages and the education programme, which would be called the legal guardians of the children under their care, provided their written consent. In addition, the importance of voluntary participation was emphasized and the children were invited to participate. All the children participated. Participants were asked the following questions: (a) draw them doing something; (b) write a little about who the person is, what they are like, and why you chose them and (c) draw a picture of the sort of person you would like to be when you grow up. These instructions were written in English on a sheet of A4 paper that served as research material. The first author initiated the study in English, the organization's main language and the instructions were translated into Bangla (Bengali) by a staff member for the

benefit of some of the younger participants. All participants had access to a selection of coloured pencils and crayons (provided by the organizations). The time limit was one hour, but the study did not take this into account completion time.

At the end of the day, white-collar and Professional occupations with a requirement for third-level education dominated (39.9%, 28.7% and 67.6%) respectively. The doctor was a popular profession, with 60% of the drawings featuring it. Another 11-year-old boy showed a drawing of a bus with the boy himself as the driver, reflecting a professional manual occupation that does not require any formal education or training. Lambert, Coad, Hicks, and Glacken (2014) described arts therapy as a key component of helping children deal with illness or difficult personal situations. Lambert et al., (2014) used Arts-Based Educational Research (ABER) to help children with their research. Lambert et al. (2014) explained how arts-based expression and methods could contribute to potentially powerful research questions and findings.

Children's perspectives on the best physical layout for hospital-built environments were investigated in this study. A total of 55 children were enrolled in the study, all of whom were in the hospital. The children in this sample were all between the ages of 5 and 8. There were 24 boys and 31 girls of various cultural backgrounds, including chronic and acute illnesses, along with different health conditions. The children were requested to draw and describe the look of their preferred hospital bed, including the physical, but also social aspects of the room. The study's goal was to use the information to help design a new children's hospital in Ireland. Some of the children could not draw because of their illness but could talk about their desired place of residence. Other children participated in groups to create their "perfect" hospital room with creative and art materials while supporting an artist through an art and health company or completing individual drawings with a hospital researcher on their bed.

Study findings showed that children knew very well the conditions in which they choose to stay whilst in hospital. In general, many aspects of the design of children's hospital rooms have been underestimated in many instances. In regard to the physical environment the children, according to the researchers, showed that they valued a

"colourful, creative, comfortable interior environment which had easy access to the external environment" (Lambert et. al., 2014, p. 63). In conclusion, the children tended to make imaginative use of the space, including imaginative décor and bringing elements of the outside natural environment inside.

CHAPTER THREE

METHODOLOGY

3.0. Overview

This chapter presents the methodology employed in conducting the study. The chapter outlines the philosophical assumptions and paradigm that underpin the study, the approach and design employed in conducting the study, the sampling and data collection processes as well as how data collected were analysed.

3.1. Study area

The study was conducted in four different districts in Ghana which include Bia West (Sefwi Debiso) District in the Western North Region, Kumasi Metropolis (Asafo) in the Asante Region, Keta Municipal (Anlo-Afiadenyigba) in the Volta Region, and Tempane Municipal in the Upper East Region. The Bia West District is one of the 9 MMDAs in the Western North Region of Ghana that was carved out of the erstwhile Bia district in 2012 by the Legislative Instrument (LI) 2014. It is located between Latitude 6°6'N and 7°0'N and Longitude 2°40'W and 3°15'W with a total surface area of 1,287.26559 km2. The Bia West District is richly endowed with human and natural resources stretching from a great pool of labour, rich soil, good climate, tropical rainforest with a variety of timber species, cash crops, livestock and all that is desirable or necessary for generating a high quality of life. Presently, Essam serves as the capital of the Bia West District. The district has a total population of 115, 881 according to the 2021 population and housing census (Ghana Statistical Service [GSS], 2021). The Educational Directorate of the Bia West District is divided into nine (9) Educational Circuits.

These are Papaase, Essam, Sukusuku - Toya, Adjoafua, Elluokrom, Yawmatwa, Oseikojokrom, Asanteman and Kwamebikrom (96 Basic Schools) (GES, 2021) and 1 College of Education at Debiso. Two government-assisted Senior High School at Debiso and Adjoafua and one Community School Senior High School at Elluokrom. The second place for the research was at Asafo in Kumasi Metropolis. Kumasi Metropolis is the largest District in the Ashanti Region and the second most urbanized district in the

country with a total population of about 5,440,463 in the 2021 population and housing census (GSS, 2021). The Kumasi Metropolis is located between Latitude 6.35°N and 6.40°S and Longitude 1.30°W and 1.35°E and is elevated 250 to 300 meters above sea level. The metropolis has a surface area of approximately 214.3 square kilometres which is about 0.9 percentage of the region's land area but accommodates about 36.2 percent of the region's population. The dominant ethnic group in the Kumasi Metropolis is the Akan and therefore the Asante's cultural artefacts and practices dominate in the Metropolis. The largest communities by population include Old Tafo, Bremang, Atonsu and Pankrono. The Kumasi Metropolis is an important educational centre, boasting 649 public pre-primaries, primary and junior high schools, two top public universities, one of the nation's premiere medical schools and a polytechnic.

The third place which was in the Volta Region centered on Anlo-Afiadenyigba in the Keta Municipal. Keta Municipal is one of the 261 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana, and forms part of the 18 of the Municipalities and Districts in the Volta Region. It was carved out of the former Anlo District, which also comprised Akatsi and Ketu Districts. The Municipality lies within Longitudes 0.30E and 1.05E and Latitudes 5.45N and 6.005N. It is located east of the Volta estuary, about 160km to the east of Accra, off the Accra-Aflao main road. Keta Municipal, with Keta the Administrative has a total surface area of 1,086km2, approximately 362km2 (about 30 per cent) is covered by water bodies. The largest of these is Keta Lagoon, which is about 12 km at its widest section and 32km long. Hence, the remaining land area is only 446 km2 a situation which creates severe constraints on access to land for development in the municipality. However, fishing and water transportation potentials exist. It shares common borders with Akatsi South Municipal to the north, Ketu South Municipal to the east, South Tongu District to the west and the Gulf of Guinea to the south. The population of the Municipality according to the 2021 population and housing census stands at 78,862 with 36,986 males and 41,876 females (GSS, 2021).

Keta Municipality has various educational institutions. There are 320 schools in the Municipality which is made up of 126 Pre-schools (84 public and 42 private), 103

primary schools (90 public and 13 private), 77 Junior High Schools (73 public and 4 private), 12 Senior High/Technical Schools (10 public and 2 private) and 4 Technical/Vocational (1 public and 3 private) (GSS, 2021).

The fourth District which is also selected from Northern Ghana is the Tempane Municipal. The Tempane Municipal is one of the 261 Metropolitan, Municipal and District Assemblies (MMDAs) in Ghana, and forms part of the 15 of Municipalities and Districts in the Upper East Region. The Tempane Municipal Assembly is carved out of the Tempane Municipal Assembly as one of the 38 newly created and upgraded District Assemblies in 2018. Created with Legislative Instrument (LI) 2352 the Tempane Municipal Assembly has its capital as Tempane. It was inaugurated on March 15, 2018, alongside other 37 newly created districts. The Tempane Municipal is located in the south-eastern corner of the Upper East Region of Ghana. It covers an area of 1,230 Km2 and lies approximately on latitude 10o 38lN and 110N and longitude 0o 06l E and 00 23l E. The Tempane Municipal shares boundaries with Garu District to the north, Pusiga District to the northeast, Bunkpurugu Nyankpanduri District to the southeast, and the Republic of Togo to the east. The population of the district according to the 2021 population and housing census stands at 86,993 with 41,268 males and 45,725 females (GSS, 2021). The district has 162 educational institutions. These are 2 Senior High Schools, 36 Junior High Schools, 62 Primary Schools and 62 Kindergartens.

3.2. Research Philosophy

As Creswell and Creswell (2018) noted, although philosophical ideas remain largely hidden in research, they nevertheless influence the practice of research and the choice of study approach and designs. In this study, the choice of study methods and design and the research view of what constitutes factual knowledge is inspired and underpinned by the social constructivism research philosophy/worldview. McKinley (2015) defined social constructivism as a sociological theory of knowledge which explains that human development is socially situated, and knowledge is constructed through interaction with others. The four fundamental elements of the social constructivism worldview include understanding, application of multiple participant meanings, social and historical

construction as well as theory generation (McKinley, 2015). The social constructivist view is that individuals seek understanding of the world in which they live and work by developing subjective meanings of their experiences directed toward certain objects or things (Creswell, 2013). Thus, factual knowledge varies and reflects the multiplicity of individuals' experiences rather than narrow meanings drawn by few individuals or categories of experiences.

The goal of research from a social constructivist's perspective is to rely as much as possible on different participants' views of a situation being studied. In this study, therefore, the approach involved relying on the meaning that was constructed by the different participants of the study regarding the influence of the environment on the drawing capabilities of children. The aim was to rely on subjective meanings negotiated socially and historically and formed the study participants through interaction with others (hence social constructivism) and through historical and cultural norms that operate in individuals' lives. The assumptions of the social constructivism worldview that guide the present study include meanings that are constructed by human beings as they engage with the world they are interpreting and therefore through open-ended qualitative research approach participants can adequately share their views. Also, humans' engagement with their environment helps them make sense of it based on their historical and social perspectives. Based on the second assumption, it is expected that through qualitative research the context and setting of study participants can be understood and applied in interpreting their experience and opinion. It is also assumed that the generation of meaning is social; arising in and out of interaction with a human community and therefore the research approach must be inductive and also involve interaction directly with the study subjects or participants.

3.3. Research Approach

The research approach employed in a study to a large extent determines the nature and types of data collected, levels of measurement and methods of analysis. Qualitative approach was employed to enable the researcher to study and do an analysis of visual representations concerning the problem under investigation. As noted by Wynn Jr and

Williams, (2012) the choice of research design is dependent on the philosophical assumptions of the researcher, the nature of the research problem, the procedures of inquiry and specific research methods of data collection, analysis, and interpretation. According to Kothari (2004), the choice of research approach significantly influences the integrity of a study finding and the overall success of a research endeavour. A careful consideration of the three distinctive research approaches namely qualitative approach, quantitative approach and the hybrid or mixed method approaches was undertaken before the choice of research approach for this study was made.

As noted by Yilmaz (2013), the quantitative research approach is concerned with objectivity and generalization of findings, while the qualitative approach is suitable when interested in understanding the experiences of a phenomenon and being able to dig deeper into obtaining in-depth information specific to each phenomenon rather than make a general prediction. A stereotypical quantitative researcher tends to have functional views of the world and sees the real world as a lab where phenomena can be manipulated, measured, and calculated to establish causal relationships using statistics. This view is however not suitable for various social construct especially experiential construct which often has no quantitative magnitude. The qualitative approach on the other hand as pointed out by Yin (2017) focuses on unearthing meaning from experience, opinions and ideas in a qualitative and non-numeric fashion. The qualitative approach requires immersing oneself into a phenomenon under study to be able to understand it better. In the qualitative approach, the researcher listens, asks questions, observes the phenomenon and gathers the material and data on the phenomenon, and analyses them to obtain the study's findings.

Unlike the quantitative approach where there is constancy of reality, in the qualitative approach, there is the notion of "multiple realities" that are always changing and undergoing transitions. Therefore, for qualitative approaches or viewpoints, it is the context of the phenomenon or subject under study that matters, and findings can only be tentatively generalised to situations with similar context and circumstances. Also, deductions from Yilmaz's (2013) differentiation between qualitative and quantitative

research approaches put forward two relevant questions, and finding concrete answers to them would lead to a researcher's decisive choice of whether a qualitative or quantitative approach for the conduct of a study. Such two questions include: a) is the researcher interested in causal relationships and wants to explore correlations between different variables? Or b) is the researcher interested in people's subjective experiences and the meaning they attribute to what happens in their daily lives? An affirmative answer to the former question necessitates the use of quantitative approach while the latter also gives ground to the use of qualitative approach. In this study, none of the objectives sought to establish cause and effect but rather explore the association between children's environment and their drawing capabilities. Against this backdrop, the qualitative approach is more favourable and suitable for the study than its quantitative counterpart. The use of the qualitative approach enabled the researcher to collect and use words, narrative and other non-numeric measures as means of data collection for the study.

3.4. Research Design

The descriptive case study research design was employed to investigate the influence of the environment on the drawing capabilities of children in selected Districts in Ghana. As Yin (2003) stated, case study design provides an all-encompassing procedure for systematically studying and describing a phenomenon, in this case, the influence of the child's environment on their drawing abilities within a real-life context. Descriptive case study designs involve a focused and detailed process in which propositions and questions about a phenomenon are carefully scrutinized and articulated at the outset (Yazan, 2015). The outcome of a descriptive case study consists of the people involved in the situation, their thoughts and opinions, relevant background history, and qualitative or quantitative information about the situation.

Furthermore, the use of descriptive case study is informed by the fact that it provides an empirical framework for collecting, analysing, and triangulating multiple sources of evidence, including documents, interviews, observations, and surveys that a comprehensive and holistic understanding of a phenomenon can be revealed (Yin, 2018;

Lune & Berg, 2017). The use of the case study design also enabled the researcher to expand and draw conclusions on theoretical propositions of child's learning based on Bandura's theory of social cognizance within the specific context of Ghana (Bandura, 1977). One of the justifications for using any form of case study design according to Hew and Hara (2007) is that the study must explore a phenomenon in context, using one or more data collection methods, describing in depth a case or cases or intended to answer "why", "how" and "what" questions. In this study, children's drawing capabilities are being explored within the context of their immediate environment including their school, home and sociocultural settings. The use of descriptive (multiple) case studies enables theory building by creating theoretical constructs, propositions, and/or mid-range theory from cases based on empirical evidence (Eisenhardt, 2007). Thus, the multiple case study approach considering each district as a case for analysis is employed to build theories that explain the influence of a child's environment on their drawings.

3.5. Population of the Study

The target population consisted of all school children; headteachers, teachers; parents (guardians) as well as cultural coordinators in four districts, municipalities and metropolis in Ghana including: Bia West (Sefwi Debiso) District in the Western North Region; Kumasi Metropolis (Asafo) in the Asante Region; Keta Municipal (Anlo-Afiadenyigba) in the Volta Region in Ghana, and Tempane Municipal in the Upper East Region.

However, the accessible population of the study involved pupils between 7 to 10 years old, headteachers and class teachers of four primary schools in the study area. Also, parents whose wards attend the selected schools form part of the accessible population as well as all district/municipal/metropolitan cultural coordinators of the study area.

3.6. Sampling and Sample Size

In this study, the selection of schools was based on a simple random sampling technique with a focus on selected districts in Ghana. Regarding the sampling process in survey research, Glasow (2005) cautioned that the selection of the sample size and sampling technique should be guided by the type of study design (qualitative or quantitative), the population size of the target participants, the homogeneity of the study elements and the degree to which a researcher get access to the study subjects. The present study as qualitative research sought to obtain detailed information on the drawing capabilities of children and how their environment influences the drawing capabilities of children in selected districts in Ghana. In all, four districts were purposively selected and placed in four categories - northern, middle, western and southern sectors of Ghana and knowledge of the identified districts. The northern, western and southern sectors were selected based on closeness to neighbouring countries, Togo and La Cote D'Ivoire. The middle belt was selected based on the numerous research on children's drawing done within the Metropolis. However, learners' selection for the study was done according to the willingness of the child to draw and take part in the exercise. Those include basic one to three learners whose ages range from seven (7) to ten (10) years. Also, cultural coordinators, teachers and parents of the above-mentioned learners were included in the study.

The key informants were also selected using the purposive sampling technique. The key informants selected include people who were directly involved in designing/implementing the curriculum and the training of the children at the selected districts. They included cultural coordinators, teachers and parents or adult caretakers. The use of the purposive sampling technique was considered desirable because it allows the researcher to carefully select the sample to reflect the purpose of the investigation (Bernard, 2002). The use of the purposive sample was also necessary to ensure that only individuals who have in-depth knowledge about the issue under investigation were selected. The children (pupils) were also selected from each of the classes under investigation using simple random sampling technique.

With regard to the sample size, Anderson (2010) asserts that qualitative research necessitates having a small sample because of the detailed and intensive work required for the study. Anderson further argues that sample sizes are not calculated using mathematical rules and probability statistics are not applicable in qualitative research. Instead, qualitative researchers should describe their sample in terms of characteristics and relevance to the wider population (Anderson, 2010, p. 4). The approach used in this study was to continuously select children from each school until saturation occurs with regard to the information obtained. Stebbins (2001) described saturation as the point when no new information is produced from additional cases. There is no threshold point for achieving saturation and therefore the researcher's own judgment determines when saturation occurs. However, in this study determination of the point of saturation was informed by the conventional approach described by Saunders et al. (2018) and Mason (2010) and employed many past qualitative studies. In sum, twenty-four (24) participants constituted the sample size of the study as categorised in Table 1.

***Table 1**: Distribution of the Sampled Participants*

Category	**Frequency**
Learners	8
Class teachers	4
Headteachers	4
Art and culture Coordinators	4
Parents	8
TOTAL	**24**

(Source: Fieldwork, 2022).

3.7. Data Collection Instruments

Four main methods were employed in the collection of data for the study. These methods include drawing activities, interviews, field notes and field observation. The drawing activities that were undertaken were the most important data for the study.

3.7.1. Drawing Activities

The drawing activities were spontaneous as much as possible to reveal the drawing capabilities as well as the influence of their environment on their drawing as the main purpose of this study. Anecdotal notes were taken by the researcher as the children were engaged in the drawing activities in order to capture the character and attitude during the drawing process. Both spontaneous drawings and directed drawings were made by the children some of which are pictorially presented under the results and discussion section (Figures 4.2, 4.3, 4.3 & 4.4) of the study. With the spontaneous drawings, children were asked to draw anything of their choice. The items that each child drew and how they drew were recorded in field observation notebooks and used to analyse the influence of the children's environment on what they chose to draw and how they drew it. The drawing that each child created was rated based on the Duncum's (1992) model of spontaneous drawing which argues that children's drawing is either; borrowed, factual, fiction, narrative, self-generated or consists of separated object. Each drawing was given three scores (from one to six), based on the following criteria; how well the drawing is factual/fiction, Narrative/Separate Object; and borrowed or self-generated based on Duncum's (1992) model scale.

According to Stolley (2012), children's spontaneous drawings are the most credible measure of their interest in drawing and their own creative abilities. Thus, analysis of spontaneous drawings made by children reveals their appreciation of their environment and their skills in drawing and art in general (Hsu, 2014). Against this backdrop, drawings made by children spontaneously in the schools in the selected districts were expected to reflect a pattern and scheme consistent with the environment they were exposed to. In addition to the spontaneous drawings, each child was presented with two images to draw: one being an artefact common in the Northern part of the country and the other, a common artefact in the southern part of the country. Three art teachers from the school were made to judge and score each child on how they drew each of the two images. Analysis of the drawing and the score each learner got on each

of the different images determined whether there was an association between the child's environment and the kind of artefact they drew well.

3.7.2. 1nterviews

In addition to the drawing, interviews were conducted with the children, teachers, arts and culture coordinators and parents on the drawings produced by each child. The purpose of the interview was to supplement the drawings with additional information on what informed the children's drawing and how their environment influences their drawings, the interviews with teachers also further revealed how much teaching and learning of drawing in the selected schools in terms of the structure and content are reflected by the environmental settings of children. The interview was semi-structured in nature and conducted with an interview guide (Appendixes II, III, IV & V) to ensure that all the appropriate information needed is asked. With the children, the interview elicited information on what influences their drawings either by peers (or others), in-school experiences, out-of-school personal experiences, or by popular culture among others.

3.7.3. Field Observation

Another data collection method that was employed in the study is field observation. With this method, the researcher sat in classes at the selected basic schools in the selected districts to make obtrusive observations about their style of facilitating and drawing activities ongoing. The observations were aided by an observational guide (Appendix I). The use of observation was necessary for the researcher to have first-hand information on how facilitation and evaluative feedback are carried out by teachers at the lower primary and to make a sound analysis of the approach teachers' use during drawing activities with the pupils.

During the observation, particular attention was placed on how the teachers use their knowledge and skills to coach the pupils in drawing activities. Also, attention was placed on how evaluative feedback was rendered to promote the learning of art with respect to both the practical and theoretical aspects of drawing. The researcher also made efforts to see the relationship between the teaching style employed to teach pupils at the

lower primary level during drawing activities and how the pupils at the lower primary respond to it. Efforts were made to capture vividly and accurately the behaviours of teachers and the reactions of pupils in the classrooms.

According to Kawulich (2005), observation enables the researcher to gather data on physical settings, human settings and programmes of study. An advantage of observation that made it suitable for the study was the fact that the researcher saw things as they occurred in their natural setting. This enabled the researcher to have first-hand information concerning what happened with no adulteration.

3.8. Reflexivity and Positionality

In qualitative research, the reflexivity and positionality of the researcher are key phenomena that must be addressed. With qualitative research, the researcher becomes part of the research engaging with the respondents through various methods of data collection and analysis. As a result of this, there is always the possibility of a probable element of bias being introduced into the study as a result of the sampling technique when purposive or assumptions may infiltrate the data collection or data analysis activities. According to Hardy et al. (2001), reflexivity must be an integral part of qualitative research as it gives an account of how the processes of doing research shape its outcomes. Reflexivity means the researcher needs to continually critique and make critical reflections of decisions about the study (Mao et al., 2016). The positionality on the other hand is about how the researcher's identity construction, cultural background and experience influence the way the real world is perceived and portrayed in the study (Temple & Young, 2004).

In order to address the possibility of bias being introduced into the study due to the positionality or reflexivity of the researcher, a number of considerations were made. The main approach to the elimination of biases was the use of the bracketing technique. In this study, the approach to bracketing included keeping notes during data collection and data analysis to facilitate engagement with the data, conducting interviews using outside sources to allow the researcher to uncover and bring to awareness any biases or pre-conceived assumptions and then the practice of keeping a reflexive journal. The use

of a reflexive journal enables the researcher to be self-aware and record his /her own feelings and biases at any point of the data collection to ensure efforts are made not to influence the interpretation of responses, recording and analysis of information gathered. During the analysis stage, self-introspection and continuous critique of any biases or predisposition toward the phenomenon of digital transformation was employed.

3.9. Data Analysis

Data analysis constitutes a critical component of research. With reference to qualitative studies, it is demanding that "researchers must demonstrate that data analysis has been conducted in a precise, consistent, and exhaustive manner through recording, systematising, and disclosing the methods of analysis with enough detail to enable the reader to determine whether the process is credible" or not and whether or not the outcome should be accepted (Nowell, Norris, White & Moules, 2017, p. 1). Context is also of importance qualitative data analysis must always lead to the reader's comprehensive understanding of the data in relation to the context of their production (Anderson, 2010). In dealing with the qualitative data generated for the current study, a thematic data analytical tool was found suitable and deployed.

Generally, the analysis, interpretation, and discussion of the results were done taking into consideration the various triangulated data gathered through children's drawing activities, interviews, and field observation. After the entire data collection process, the analysis process, thereafter, started with manual transcription of interview recordings into text and identification of sub-themes, themes, trends and/or patterns derived from similarities, differences, and sequences embedded in both the interview and field observational data. The entire process of data analysis was guided by the research questions and the overall design of the study employing Nowell, et al. (2017) six-step qualitative data analytical approach which includes data familiarisation, code generation, theme searching, reviewing themes, defining and naming of themes and Producing the report. The aforementioned thematic analytical approach is solidly affirmed by many qualitative researchers (Kiger & Varpio, 2020; Howitt, 2019; Majumdar, 2019; Salleh, Ali, Mohd-Yusof & Jamaluddin, 2017; Braun & Clarke, 2006).

With the first step which deals with data familiarisation, the researcher had a prolonged engagement with data; triangulated the different data collected through interviews, field observation, children drawing activities and end products; documented theoretical and reflective thoughts embedded in the triangulated data; documented the thoughts about potential codes/themes, and stored the raw triangulated data (field notes, interview transcripts, and reflexive journals) in well-organised archives.

In the second step which has to do with code generation, the researcher manually examined the harmoniously triangulated data where codes were assigned based on similarities and differences of data sources (in this case, the various schools, districts, municipalities, metropolitans and regional locations of the participants). The manual coding helped the researcher to distinguish quickly the coded data from each other according to their sources of elicitation and contextual underpinnings. In all, a coding framework was used by the researcher where each transcript/field note of the triangulated data was closely examined and codes were assigned based on similarity in words used, phrases, statements of ideas, patterns and or trends.

The third phase, searching themes, began when all data had been coded and initially collated, and a list of different codes was identified across the triangulated data set. At this stage, the researcher sorted and collated all the potentially relevant coded extracts and combined them according to the similarities found to form the central and sub-themes in tandem with the study's research questions where all irrelevant and unencoded data were discarded. However, all coded data extracts that did not seem to fit into the initially generated themes were categorised as miscellaneous because it was not advisable to abandon any code category at this stage. In summary, this phase of thematic analysis ended with a collection of central themes, sub-themes, and miscellaneous themes with significant relationships. At this point, the researcher began to get a clear sense of the various categories of themes and was ready for the next step, the review phase.

With the review phase of the thematic analytical approach, the researcher vetted the central themes, subthemes and miscellaneous themes to test their referential

adequacy by returning to raw data. During this phase, the researcher reviewed the coded data extracts for each theme to consider whether they appear to form a coherent pattern. The trustworthiness of individual themes was considered to determine whether the themes accurately reflected the meanings evident in the data set as a whole. By so doing, all inadequacies in the initial coding and generated themes were revealed and a refinement process entailed making adequate changes and revisions including recoding, collapsing and merging of some themes among others. This process allowed the researcher to have confidence in the various themes generated, how they fitted together, and the overall empirical story they tell about the data.

The fifth step dealt with defining and naming the themes generated. Having generated satisfactory themes in the preceding phase, this stage of the thematic analysis bothered on defining, refining and naming the themes. At this phase, the researcher made explicit the essence and the meaning behind each theme and the generality of the themes generated. Just as the contents of each theme are justified at this phase, the most intriguing aspects of the themes and reasons behind their collations are made explicit through detailed analysis of each individual theme from the context of the entire triangulated data set but in accordance with the study's research questions. After a successful definition and refinement process, the researcher brainstormed to contextually name the themes in a simple, brief and clear manner to facilitate easy understanding.

The sixth and last step of the thematic analysis was to produce the final report for the study. Since the researcher has well-worked-out data themes, the analysis and write-up of the final report were done in the most simplified and contextual manner to facilitate easy readership and comprehension. In other words, the analysis and final report were succinctly, concisely, logically, coherently and systematically presented by the researcher with accompanying evidential photographs which tend to highlight the authenticity and trustworthiness of the outcomes of the study in their entirety.

3.10. Ethical Consideration

To ensure ethics, a pilot study was first conducted with a similar but small population of research participants to identify ethical concerns that participants had with the study. Informed consent was sought from all research participants before they participated in the study. Participation in the study was made voluntary for participants so that selected participants who were not comfortable with the study could opt out. Also, personal identifiers such as names, contact numbers and addresses were not demanded. This was done to ensure that respondents' comments were not traceable to them personally so that their confidentially could be assured. Pseudonyms were therefore used.

3.11. Ensuring Trustworthiness

Qualitative research is trustworthy when it accurately represents the experiences of the participants. To ensure that the data collected remained trustworthy during and after collection, the researcher discussed the data collection instruments with the supervisor before it was administered. The suggestions from the supervisor helped the researcher to modify the data collection instruments. Not to skew the interpretation given by the participants, the researcher maintained a degree of neutrality in the findings. Four criteria proposed by Lincoln and Guba (1985) were employed to ensure the trustworthiness of the data collected such as: credibility, transferability, dependability, and confirmability.

3.11.1. Credibility

This qualitative study sought to identify an authentic understanding of a specific phenomenon (LeCompte & Geotz, 1982). Thus, the credibility of the human experience, explained in categories, reflects an assurance that the phenomenon exists. Triangulation as noted by Lincoln and Guba (1985) is a validity measure that makes use of different sources, theories, and methods to analyse the same information. In this study, the use of triangulation was demonstrated by using drawings, audio recordings and field notes as part of the data collection. To further enhance the validity of the study, the researcher once again carried out member checking. Member checking in the study refers to an examination of interpretations, categories, and conclusions with the stakeholder

groups from which data were originally collected. These processes were carried out to ensure clarity and accuracy while collecting qualitative data.

3.11.2. Transferability

Transferability is equivalent to the generalisability of findings in a qualitative study (Kusi, 2012). This refers to the degree to which the results of the qualitative research can be generalised or transferred to another context (Bhattacherjee, 2012). The researcher achieved this in his study by extensively and thoroughly describing the process that was adopted for others to follow and replicate. Thus, the researcher kept all relevant information and documents regarding the study. Again, the research context and methodological processes were provided. These could enable other researchers to apply the findings of this study to similar settings of their choice thereby regarding the findings in this study as answers in their chosen context. Furthermore, there was adequate background information about the respondents; and the research context and setting that allow others to assess how transferable the finding is. The researcher kept accurate records of all the activities while carrying out the study. These include the raw data (transcripts of the interviews) as well as details of the data analysis.

3.11.3. Dependability

Dependability corresponds to the reliability of findings in qualitative research (Merrian & Associates as cited in Kusi, 2012). Guba and Lincoln (1985), admit there could be no credibility without dependability in qualitative research. Also, it is concerned with whether we would obtain the same results if we could observe the same thing twice (Trochim & Donnelly, 2006). Dependability in this study was related to consistency and it was done by making sure that the researcher checked whether the analysis process was in line with accepted standards for the design of the study. Extensive and detailed evidence of the process in which the research is conducted was documented in order that others can replicate and ascertain the level of dependability. To ensure dependability, interpretive researchers must provide adequate details about their phenomenon of

interest and the social context in which it is embedded in order to allow readers to independently authenticate their interpretive inferences (Bhattacherjee, 2012).

In this study, dependability was established through the establishment of appropriate enquiry decisions. This included a review of interviewer bias to resist early closure and at the same time prevent the provision of unreliable data due to boredom on the part of the respondents because of prolonged interview sessions. In addition, information from the literature assisted the researcher in developing questions that elicit appropriate responses to answer the research questions that are formulated to guide the study. There was a systematic data collection procedure that reached the point of saturation, the extensive documentation of the data (transcriptions of interview narratives), methods and decisions in the memo are steps in proving the dependability of the data. Thesis supervisors assessed the work to find out whether or not the findings, interpretations and conclusions were supported by the data.

3.11.4. Confirmability

Trochim and Donnelly (2006) declare confirmability to mean the degree to which the results could be confirmed or corroborated by others. Also, confirmability refers to the extent to which the findings reported in interpretive research can be independently confirmed by others, typically, participants. This is similar to the notion of objectivity in functionalistic research. Since interpretive research rejects the notion of an objective reality, confirmability is demonstrated in terms of "inter-subjectivity", that is, if the study's participants agree with the inferences derived by the researcher. In order to establish confirmability, the researcher after coding and transcribing the audiotapes, interview questions, and all other relevant information and documents regarding the study, was given back to the participants to confirm the responses. The researcher effected changes where necessary and gave the transcribed data back to the participants again for them to authenticate the inferences derived by the researcher. The researcher then took the final transcribed data from the participants as a true record of what the respondents factually provided. Confirmability was also achieved through neutrality. The purpose of the above was to ensure that the interpretation of the data would not be

based on the researcher's own particular preferences and viewpoints but rather to be fully grounded in the data collected.

CHAPTER FOUR

RESULTS AND DISCUSSION

5.0. Overview

This chapter presents the results and discussion from data collected for this study. The results presented in this chapter address four specific research questions that focused on: the drawing capabilities of children in lower primary in selected districts, municipalities and metropolis in Ghana; the influence of children's environment on their drawing outcomes; the influence of self-efficacy (Past experience, facilitation/evaluative feedback and Physio-emotional status) on the drawing capabilities and outcomes of children in the study area, and the role of educators in providing a convenient environment to enhance the drawing capabilities of children in the study area. The results are based on data collected from school pupils in lower primary (Basic School 1 to 3), their parents/adult caretakers and teachers as well as key informants that included District Coordinators for art and culture.

4.1. Drawing Capabilities of Children in the Lower Primary Schools in the Study Area

The drawing capability of children is a multidimensional concept that embodies skills/knowledge, imagination, recall/memory and their interests (Siry, 2014). Analysing children's drawing capabilities must be comprehensive enough to cover all the domains that relate to what children draw and how they draw it. To achieve this, this study involves analysis of both directed drawings and spontaneous drawings of the study participants. Directed drawings are effective in establishing children's ability to understand concepts, follow instructions, and pay attention to details. Directed drawing helps in the coordination of skills acquisition and planning of learning to enable progressive development in various elements, creative and intellectual skills. Spontaneous drawing on the other hand represents the child's memory and interest more than their abilities or skills. Duncum (1992) also indicated that spontaneous drawings of children reveal their innate feelings and expressions of uncommunicated observation and

passion. Thus, examining both directed drawings and spontaneous drawings provides a robust and comprehensive view of the drawing abilities of the children.

4.1.1 Directed drawing Capacity

A directed drawing exercise was conducted for the children in the selected schools across the Southern, Middle and Northern zones of Ghana and the findings are presented in Table 1. The objects used in the directed drawing were the sun and a family of five (Appendix I C) while the house was added to be painted (Appendix I). The choice of the objects was such that they represented objects common to children across the different zones from which the children in the study were sampled. The rating scale (Appendix IX) was adopted from Chevallier et al. (2012) with an average of children in each zone. The results show that, overall, the children's drawing capabilities were rated from fairly good to very good. The major deficiencies in the children's drawings were the inability to accurately represent the details of the drawings given to them, the addition of extra features not in the drawing and omitting some specific aspects of the drawings. Nearly all the drawings however could easily be recognised as the object they intended to draw. This shows the moderate to good drawing capabilities of the children.

An important observation made from the results was that differences exist in terms of the children's capability to draw the two different objects (sun and family) and the painting, and these differences also show patterns across the different zones. It was quite clear across the board that the easiest object the children could draw was the sun whereas the family of 5 was the area where many of the drawings have deficiencies. The results show that among the children in the Northern zone, the best-drawn object was the sun with the drawing of children in the Tempane Municipal District rated from good to very good. In both districts in the Northern and Southern Zones, the Sun was drawn by the children to near perfection with some children clearly showing all features in the image given to them with the exception of a few cases where extra features were added to the drawing by the children. In the middle zone, the best score of the children's drawing was in the area of painting of houses. Many of the children exhibited good capabilities in the choice of colours for the roofing and walls of the house. In the Western

Zone also, the best performance was in the area of a painting of housing and drawing of the sun with limitations also in the drawing of the family of 5. Many of the children drew a family of three (3) as opposed to the 5-member family they were asked to draw. It was generally recognised that the limitation with respect to the painting was with respect to the colour choice and combination. Among many of the children in the Northern and Southern Zones, the houses were coloured with extremely bright colours that did not reflect the painting of houses around them. The problem associated with the choice of colour was answered by a teacher who said:

> *The children are often unable to choose the natural colours of the objects. Most of them are excited with bright colours such as yellow. They kept asking this colour to colour their objects even though the objects did not have the yellow colour in reality* **(Teacher participant NZ1, personal communication, February 5, 2022).**

The major limitation of directed drawings of children in the middle zone was missing features in the drawing of the sun and of the family. In the drawing of the sun, the missing feature generally was the face on the sun and the serrated edge while the family drawing was usually fewer than the number five (5) in the drawing. This observation indicates an inability to pay attention to details or follow detailed instructions. While the absence of some details may be considered as evidence of low drawing capabilities or poor attention to detail, this may as well represent the children's ideas of what the object under consideration should be. According to an interview with the one of the districts' cultural coordinators, he corroborated with the teachers stating that children sometimes draw objects the way they expect them to look, but not necessarily based on the way the object is seen by others or directed by a teacher.

It was also observed that the drawing of the family of five (Appendix I c) by children in the Northern Zone was appreciated but, in some cases, extra details and changes in the order were observed. Extra details in this scenario were the inclusion of handbags in the drawing which is not the case in the original and the addition of design to dresses, and pockets among other details. Omissions in the drawing include having fewer than the five people in the family. The lowest area of drawing abilities in the Northern zone was the painting. Many of the children's choice of colours was "poor",

obscuring important features of the house. There are however few cases of children producing good paintings of the house, especially in the Tempane Municipal with realistic depictions of common roof colours in the area. The relatively moderate performance of the children's drawing capabilities was corroborated by one of the schoolteachers interviewed who said: Most of them are able to represent the objects they were asked to draw. The cultural coordinator on children's drawing abilities also asserted that:

> *The drawing capability of the lower primary children is not so much like the upper primary. The lower primary because of the handling of the tools finds it difficult but there are some of them who are talented, they are naturally talented and are able to do the work you give them. Most children like to draw because it is the medium of communication to them. The things they cannot explain in words are put into drawings. This is why there are pictorial readings, and it creates pictures in their minds to be able to express them* **(Cultural Coordinator NZ1, personal communication, February).**

4.1.2. Spontaneous Drawing Capacity

With regards to the spontaneous drawings, the children were asked to draw any objects of their interest or what they were able to draw. After the drawings were collected, the Duncum's (1992) model of children's spontaneous drawing was used to classify the objects into borrowed, factual, fictional, narrative, self-generated or separated objects before rating was applied. Based on Duncum's (1992) model each drawing was given three scores (from one to six), based on the following criteria; how well the drawing is factual/fiction, Narrative/Separate Object; and borrowed or self-generated based on the Duncum's (1992) model scale. The results show both similarities and differences with regard to the spontaneous drawing of the children individually and from region to region. The common objects drawn by most of the children include trees, houses, people, cars, animals, fruits and some simple farm tools. In terms of the animals and fruits, some differences and similarities were observed. Animals such as goats, sheep and cattle were common but children from the Southern zone have fish and other aquatic animals in their drawings but none of the children from the Northern zone drew fish. Baobab fruits were found in the drawing by children from the Northern Zone but none in the Southern,

Middle and Western zones. Spontaneous drawings common to the Northern and Middle Zones alone were drums specifically the talking drum. Spontaneous drawings that were unique to the Northern Zone include the Baobab tree and its fruits, Xylophone and cattle. Also, the way people were drawn appears unique, most especially, in their dressing. In most cases, women were drawn wearing hijab by some of the children from the Northern Zone but not seen among drawings produced by children in the middle and Southern Zone. There were lots of coastal images and objects in the spontaneous drawings that were unique to drawings by children in the Southern Zones. Some of these objects include fish and cowries.

Table 2: *Spontaneous Objects drawn by Children across Different Zones in Ghana*

Northern and Southern Zones	**Middle Zone**	**Western Zone**
Tree by house, Chicken, Car, Cattle, Drums (6), Xylophone, Flag, Clay pot, Aeroplane, Mosque, Classroom (Makaranta), Mango tree, Baobab, tree, Fish, River Canoe, Women, with hair covered by hijab, Bicycle, Baobab fruit, Borehole pipe, Talking drum	Tree, House, Car, Talking drum, Aeroplane, Cocoa pod, farm tools (cutlass)	Tree, Car, Kitchen Cocoa pod, Bowl, Fruits (Mango, orange, apple, pear) Church.

(Source: Field survey, 2022).

Through observation and interviews with key informants including the pupils, the drawings of the children for the six classes were classified into factual/fiction, Narrative/Separate Objects; and borrowed or self-generated based as prescribed by Duncum (1992). The results show that the drawings have elements of factual and fictional imageries, borrowed and self-generated representation and then narrative and separate objects. This observation also demonstrated the wide heterogeneity of the representations made by the spontaneous drawings of the children. It is important to note that some classes of drawings were more dominant than others. The dominant classes across the types of drawings observed were narrative, factual and borrowed or self-

generated drawings. These observations give an inkling of the potential of the environment in the objects children draw and their drawing capabilities.

4.2. Influence of Children's Environment on their Drawing Outcomes and Capabilities

Under this section, the focus was on examining the influence of the environment on what children draw and how they draw it. The analysis under this section was informed by a number of empirical literature that outlined the importance of the physical environment, social and cultural environment on children's draw and more specifically underpinned by the theory of realities proposed by Wilson and Wilson (1982). Guided by this theory, the analysis looks at the influence of common, projected/anticipated, normative, and prophetic realities on their drawing outcome and capabilities. The common reality based on this theory represents the immediate environment consisting of people and tangible objects, while projected/anticipated reality is a reconstruction of the many ways that one could be such as superheroes, dancers, fighters etc. The normative reality represents the child's reinvention of good and bad, people or things; appropriate and inappropriate behaviour while the prophetic reality represents the child's depiction of the future of themselves or the world as a whole.

The spontaneous drawings of the children were examined to identify patterns that relate to either the common reality (tangible environment), projected/anticipated reality, normative reality or prophetic realities. The analysis reveals that each of the different realities of the children's environment has some influence on their drawings. The most obvious of the factors was the common reality as the drawings of the children were mainly tangible objects in their schools, homes and physical environment. For instance, the majority of the common items drawn by the children included houses, cars and people. These objects are common reality components of the environment of each child. Some of the items were not immediately visible to them but their frequent encounter with them in the school or their community influenced their selection as a choice of objects to draw. Some others were influenced by things they saw on television such as aeroplanes and police. One of the objects that were common, especially among

schools in the Northern Zone was a borehole pump/pipe (Figure 3.) Interviews with the children and parents revealed that the children go to fetch water from the borehole pump/pipe everyday, so it is easier for them to visualise them in their minds. This indicates that the objects the children are exposed to frequently become things of interest to them in drawing.

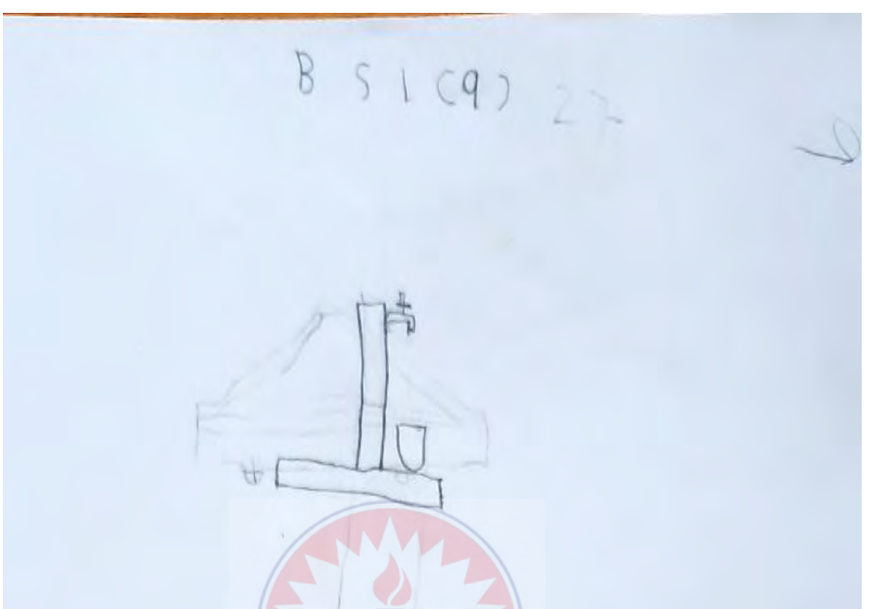

Figure 3: Common Reality - Drawing of Borehole by Primary 1 pupil (**Source:** Fieldwork, 2022).

4.2.1. Common Reality

In some cases, the common reality influence on children's drawing is limited to their present or immediate environment and may even include narration of an ongoing events. With reference to the Duncum (1992) classification of children's drawings, the children's drawings are either narratives of an ongoing activity or feelings in their life. These types of drawings may also be considered as 'factual' drawings since they represent things they saw at the time of drawing. For instance, one of the children under the spontaneous drawing exercise drew his class teacher who was then sitting in a swivel chair in the classroom (Figure 4). In another instance, one of the children drew the happening in their bedroom and when interrogated the child confidently narrated that he had drawn this incident before, which he showed to his father who told him not to draw that scene again. The boy added that he was confused but stated that he was happy to

draw it again because he was not restricted in drawing his experiences (Figure 5). This is an indication of the influence of the immediate environment or common reality on children's drawing outcomes. A similar observation was made when one of the pupils drew a snake (Figure 6) and after interrogating her it was found that there was a snake in the classroom wall which was not seen by anyone else until her drawing. Given this observation, children's drawing outcome may be a reflection of the physical environment they experienced at the time that they had to respond to it.

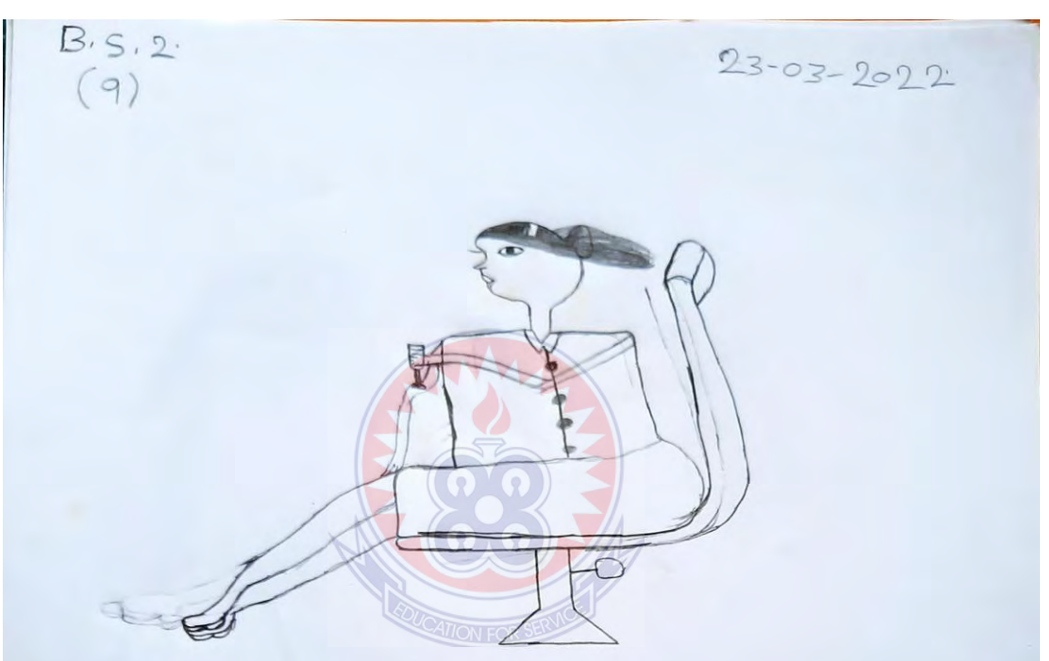

Figure 4: Class teacher in a Swivel Chair Drawn by Primary Two Pupil (**Source:** Fieldwork, 2022).

Figure 5: A Bedroom Scene Drawn by a Basic 2 pupil
(Source: Fieldwork, 2022).

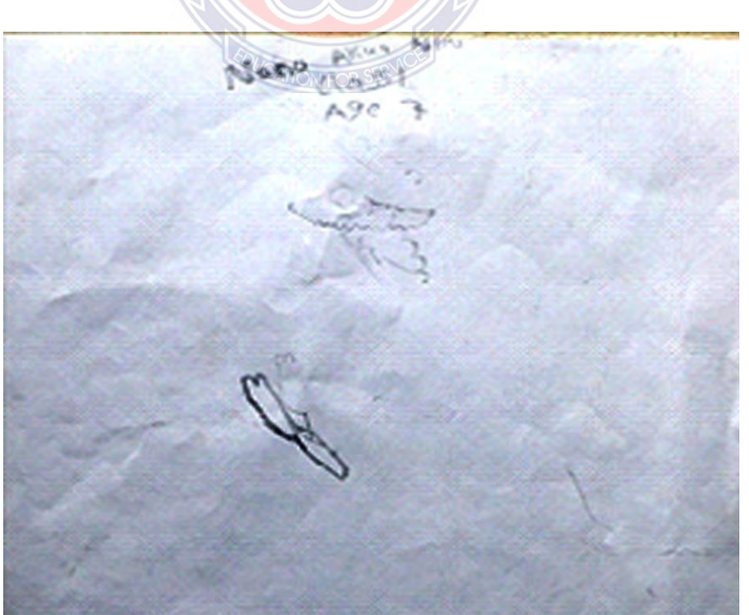

Figure 6: Common reality - Snake in the Classroom
(Source: Fieldwork, 2022).

4.2.2. *Projected/Anticipated Reality*

Evidence of projected/anticipated reality influence on the children's drawing outcome was also evident from the spontaneous drawings that the children made. Clearly, many of the children identified themselves in many different projections. Quite interestingly, some of the projected/anticipated images presented by the children drawing included being a policeman – fiction (Figure 7); superman - fiction (Figure 8); dancer - narrative (Figure 9); female soccer superstar – fiction (Figure 10), among others as observed in Appendix VIII. This observation also demonstrated that the children's drawings were influenced by their projected/anticipated reality of the social environment and not the immediate physical environment or common reality they experienced. Usually, representation of projected/anticipated reality falls under the fiction's classes of drawings according to Duncum's (1992) classifications. The difficulty in examining such drawings is that they are difficult to understand without the involvement of the children.

Figure 7: Projected Reality – Being a Policeman **(Source:** Fieldwork, 2022).

Figure 8: Projected Reality – Being a Superman **(Source:** Fieldwork, 2022).

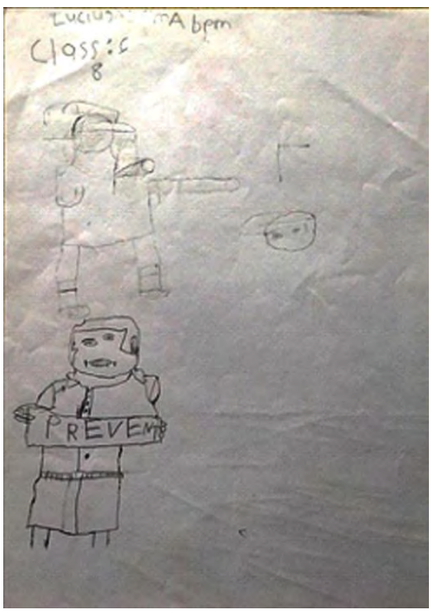

Figure 9: Projected Reality: Being a Dancer **(Source:** Fieldwork, 2022).

Figure 10: Projected Reality: Being a Female Soccer Superstar **(Source:** Fieldwork, 2022).

4.2.3. Normative Reality

Very little to no evidence of the normative reality dimension of the environment's influence on the children's drawings was observed. Normative reality encompasses an expression of judgment of right and wrong or bad and good. The absence of evidence of normative reality dimension in the children's drawing means the children were less interested in expressing moral value-judgment. There were however subtle indications of normative realities but were generally an expression of religious and cultural values rather than moral values. For instance, children in the Northern zone who drew women often add hijab covering their head as it is the practice of women in some parts of Northern Ghana to have their hair covered at all times. This was even noted in directed drawings where the image given to the children had no hijab, but the children went ahead to add it perhaps because they expected that image of a woman should have a hijab. This observation also means that the children's environment influences the way they expect certain images to be portrayed and therefore use their drawings to demonstrate that.

4.2.4. Prophetic Reality

The results also showed the influence of prophetic reality, that is what they expect to see of themselves or the world in the future in their drawing. The drawing types

that were generally produced depicting prophetic reality were fiction in nature, representing things that were not in their immediate surroundings but in the future. The evidence supporting this was also found after further interrogation with the pupil. For instance, some children drew aeroplanes (Figure 11) and when interrogated indicated they can see themselves travelling in aeroplanes in the future. Others drew bicycles (Figure 12) and assigned their names to it as their property which is an indication of their future state or prophetic realities.

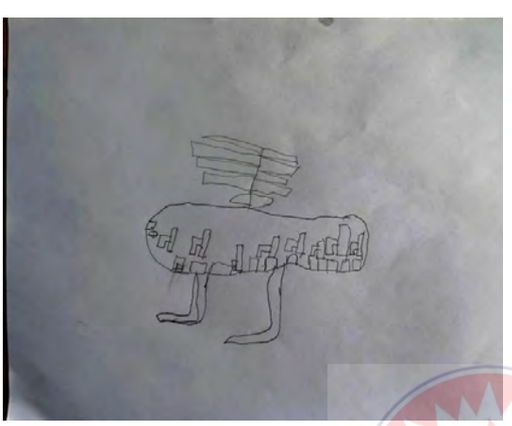

Figure 11: Prophetic Reality: Aeroplane **(Source:** Fieldwork, 2022).

Figure 12: Prophetic Reality: Riding of Bicycle **(Source: Fieldwork**, 2022).

The influence of prophetic reality was most of the time not immediately obvious in the drawing until further interrogation with the children. For instance, one of the children drew someone riding a bicycle (Figure 12) which could easily be a depiction of his common reality as people were riding bicycles around her immediate environment. But, when asked what that was, she said it was her riding a bicycle her father promised to buy for her. This indicates the child's prophetic reality rather than common reality.

4.2.5. Environmental Reality

Evidence from the interview affirmed the importance of the various environmental realities on children's drawings. Many of the parents believed that the things their children draw were influenced by what they see around their vicinity. Responses from some of the children affirmed this. For instance one of the Basic 3 pupils was interviewed and asked to interpret her spontaneous drawings, she explained that:

I draw some of the things because I can see them around. Also, my love for some of the things I see like bicycles, cars, and friends [Figure 13] makes me to draw them. I have a nice bicycle that I ride to school every day **(Basic 3 pupil participant 1, personal communication, March 23, 2022).**

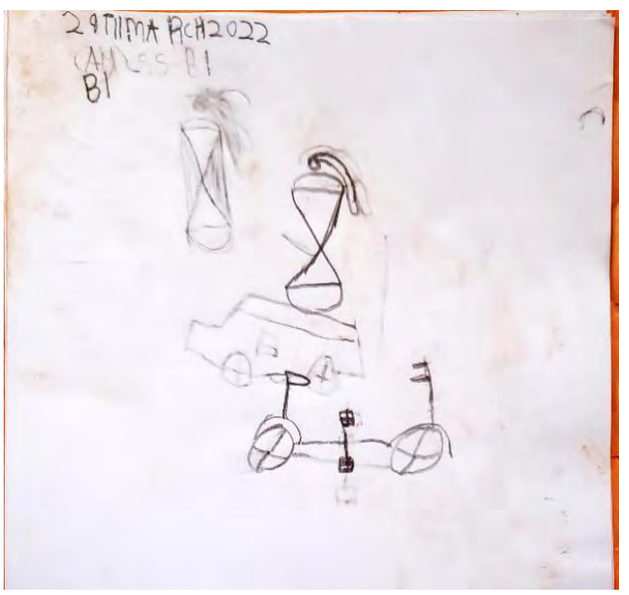

Figure 13 Environmental Reality – A drawing of a Primary 3 Pupil Showing Elements (Bicycle, car, and friends) in Her Immediate Environment **(**Source: Fieldwork, 2022).

The Cultural Coordinator in one of the Districts in the Northern Zone in an interview also buttressed this point with the statement below when asked about the influence of children's environment on their drawing:

Let's say for example the objects they see in the environment, community, and activities in the society (e.g., drumming and dancing, playing of football and the market). These activities influence their drawings because they reflect on their minds anytime they are asked to draw something **(Cultural Coordinator NZ2, personal communication, February 24, 2022).**

A parent who is a craftsman believed the drawing of his children was influenced by his craft activities as most of what they choose to draw and draw well were ceramic works. When asked about the influence of environment on children's drawing, one of the parents asserts that:

I think my children's drawing is influenced by what they see. I used to engage in craft activities until I travelled. During this time and until now if you ask my children and others who live near me to draw anything, they will draw clay pots and some of my crafts. I think they do so because that is something they can easily relate to or familiarise with. Since I travelled and have not been doing

> *a lot of the craft, I can see their drawings are shifting to something else within the home and may be schools* **(Parent-participant VR1, personal communication, February, March 13, 2022).**

One of the cultural coordinators indicated that creative and cultural environments were the key factors influencing children's drawing. When one the cultural coordinators in the Volta Region was asked about the value of the children's cultural environment in their drawings, this was what was opined:

> *Since culture is a way of living of the people, especially most of the types of works their parents and indigenous people engage in make them to relate themselves to it. For example, this community is a fishing community so a child easily relates to the boat, nets, yes through drawing since they cannot spell it, they easily express it through drawing to express themselves. In our cultural competitions, we see children drawing boats, and nets, which are more easily seen in their drawings than other things from outside (***Cultural Coordinator VR2, personal communication, February, March 15, 2022).**

4.3. The Influence of Self-efficacy on the Drawing Capabilities and Outcomes of Children in the Study Area

Underpinned by the Bandura's Social Cognitive Theory and Self-efficacy (Bandura, 1989) and preponderance of empirical literature, the study examined how self-efficacy of the children influence their drawing outcomes and capabilities. Operationally, self-efficacy as applied in this study was conceptualised with three measures viz past experience of the child, facilitation and evaluative feedback from teachers and parents/adult caretakers as well as physio-emotional states of the child. No observation was made on the physio-emotive state influence on drawing, but the other components of self-efficacy were prominent. The influence of these components of self-efficacy was widely observed from the directed drawings and spontaneous drawings produced by the children, as well as responses from interviews with the pupils, teachers, parents and cultural coordinators of the studied districts.

4.3.1. Experience

One of the most obvious ways and pathway through which self-efficacy influence the drawing outcomes and drawing capabilities of children is through experience. The results generally revealed two forms of past experience that influenced the drawing abilities of the pupil which included practice experience which relates to the experience of ever drawing the object at hand; and observational experience which relates to the child ever seeing or observing the object at hand personally. Both of these dimensions of past experience show unique and important influence on the drawing outcomes and drawing abilities of the children. Analysis of the spontaneous drawing outcome of the children revealed that many of the children were good at drawing objects like flowers, boxes, and some domestic animals which were also the objects the teachers mentioned as things they had taught the pupil how to draw. In this case, both the interest in these objects and the capability to draw them were influenced by the fact that the pupils have past practice experience in drawing them.

The above observation was also made with regard to drawings made at home as well. It was noted from the spontaneous drawings, that the choice of objects and the drawing abilities were equally influenced by past experience of drawings they have done either by themselves or through the guidance of a family member at home. This was evident from the fact that many of the objects mentioned by the parents as things their children have drawn back at home before were seen in the choice of spontaneous drawings, they made and reflected in how they drew these objects. An interview with a parent equally revealed that past experience of practice was important in the drawing capabilities. A parent whose child's drawing was rated as good reported that "she started drawing at a younger age and I think her past experience of learning to draw at a younger age has a major influence on her when growing up. That actually made her to develop a passion for drawing". From similar observations, it was deduced that children's ability to draw objects well was a result of their past experience in drawing these objects at school and/or at home.

Besides, past experience of practices at school and home, there is also experience from the observation that also influences children's drawing outcomes and capabilities. Fox and Lee (2013) have described the observational experience as the most subtly but intriguing determinant of children's drawing. The outcome of the directed drawing given in this research depicted several instances of the influence of the children's personal observation on their drawing outcome and capabilities. The directed drawing exercise in this study involves two objects, the sun with a human face and a family of five (Appendix I c). It was realised during this exercise that some of the children barely looked at the objects as drawn and given to them to draw but went ahead with their own expressions of the objects. That is instead of looking at the drawing of the 'Sun' for instance as presented to them to draw, some went ahead with their own version of the drawing of the sun because they know what the sun is like. As a result of this, it was realised that a good number of the children did not accurately depict the drawing given to them and most commonly did not include the human face on the sun perhaps because that is not their observational experience of how the sun look like.

Similarly, in drawing the family of five given to the children it was realised that the majority of the children deviated from the specific drawings given to them. For instance, some of the drawings of the children were influenced by their self-efficacies (factual/narrative) such as family of three (Figure 14), four (Figure 15), six (Figure 16), seven (Figure 17) or more even though in the drawing given to them the number is five. It was also observed that many of the children added details that were not in the picture given to them, such as adding a handbag to the "mother" in the family, putting hut (taqiyah) on the "father" and "males" and many other details on their dressing and accessories. This observation is explained by the fact that these other different drawings represent their observational experience of what a family look like or in some cases the family of the children. This is buttressed by the fact that one of the children actually gave names to the family members (Figure 14) which presupposed that it was either their own family or a known family to them.

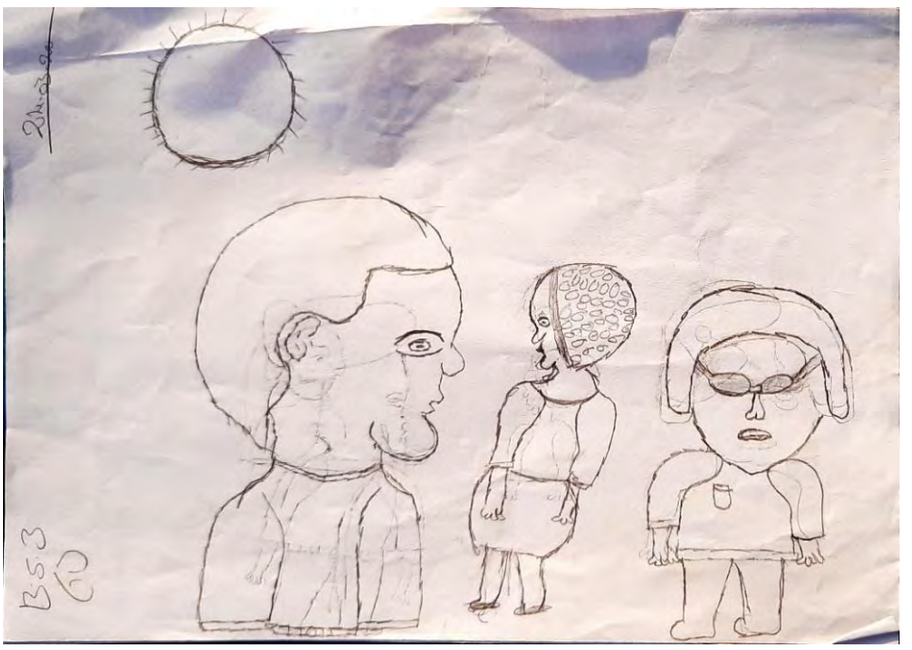

Figure 14: Self-efficacy - Detailed Representation of a Family of Three **(Source:** Field work, 2022).

Figure 15 Self-efficacy - Family of Four with Hijab and Taqiyah Drawn by Primary 2 pupil (**Source:** Field work, 2022).

Figure 16: Self-efficacy - Representation of a Family of Six **(Source:** Field work, 2022).

Figure 17: Self-efficacy - Detailed representation of a Family of Three **(Source:** Field work, 2022).

The observation made about the deviation of the children to rather draw from their self-efficacies (Figures 14, 15, 16 & 17) instead of the five-member family task assigned to them, was affirmed by one of the cultural coordinators in Volta Region who asserts that:

> *...Sometimes children draw objects slightly different from what is presented to them because they rather try to depict what they know especially if the object is something they see often or have seen before. So, for instance in our area as a fishing community if you draw a fishing boat for children to copy it is likely that instead of following your drawings, they will try to recollect their own experience with what a fishing boat looks like and draw which may not accurately reflect the drawing given to them. This is the way they draw to represent the natural expression of their observational experience* **(Cultural Coordinator VR1, personal communication, February, March 15, 2022).**

4.3.2. Facilitation and Evaluative Feedback

Another factor of self-efficacy that influenced drawing outcomes and drawing capabilities was the facilitation and evaluative feedback**.** A number of the children indicated that they like to draw more when they receive feedback from their teachers at school or parents at home. The observation from their response was that the children feel happy to have the attention of their teachers or parents on them and what they do. To maximise this experience, the children draw often in order to continually hold the attention and interest of their teachers or parents on them. One of the responses of a child interviewed in the Volta Region that supports this observation is as follows:

> *My teacher always guides me to draw in class. She supervises my drawings to make sure I am on the right track. At home, my mother helps me too. In the house, my mother shows me some of the objects on her phone and would ask me to draw them. My mother always encourages me to draw and praises me every time I draw something. When they talk about my drawings, I feel happy, and I like to draw things so I can show to them again* **(Basic 3 pupil-participant 2, personal communication 3 pupil, 4th February 2022).**

One of the children whose drawing was rated highly when asked about what influenced his drawing capabilities revealed that;

> *My teacher guides me to draw by watching me and also directs me to do it this way or that way* **(Basic 2 pupil-participant 2, personal communication 3 pupil, 4th February 2022).**

This statement also demonstrates how self-efficacy achieved through facilitation and evaluative feedback influences the drawing abilities of children.

One of the teachers also corroborated that;

> *My facilitation or evaluative feedback helps in bringing the children's mind on what they draw, and it enables them to better their drawing skills* (**Teacher participant NZ2, personal communication 3 February 4, 2022).**

This observation is also consistent with that noted by the parents. Some parents noted that their participation in guiding and facilitating of their children helped elevate the interest and capability of their children in drawing.

From the parents' perspective, facilitation and evaluative feedback also encourage them to bring out their creative talent. One parent succinctly concurred that

> *by educating the children to know that drawing is not only about special objects but also includes events, activities or occasions. It helps in developing their drawing skills and brings out their creative talents* **(Parent-participant NZ1, personal communication, February 4, 2022).**

4.4. Role of Educators in Providing Convenient Environment Enhance Children's Drawing Capabilities

The study also sought to find out the role that educators (teachers), and parents, etc can play to create the needed environment and build self-efficacy of children in improve children's drawings. The analysis of the responses obtained revealed patterns and themes on the roles that educators need to play to enhance children's drawing outcomes and capabilities. The major roles identified include: providing facilitation and guidance; portraying and promoting the positive value of art and culture; creating an environment rich in our culture; motivation and provision of the needed tools and materials for drawing. These roles are herein discussed.

4.4.1. Facilitation and Provision of Guidance

The most commonly indicated role that the respondents indicated for educators to play to enhance children's drawing outcomes and capabilities within their environmental and cultural context was facilitation and guidance. Facilitation and guidance involve the art

of decision support, direction and corrections done in a way that empowers people to become the best version of themselves in what they do (Stacey et al., 2013). Many of the respondents believe that children drawing capability development deserve dedicated and deliberate facilitation and guidance. This was thought necessary because children often lack focus, and ignore details which influence the quality of their drawings. Through facilitation and guidance, it is believed by many of the study participants that the children's drawing outcomes and capabilities will improve. It was noted from the responses and supported by the drawings that the children often lack direction and deliberateness in their drawing which influence their ability to accurately portray the image they have with their drawings.

One of the educators (teacher) interviewed underscored not only the importance of facilitation and guidance but also the timeliness of facilitation and guidance as underpinned by their development stages. When asked about the role educators can play, he said:

> *I think facilitation is one of the most important roles educators can play to enhance children's drawing. Facilitating children at the early stages of their drawings will imbibe passion and love for the art. Educators should monitor and evaluate children's drawings and give feedback that goes a long way to encourage children to enhance their capabilities. It is important that the facilitation and guidance reflect the development stage of the children to enable them effectively to receive and utilise them* **(Teacher-participant WNR 1, personal communication, February 21, 2022).**

A cultural coordinator in the Volta Region also supported the idea of teacher facilitation to enable children to gain experiences of their culture, promote their creativity, and draw outcomes and capabilities. His response suggests that proper facilitation and guidance at home make facilitation and teaching at school easier and therefore both (teachers and parents) should see themselves working synergistically in the facilitation and guiding of children in art and cultural activities. Specifically, the culture coordinator posited that:

> *…by facilitation, since these children are taken to fishing at an early age, let us take it from the parents first before we go to the school. Those who cannot go fishing help their parents when they return from fishing by*

> *picking the fish, so by that they are already in tune with that kind of life and being in tuned with that kind of life makes the work of the teacher easier. So, when the teacher makes mention of it, he says oh, how many of you know about boats they immediately raise their hands. How many of you see this fish before and how many of you know this, so it makes the work of the teacher easier from the training they have had from their parents. In terms of drawing, the teacher draws on the board and asks them to draw and since they have been associated with the real thing before and not now that they are going to imagine it, it is very easy for them to pick up* **(Cultural Coordinator VR2, personal communication, February 21, 2022).**

Many of the respondents believe that effective facilitation and guidance should address socioemotional needs and motivate children not only to improve their drawing capabilities but also to raise their interest in drawing. Some of the respondents indicated that praising the drawing of children motivates them to draw a lot. Educators' roles should therefore include deliberate efforts to applaud and motivate children as forms of facilitation and guidance. It is also important to give feedback to children and encourage them to make corrections and improve in areas of drawing they are weak at.

4.4.2. Portraying and Promoting the Positive Value of Art and Culture

The results also reveal that the teachers should portray a positive image of culture, art and drawing to enable children to develop interest and build their skills in drawing. It was widely acknowledged and hammered by the respondents that the way that teachers view art, culture and drawing influences children's interests and capabilities in the drawing. Children take clues from their teachers and other educators as well. This means that once the educator portrays art, culture and drawing as positive, the pupil will show interest and build their capacity to draw and the vice versa is also true to. This means the teacher's (educator) values of culture and drawing and how well he/she inculcates in the children determines their success in the drawing. Displaying work of art in the classroom and other areas children visits subconsciously arouse the child's curiosity, intrigue and interest in culture and drawing. Thus, central among the roles educators need to play is to be the lens through which children see art and culture as valuable.

A number of points made by the study participants buttress the point above. During an interview with the cultural coordinator of one of the districts in the middle zone, it was realised that the teacher and parents (educator) is the major source through which children build interest and capabilities in drawing. Supporting this claim below is what one of the district cultural coordinators said:

> *I will relate [children drawing capabilities and culture] to how the class teacher sees the cultural activities within the environment, how the teacher values it, and how the teacher treats it, in general, will have impact on the child. When the teacher thinks that these are outmoded issues, the teacher might not have an interest or when the teacher thinks that these are things the child needs to know, these are issues that remain the real part of the child and tries to model the child out of it, the child develops interest out of it. Until the teacher places value or puts a place value on what the child is drawing, it makes the child to develop an interest in whatever he/she does. At times the culture the child finds himself in also helps the child to develop interest. If the environment has negative effects on the culture, if the cultural activities are being despised by elderly people, "tin gods" as outmoded like artefacts, they do not value it again. So, when the child finds those artefacts, it turns to have negative effects on the child. It is not only teachers who have much contact with the child. The parents have more influence on the child too. When the child gets home the child does drawings and it is not only in the school that the child does drawing. So, I see the teacher as the first coach and the parents as the second coach and the environment as the third coach. In drawing, the teacher guides and leads the child by giving him/her an object in the first place or giving a scenario for the child to draw* **(Cultural Coordinator AR 1, personal communication, April 13, 2022).**

Portraying and placing valued legacy on the artefacts. Some of the respondents noted that in Ghana most artefacts we see as worshipped by our forefathers. Because of this, these artifacts are associated with idol worship which then leads to them being seen as taboo in the beliefs and ideologies of Christians and Muslims who are the majority in Ghana. The effect of this circumstance is that in the typical Muslim or Christian home, cultural artefacts are not displayed and therefore obliterate their influence on the children's view of their environment, culture and drawings. To promote and enhance the role of environment and self-efficacy in children's drawing, require

educators including parents to promote the positive value of their culture, artefacts and crafts to children.

4.4.3. Create an environment of the culture of the Children

One of the points that represent roles for educators in enhancing the influence of environment and self-efficacy on children's drawing outcomes and capabilities involves creating an environment of the culture of the children. Children by nature are attracted towards what is within their environment and therefore the environment becomes the starting point of their creativity, innovation and reality about life. Children need to be exposed to an environment of the cultural activities and elements of society in order to appreciate them. One of the teachers interviewed acknowledges this and therefore pointed out that:

> *Children are attracted to what they see in their communities and surroundings (environment) and therefore the environment become a starting point for developing in drawing abilities and interest. Let's say for example the objects they see in the environment, community, and activities in the society (e.g., drumming and dancing, playing of football and the market). These activities influence their drawings because they reflect on their minds anytime they are asked to draw something* **(Teacher-participant AR 1, personal communication, April 15, 2022].**

This means that to build on the environment and self-efficacy as factors for improving children's drawing, creating an environment that reflects their experience is an important role for educators. There are many suggested ways to achieve this. Common among the responses include taking the children out to visit places of cultural importance. This is believed to have the potential to enable the children to create memories them and bring back to the classroom. These kinds of visits also enhance the children's experience of their culture and art to build interest, intrigue and self-efficacy for drawing. A parent interviewed averred that:

> *When learners visit cultural places, they register the things they see there and when they come back to the home/classroom it will be easy for them to bring it out. So, the things they see are captured on their minds and when they come to the classroom and ask them to express it, they easily give it out because the eyes*

have seen it and recognized it" And since the eyes see it the memory captures it. So, they easily represent it when you ask them to bring it out. So, visitation to places should be a thing of interest in the schools, which is something that we are now having a problem with. If you want to take the children out now, you will have to write a letter from the headmaster to the board, from the board to the directorate. How can the teacher be encouraged to take the child out for these children to see? Students should be allowed to visit places so that it does not limit the learning to only the classroom **(Parent-participant AR 1, personal communication, April 15, 2022).**

4.4.4. Provides the needed tools and materials for drawing

The other role that has been identified for educators (teachers), parents, and others to play in order to create the needed environment and build self-efficacy of children for improved children's drawing activities is to provide the policies, tools and materials necessary to children's artist development. Like all other skills, drawing skills are developed through practice and for practice to take place the needs tools and materials need to be available and accessible. Thus, educators need to play key roles in ensuring tools and materials for drawing including the objects are made available and accessible to children at their convenience. Analysis of the responses obtained from this study supports this assertion. Many of the respondents indicated that diverse activities (cultural and artistic) at both schools and home serve as influential sources of motivation and/or encouragement for the enhancement of children drawing capabilities.

Besides policies, schools need to be equipped with drawing materials (colours, drawing sheets etc.) and age-appropriate creative art books that depict the people living in the geographical area of the people are needed to ensure the development of drawing skills within the unique cultural experience and self-efficacy of the children. The educators have an important role to play in all of these. Even more important is the role of parents as educators supplementing the availability of tools and materials for drawing. One parent acknowledges the importance of this role of parents in children's drawing capability with the observation that the availability of drawing boards at home that encourages his children to engage in drawing after school.

4. 5. Key Emerging Findings and Analytical Discussion

This section presents an analytical discussion of the results obtained from the study. The discussion involved situating the findings within the underpinning theories, the state-of-the-art and the existing literature. The discussion is also organised under four sub-themes with respect to the specific research questions the study sets out to answer. The sub-themes include; the drawing abilities of children, the influence of environment on children's drawing outcomes and capabilities, the influence of self-efficacy on children's drawing outcomes, and the role of educators in developing children's drawing capabilities.

4.5.1. Drawing capabilities of children in the lower primary Schools in the Study Area

Drawing is an inherent daily activity of children. Navei et al. (2022) affirm that "artistic expressions in diverse forms (scribbling, drawing, painting & others) are manifestly inherent in children's daily activities" (p. 5). Farokhi and Hashemi (2011) observe that the earliest expression of children's creativity and their level of mental development are manifested in the kind of drawings they are able to create and the pictures they paint. It is contended that drawing is one of the first skills that children learn, and it has implications for the development of other intellectual skills, innovation and creativity (Gu et al., 2019). For this reason, the analysis of children's drawing outcomes and capabilities is an important first step in enhancing their learning and development. Therefore, the Analysis of children's abilities to draw needs to be consolidated to assist learners and educators in understanding how learners' capability to draw affects other areas of their studies (Ozsoy & Ahi, 2014).

In this study, the drawing capabilities of the children in lower primary schools in selected Districts, Municipalities and Metropolis in Ghana were examined from multidimensional perspectives bothering their exhibition of practical skills and/or knowledge, imaginative skills, recall/memory, and their interests in drawing activities. To be able to effectively do this, the study sought guidance from Chevallier et al. (2012) 7-point drawing capability rating scale which allowed children's drawing outcomes and

capabilities to be classified into; very bad, bad, a little bad, a little good, fairly good, good and very good). The rating results of the current study showed some differences among the children in terms of their drawing capabilities. However, a rigorous assessment of the drawing activities and outcomes of all the children in the study area, the study found that none of the children scored below average but generally from average (Fairly good) to very good. This observation corroborates with Hosny et al. (2020) account that the average Ghanaian child has varied drawing capabilities ranging from fairly good to very good drawing. According to Martikainen and Hakokoöngäs (2022), drawing capabilities assessment often looks at the drawer's ability to effectively use drawing tools and materials, the extent to which they pay attention to details and the proximity of the object drawn compared to what was intended. The rating developed by Chevallier et al. (2012) and used in this study was also influenced by the above dimension of drawing capabilities. The difficulty however was that children at lower basic schools often did not pay attention to details and accuracy but rather focused on the self-expression potential in drawing. This is affirmed by the results of a study conducted by Acquah (2018) in Kumasi - Ghana on children's drawing capabilities where it was found that collectively the drawings of children are usually much more expression of their feelings, mood, behaviour and personality traits rather than accurate depicting of any object given to them. This is in tandem with the theoretical exposition of Viktor Lowenfeld, (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987) which highlights that children, particularly at the schematic stage (7 to 9 years, do not attempt to copy a visual representation of objects in their environment but the they arrive at concepts through a combination of many factors, their awareness of their own feelings, and their development of perceptual sensitivities. For this reason, the drawing capabilities and outcomes of many of the children assessed by the study through the use of Chevallier et al. (2012) 7-point drawing capability rating scale emerged lower than expected but not below average.

The rated drawings also revealed differences in the score of the children on objects they were directed to draw with some objects such as the "Sun" appearing much

easier to draw than the family of five by many of the respondents. Not only in the directed drawings but also in the spontaneous drawings, similar observations were made. These observations were also an indication of the fact that children's drawings ability varies from object to object with some objects appearing easier to draw than others. Generally, children were able to draw close to perfect objects they are exposed to in their immediate environment. This result is affirmed by Yu and Nagai (2020) that familiarity with objects is an important determinant of children's capability in drawing them. Thus, the different drawing capability scores of the children demonstrated the importance of past experience and how the environment shapes children's drawing capabilities.

The choice of objects spontaneously drawn also gives an indication of not only what they can draw but also the interest and creative ability of the children in the study area. The spontaneous drawing exercise also allows children to use their own perceptions in developing and demonstrating their imagination and drawing skills (Longobardi et al., 2015). The results of this study revealed that there were common objects all the children drew in the spontaneous drawings which were basically household items and objects within their immediate background. Unique items in the environment of the children also featured in their spontaneous drawing indicating that children's choice of drawing may represent the environment they found themselves. Studies corroborate that children's spontaneous drawings are the most credible measure of their interest in drawing and their own creative abilities (Stolley, 2012; Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987).

These observations also indicate that children develop and demonstrate their drawing abilities through drawing objects within their own surroundings. This observation confirms Okada and Ishibashi (2017), and Rose (2014) claims that both directed drawings and spontaneous drawings are needed to understand children's drawing outcomes/interest and their drawing capabilities**.** Overall, the directed drawing outcomes effectively established the children's ability to understand concepts, follow instructions, and pay attention to details. This, according to Rudd et al. (2020), helps in the coordination of drawing skills acquisition to enable children's progressive

development in various elements of creative and intellectual skills. Spontaneous drawing on the other hand offers an opportunity for the children to recall objects in their memory, experience, and interest as well as reveal their innate feelings and passion through drawings (Longobardi et al., 2015). The rating assessment of the children's drawing capabilities revealed some perplexing outcomes such as; the inability of some children to accurately represent the details of objects in their drawings, the addition of extra features not in the drawing; omission and exaggeration of some specific aspects of the drawings. This observation is in tandem with Lowenfeld's theoretical observation of children's drawings where at the Schematic (7 - 9 years) stage they tend to omit, exaggerate or distort parts of objects in their drawings while at the Drawing Realism stage (9 to 12 years) children become more aware of themselves and their environment, perceptual understanding of tools and materials, therefore, their drawings are more detailed (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987). Since the distortions, omissions, exaggerations, and or detailed drawing capabilities are learnable skills dependent on children's developmental age as theorised by Lowenfeld (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987), art educators, parents, guardians and caretakers need to pay constant attention with encouraging attitude as children engage in their daily drawing activities to nurture their drawing capabilities. By so doing, art educators, parents, guardians and caretakers should provide a variety of art materials, tools and themes to explore. At the later part of children's age (9 years and above) when children have become sensitive to the qualities of the materials and tools in their immediate environment (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987), they could be taught how to improvise simple drawing materials and tools for intensive directed and spontaneous drawing activities. This would go a long way to gradually build the drawing capabilities of children to intuitively overcome drawing-related challenges such as; distortions, omissions, exaggerations, and other fallouts as they transition from one stage to another.

4.5.2. Influence of children's environment on their drawing outcomes

The environment which a child grows has various physiological and psychosocial implications for the child (Grazuleviciene et al., 2017). Not only does the child's environment influence their perspective of society and life in general, but it also influences their creative ability and drawing skills (Wilson & Wilson, 1982; Lowenfeld, & Brittain, 1970; Lowenfeld, 1947). Unlike adults, children's activities and overall development are determined by their sensory experience and observation of their environment. Broadly the physical environment and the psychosocial environment (social and cultural environment) of the children are the fundamental lens through which they view and represent the world around them (Schmeer and Yoon, 2016). For this reason, various studies have examined the influence of children environment on their drawing outcome and drawing abilities (Navei, et al., 2022; Acquah, 2018; Avoke & Essel, 2017; Aryaf**,** 2016; Kayacan-Keser & Eren, 2015; Hsu, 2014; Duku & Kemevor, 2013; Biedinger, 2011; Farokhi & Hashemi, 2011; Oğuz, 2010; Wilson, 1997a; 1997b). Various theories have also been propounded to deduce the meaning of how the environment is a factor in the drawing of children (Wilson & Wilson, 1982; Lowenfeld, & Brittain, 1970; Lowenfeld, 1947). Among these theories, this study was underpinned by the theory of realities proposed by Wilson and Wilson (1982) which indicates that children's drawings are influenced by their common, projected/anticipated, normative, and prophetic realities.

The findings from this research revealed how the children's physical environment, social and cultural environments were at the centre of their drawing capabilities and outcomes as they were engaged in directed and spontaneous drawing exercises. Observation of the children's directed drawings indicated a pattern that showed that the children drew the objects given based on how they perceived such objects in their immediate environment. This is to say that the first point of influence for children's drawing is the appearance of the object in the environment they find themselves in before paying attention to the details of the object as presented to them. An analysis of the spontaneous drawings demonstrated much more clearly the influences

of children's environment on their drawing as only what was conceived from their environment was drawn by them. This supports Hsu (2014) claim that spontaneous drawings made by children reveal their appreciation of their environment and their skills in drawing and art in general.

The environment of a child according to the Wilson and Wilson (1982) theory of reality is not only the immediate physical environment referred to as common reality but also includes their projected/anticipated reality (imaginative creations), normative reality (judgment) and prophetic reality (prediction of their future or the world). Irrespective of the various types of environments as put forward by Wilson and Wilson, it appears much focus is ordinarily placed on the physical environment or common reality of the child's environment. This perhaps is because adults often presume children's environment is all about the immediate tangible objects they see (Tyler, 2020). Unlike adults, children are often unable to effectively filter their sensory memory to eliminate things that are not apparently reality (Stein et al., 2014). This was everything conceived in their memory from real observation to imaginary observation stayed with them. A study by Lane et al. (2016) has shown that to children, their imaginations appear to them as real as the physical environment and therefore exert influence on their lives.

The aforementioned observation suggests that it is not only the skills and talent of the child nor the physical environmental features that influence their drawings but their imaginations, which create projected/anticipated reality, normative reality and prophetic reality as well. Underpinned by this assumption, children's drawings are perceived to be influenced by what they feel and what they want to say to others about their environment, their personal life and style, their worldview and their representation of the future. This also means that every child's level of consciousness of all the different dimensions of their environmental realities, and the breadth of their vision of the world influences the content of their drawing (Agarwal et al., 2021).

The results of the current study support the Wilson and Wilson (1982) theoretical expositions as major differences were witnessed in the drawing outcomes among the children in one zone and across zones. These differences reflected each child's vision of

their environment either from; common reality, projected/anticipated reality, normative reality or prophetic reality perspective. The results generally showed patterns that related to the common reality (tangible environment), projected/anticipated reality, normative reality, or prophetic realities of the children. Children in the Southern Zone (Coastal areas) drew sea objects such as shells among other things within the unique common reality dimension of their environment which were not found in the drawings of the children from other zones. Likewise, baobab fruits were commonly drawn by children in the Northern Zone of Ghana. This means that the unique drawings of the children from the different zones in Ghana were informed by their unique common reality of the environment they are exposed to. Generally, the common reality (physical environment) was the common aspect of the environment that influenced the drawings of the children. This observation supports Li et al. (2021) claim that children's common reality is the most crucial in their drawing. Hall (2015) also noted that objects within the common reality have more stability in the children's memory than other imaginative reality of the children. For these reasons, it was not surprising that the common reality dimension of the children's environment influenced their drawing the most.

The study also found evidence of projected/anticipated reality, normative reality and prophetic reality to have influenced the children's drawing outcome. This included identification, imagining and depicting themselves as superheroes such as Spiderman, Jack, among others. The normative reality was subtly witnessed in terms of their expression of religious and cultural values rather than moral values while the prophetic reality was witnessed in terms of some of the things the children drew and saw themselves owning such things (bicycle, car among other) in the future. Representation of these kinds of realities was mostly in the form of fiction during the spontaneous drawing exercises.

4.5.3. The Influence of Self-Efficacy on Children's Drawing Capabilities in the Study Area

Underpinned by Bandura's Social Cognitive Theory and Self-efficacy (Bandura, 1989) and with preponderance of empirical literature, the study examined the influence of self-

efficacy on children drawing outcomes and capabilities. Self-efficacy according to Artino (2012) is an educational psychological concept that represents a person's belief in his or her capability to act in a certain way or accomplish a given task. According to Bandura (1977), self-efficacy determines how active and persistent an individual can behave towards an issue or subject. From the Self-efficacy theoretical framework, an individual's motivation to undertake a certain task is informed by their confidence or their ability to execute the task or behaviour (Ein-Gar & Steinhart, 2017). In this study, two pathways were conceptualised for achieving self-efficacy in children's drawing with respect to past experience of the child and facilitation and evaluative feedback from teachers and parents. According to Krpan et al. (2021), past experience is a major determinant of self-efficacy when undertaking an activity. Likewise, facilitation and evaluative feedback have also been found to enhance confidence in undertaking different activities (Goe et al., 2012).

Informed by Bandura's social cognitive theory and self-efficacy theoretical foundation, the study explored how children's past experiences, facilitation and feedback could influence their drawing outcome and capabilities. Past experience is utilised in this study from two dimensions, past experience of practice and observation. The results of the directed and spontaneous drawings produced by the children showed elements of the influence of the children's past experience as well as the facilitation in developing self-efficacy for drawing. As Allen et al. (2015) have noted, children's choice of what to draw and their ability to accurately represent objects are influenced by past experiences of encounter with the objects either through practice and/or observation. It was ascertained that many of the children chose to draw only things they had drawn before or seen before during the spontaneous drawing exercises. This observation was influenced by the fact that by ever drawing or observing these objects, the children built their self-efficacy in drawing them and the self-efficacy influenced their choice to draw such objects and their capability in drawing them well. In some cases, the influence of self-efficacy leads to neglecting some details by the children as they pay little attention

to the drawing given to them to concentrate on what they know to be the drawing of the object in question.

Analysis of the spontaneous drawing outcomes of the children revealed that many of the children were good at drawing objects like flowers, boxes, and some domestic animals which were also the objects the teachers mentioned as things they had taught the pupil how to draw. This suggests that the choice and ability to draw these objects well was because they had past experience of practice drawing them which enhanced their self-efficacy in drawing them. According to Quillin and Thomas (2015), when children practice drawing an object over time, they build their self-efficacy in drawing them which influences their interest and capacity in drawing these objects. In this case, the interest in the objects the children drew, and their capabilities were influenced by their self-efficacy developed through past practice.

In some cases, the past experience is not in the form of practice but through observation. According to Fox and Lee (2013), observational experience of children is an important pathway to the development of interest and self-efficacy in drawing. When children observe objects of interest they develop intrigue and keep a memory of them which they may express through drawing (Saunders & Wong, 2020). This analogy was affirmed in this study as many of the objects the children produced were things they had prior observational experience of either in school, home or elsewhere. Overall, the outcome of the spontaneous drawing and directed drawing given in this study depicted several instances of the influence of the children's personal observation on their drawing outcome and capabilities. Interviews with the children, their parents and teachers revealed that observational experiences were reflected in developing the children's self-efficacy for drawing.

The other pathway of self-efficacy that influenced the drawing outcome and capabilities of the children was facilitation and evaluative feedback. It was ascertained that facilitation and evaluative feedback assist children in developing their artistic knowledge in terms of their drawing capabilities. According to Akkuzu (2014), when children receive facilitation and positive evaluative feedback on their drawings, they feel

confident in their drawings (self-efficacy) which motivates them to draw even more and well. The observation from responses of the children that frequently received facilitation and evaluative feedback from their teachers and parent is that such feedback makes them feel happy and motivated and to keep on drawing so as to maximise their drawing capabilities.

4.5.4. The role of educators in providing a convenient environment to enhance children's drawing capabilities in the study area.

Educators are key stakeholders in the delivery of education at all levels. In examining the role educators need to play in providing a convenient environment that enhances children's drawing capabilities, the study contextually viewed educators to constitute both parents and teachers as by Rose et al. (2006). Informed by this, the study examines the roles that educators (Parents and Teachers) can play to create the needed environment to enhance children's drawing capabilities. The results showed four fundamental roles which included providing facilitation and guidance; portraying and promoting the positive value of art and culture; creating an environment rich of our culture; motivation and provision of needed tools and materials for drawing. These roles were recognised by many of the stakeholders as critical to the development and enhancement of children's drawing capabilities.

The role of facilitation and provision of guidance on improving children's drawing capabilities cannot be overemphasized. According to Stacey et al. (2013), facilitation and guidance are about providing decisions, support, direction and corrections in a way that empowers people to become the best version of themselves in what they do. Reddan (2015) acknowledges that facilitation and provision of guidance enhance children's self-efficacy in any activity assigned to them. Thus, by offering children with facilitation and guidance in drawing the children are expected to develop high self-efficacy in drawing which will enhance their drawing capabilities. The role of the educator is therefore to be a constant source of facilitation and guidance to enhance children's drawing capabilities. Studies such as that of Twigg et al. (2013), and Remesh (2013), have also acknowledged facilitation and guidance as key roles for educators to

enhance children's drawing capabilities. According to Yu and Nagai (2020), facilitation and guidance allow children to develop their drawing talents and creativity.

One other role that educators is expected to play based on the findings of this study is to portray a positive image of culture, art and drawing to enable children to develop interest and build their skills in drawing. According to Myers (2013), the image of drawing, art and culture that educators paint to children determines their interest and self-efficacy in drawing. This claim was observed in this study as many of the participants stressed the fact that the way that educators view art, culture and drawing influences children's interest and in drawing capabilities. Generally,, children take cues from adults on what is good, important and should be pursued. This means that in an environment where educators treat art, culture and drawing as unimportant, children are unlikely to have an interest and develop their skills in these areas. The role of the educators in this is to create an environment that portrays art, culture and drawing positively to children. This, according to the findings of this study can be achieved by displaying culturally related works of art and works of art in general in the classroom and other vantage places children visit to subconsciously arouse the children's curiosity, intrigue and interest in culture and drawing.

Also, the study found that educators need to provide an environment that is culturally rich to enhance children's drawing capabilities since children's cultural experiences influence what they draw. Children by nature are attracted towards what is within their environment and therefore the environment becomes the starting point of their creativity, innovation and reality about life (Ponticorvo et al., 2022). Children need to be exposed to their cultural activities (dancing, singing, festivals, and others) and other artistic elements of their immediate society in order for them to appreciate and internalise their cultural ideals. To build a convenient environment that supports children's drawing capabilities is to create an environment that reflects their cultural experience. This can be achieved by taking the children out to visit places of cultural importance. This is believed to have the potential to enable the children create memories of such cultural experiences which could form part of their spontaneous drawing repositories.

One other basic role that educators are expected to play to create the needed environment and build self-efficacy in children to improve their drawing capabilities is to provide adequate tools and materials to children during drawing sessions. Drawing like any other artistic skills require constant practice but constant practice is not possible if the needed tools and materials are not available (Heideman et al., 2017). At both home and school, educators are expected to provide children with relevant tools that will instil interest and self-efficacy for drawing. According to Frimpong (2021), one of the bottlenecks that prevent children in Ghana from fully developing their drawing capabilities is the lack of basic tools and materials for children to constantly practice drawing. In such a situation, the children do not have the tools and materials to undertake drawing activities even if they have an interest in drawing. At about age 9 and above when the children have become conscious of themselves and sensitive to the qualities of the materials and tools in their immediate environment, educators can teach them how to improvise basic drawing tools and materials on their own for drawing purposes as theorised by Lowenfeld (Lowenfeld, 1947; Lowenfeld & Brittain, 1964; 1970; 1987). This has the tendency to build the drawing capabilities of children as tools and materials are no longer a hindrance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0. Overview

This chapter presents a summary of the main findings of the study, the conclusions drawn, the recommendations made as well as limitations and suggestions for future studies.

5.1. Summary of Main Findings

The purpose of the study was to examine the environmental influence on the drawings of lower primary school children in selected districts, municipalities, and metropolis in Ghana highlighting the challenges and the dynamics involved in children's holistic artistic development in Ghana. To achieve the aforementioned purpose, four specific objectives were structured with their corresponding research questions for data elicitation. The first objective assesses the drawing capabilities of primary school children within the age range of 7 to 10 in the study area to establish their levels of artistic development. While the second objective examined the influence of the children's environment on their drawing outcomes, the third objective made an attempt to find out how self-efficacy (past experience, facilitation/evaluative feedback and physio-emotional status) influences the drawing of children in the study area. Lastly, the fourth objective explores the role educators can play in providing a convenient environment to enhance the drawing capabilities of children. The study was situated within the qualitative (multiple) case study design with triangulated data drawn through interviews, children drawing activities, and field observation from twenty-four (24) informants. Through an in-depth thematic analysis of the data, the study established some key findings in accordance with each of the objectives.

Under objective one, the assessment of both directed and spontaneous drawings of children in the study area revealed that:

- Significant differences exist among the children in terms of their drawing capabilities and outcomes. That notwithstanding, a rigorous assessment of the

drawing activities and outcomes of all the children in the study area, the study found that none of the children scored below average but generally from average (Fairly good) to very good indicating that all the children have basic drawing capabilities that could be built on. The assessment of the children's drawing capabilities was done from multidimensional perspectives such as; their exhibition of practical skills and/or knowledge, imaginative skills, recall/memory, and their interests in drawing activities. This was made possible through the use of Chevallier et al. (2012) 7-point drawing capability rating scale which classifies children's drawing outcomes and capabilities into; very bad, bad, a little bad, a little good, fairly good, good and very good.

- With the directed drawing exercises, although most of the children did not strictly follow the drawing instructions assigned to them, they capably drew elements with detailed parts whereas a few of the children's drawings showed omissions and exaggerated parts which are characteristic of their developmental age as theorised by Viktor Lowenfeld. For instance, the "Sun" appeared much easier to draw than the family of five by many of the children during the directed drawing session. These observations were also an indication of the fact that children's drawing ability varies from object to object with some objects particularly familiar ones appearing easier to draw than others. The different drawing capabilities exhibited by the children reflected in their rated drawings scores demonstrating the importance of past experience and how the environment shapes children's drawing capabilities.
- With the spontaneous drawing activities, an opportunity was given to the children to recall objects in their memory, experience, and interest as well as reveal their innate feelings and expressions through drawing. The analysis of the spontaneous drawing activities and outcomes of the children revealed children's capability to draw common things they see in their social and physical environments which were basically household items and objects within their school compound. Although none of the children's drawings scored low marks,

the rating assessment revealed the inability of some children to accurately represent the details of some objects in their drawings leading to omissions and exaggerations of some parts in the drawings.

- Both the directed and spontaneous drawing outcomes saw some of the children distorting, omitting, exaggerating or giving detailed renditions of figures and objects in their drawings as their artistic developmental age could permit. The distortions, omissions, or exaggerations that characterise the children's drawing have serious implications and require the intervention of art educators, parents, guardians and caretakers.
- Art educators, parents, guardians and caretakers need to pay constant attention to children's daily drawing activities to nurture their drawing capabilities with an encouraging attitude. They also need to provide a variety of art materials, tools and themes for children to explore. At the later part of children's age (9 years and above), children could be taught how to improvise simple drawing materials and tools for intensive directed and spontaneous drawing activities all of these would go a long way to gradually build the drawing capabilities of children to intuitively overcome their drawing-related challenges such as; distortions, omissions, exaggerations, and other fallouts as the transition from one stage to another.

In examining the influence of the children's environment on their drawing outcomes, the study found that:

- Certain environmental realities influenced children's drawing outcomes in the study area. Common among these environmental realities include children; common reality (immediate physical environment); projected or anticipated reality and their prophetic reality. However, major differences were witnessed in the drawing outcomes among the children in one zone and across zones in the study area.
- On the influence of common reality (tangible environment) on children's drawing outcomes with reference to their spontaneous drawing activities, it was observed that the children's tangible environment greatly influenced their drawings. For

instance, it was found that the children in the Southern Zone (Coastal areas) of Ghana drew objects that are commonly found around the sea such as; shells among other things which were not found in the drawings of the children from other zones of Ghana. Also, baobab fruits were commonly drawn by children in the Northern Zone of Ghana affirming the influence of children's tangible environment on their drawing outcomes. With reference to the directed drawing activity, the children drew the objects given to them based on how they perceived such objects in their immediate environment. This suggests that the first point of influence for children's drawing is the appearance of the object in the environment they find themselves in before paying attention to the details of the object as presented to them.

- With reference to projected/anticipated reality, many of the children identified themselves in many different projections. For instance, during the spontaneous drawing activities, some of the children identified, imagined and depicted themselves as superheroes such as; being a policeman – fiction; superman - fiction; dancer - narrative; female soccer superstar – fiction, Spiderman, and Jack, among others.
- On the influence of children's normative reality on their drawings, subtle pieces of evidence emerged. Normative reality encompasses an expression of judgment of right and wrong or bad and good. For instance, during spontaneous drawing, children in the Northern zone of Ghana drew women often in hijabs as it is a regular practice by women in some parts of Northern Ghana to always cover their hair with hijabs. This was also noted in directed drawings where the images given to the children to draw had no hijabs, but all women images were drawn wearing hijabs perhaps because the children expected that every woman must wear a hijab. This observation also means that the children's environment influences the way they expect certain images.
- The influence of children's prophetic reality was witnessed in terms of the children drawing things they need in life and believing they would own such

things in the future. The drawing types that were generally produced depicting prophetic reality were fiction in nature, representing things that were not at their disposal but looked forward to owning them in the future. For instance, some children drew aeroplanes and when interrogated they indicated they see themselves travelling in aeroplanes in the future. Other children drew bicycles, cars and so on and assigned their names to them as their property which is an indication of their future state or prophetic realities.

However, among all the types of environmental realities, the common reality (physical environment) greatly influenced the drawings of the children the most. The third objective, which sought to find out the influence of self-efficacy on the drawing capabilities and outcomes of children in the study area, revealed that:

- The self-efficacy of children with respect to their past experience; facilitation and evaluative feedback from teachers and parents have a great influence on children's drawing capabilities and outcomes.
- With past experience, two key observations were made such as practice experience which relates to children's previous experience of ever drawing the object; and observational experience which relates to the children's previous observational encounter with objects. For instance, with the spontaneous drawing activities, many of the children were good at drawing objects like flowers, boxes, and some domestic animals which were also the objects the teachers mentioned as things they had taught the pupils how to draw. In this case, both the interest in these objects and the capability to draw them were influenced by the fact that the pupils have past practice experience in drawing them. Also, the outcome of children's directed drawing activities revealed several instances of the influence of children's personal experience on their drawing capabilities and outcomes. For example, the directed drawing exercise which involved two sets of objects, the sun with a human face, and a family of five, were not closely observed by the children during the drawing exercise. Instead of observing the images presented to them to

draw, some of the children drew them based on how they perceived them. As a result of this, it was realised that a good number of the children did not accurately depict the elements that constituted the directed drawing exercise but rather drew them based on their personal experiences.

- The other pathway of self-efficacy that influenced the drawing capabilities and outcomes of the children was facilitation and evaluative feedback. It was ascertained that facilitation and evaluative feedback assisted children in developing their drawing capabilities. A number of the children indicated that they like to draw more when they receive feedback from their teachers at school or parents at home. Some children revealed that they feel happy to have the attention of their teachers or parents on what they draw. In such an environment, the children argued that they regularly engage in drawing to continually hold the attention and interest of their teachers or parents.

The fourth objective explores the role of educators in providing a convenient environment to enhance the drawing capabilities of children in the study area. It emerged that:

- Educators (parents and teachers) have four key roles to play. They include providing facilitation and guidance; portraying and promoting the positive value of art and culture; creating an environment rich in our culture; providing extrinsic motivation and prioritising children's cultural background in drawing activities**,** and lastly, ensuring equal drawing opportunities for all the children as well as ensuring the availability of adequate tools and materials for the children to undertake varied drawing activities**.**
- With the role of facilitation and provision of guidance, educators need to offer regular facilitation and guidance which involve the art of decision support, direction and offering corrections on children's drawings without expressing displeasing criticisms that have the potency to thwart children's drawing capabilities. Many of the respondents believed that

the development of children's drawing capabilities requires dedicated and deliberate facilitation and guidance by educators. This was seen as a necessity because children often lack focus, and ignore details which influence the quality of their drawings. Therefore, through educators' facilitation and guidance, many children stand to improve upon their drawing capabilities and outcomes.

- Also, to create a positive image of culture, art and drawing to enhance their drawing capabilities, educators need to create an environment that portrays art, culture and drawing positively to children by exposing children to cultural activities (dancing, singing, festivals, and others) and other artistic elements of their immediate society in order for them to appreciate and internalised their cultural ideals for spontaneous drawing activities. This is because, the respondents widely acknowledged that the way teachers view art, culture and drawing influences children's interests and capabilities in drawing. Children directly take clues from their teachers and other educators as well. This means that once the educator portrays art, culture and drawing as positive, the pupil will show interest and build their capacity to draw and vice versa. This calls for educators to always display works of art with cultural themes in the classroom and other areas where children visit to subconsciously arouse their curiosity, intrigue and interest in culture and drawing. Thus, central among the roles educators need to play is for them to be the lens through which children see art and culture as valuable for inculcation into their drawing activities.
- With the provision of adequate tools and materials to facilitate children's drawing capabilities, educators are required to provide children with adequate drawing materials and tools that will instil interest and self-efficacy for drawing. This is due to the case that drawing skills are developed through practice, and for practice to take place, the needed tools and materials should be available and accessible to the children.

- Also, when the children are about age 9 years and above, at which period they have become conscious of themselves and sensitive to the qualities of drawing materials and tools in their immediate environment, educators should teach them how to improvise their own drawing materials and tools. This has the tendency to build the drawing capabilities of children as tools and materials are no longer a hindrance.

5.2. Conclusions

All the children studied have various degrees of drawing capabilities. The children have the capability to spontaneously draw objects from memory with most parts represented in detail. Also, all the children studied have the capability to directly draw common things they see in their social and physical environments. However, omissions and exaggerations of some parts characterised the drawings of some of the children suggesting that the children need some form of support from parents and art teachers to further nurture their drawing capabilities to the fullest as they transition from one stage to another in their artistic growth and development.

Children's environmental realities have a great influence on their drawing outcomes in the study area. Some of these environmental realities of children that influence their drawing outcomes include their; common reality (immediate physical environment); projected or anticipated reality and their prophetic reality. Children are capable of spontaneously and directly drawing elements commonly found in their immediate environment. Also, children's projected/anticipated realities have an influence on their drawing outcomes as the outcome of the directed drawing exercise revealed that children from Northern Ghana modified women's images to include the wearing of hijabs which, based on their anticipated realities, every woman is supposed to wear hijabs and therefore projected as such. The prophetic realities of the children in terms of the things they need in life, and the personalities or professionals they seek to be in the future generally influenced their drawing outcomes.

Children's self-efficacy has a great influence on their drawing capabilities and outcomes. The self-efficacy of children comes in two forms such as their past drawing or observational experience, facilitation and evaluative feedback on their drawing activities from teachers and parents. Children have the capability to draw objects better spontaneously and directly, particularly those objects they once drew or perceived in their immediate environment. In this case, both the interest in these objects and the capability to accurately draw them are influenced by their past practice experience in drawing or observing them. With regular facilitation and evaluative feedback from teachers and parents, children's drawing capabilities could be developed as many of the children studied indicated that they feel happy and like to draw more when they receive feedback from their teachers at school or parents at home.

Educators (parents and teachers) have Key roles to play in providing a convenient environment to enhance the drawing capabilities of children. Educators need to provide regular facilitation and guidance to children during drawing activities. Educators also need to create an environment that positively portrays art (drawing) and culture to children by exposing children to cultural activities (dancing, singing, festivals, and others) and other artistic activities of their immediate society in order for them to appreciate and internalised their cultural ideals which could easily be replicated through drawing. Additionally, educators need to provide equal drawing opportunities for all children by ensuring the availability of adequate tools and materials for the children to undertake varied drawing activities**.**

5.3. Recommendations

Since the children studied have various capabilities in drawing but still need support to sustain and or improve upon such drawing capabilities, it is recommended that teachers and parents closely monitor their children's drawing activities and provide the required measures to sustain, improve or overcome children's drawing capabilities.

The exposition that children's environmental realities have a direct influence on their drawing outcomes, the study calls on parents and teachers to monitor children's drawings to ascertain their environmental realities to provide the required facilitation and guidance to enhance the growth of their drawing capabilities.

The revelation that children's self-efficacy has an influence on their drawing capabilities and outcomes demands parents and teachers to provide and facilitate adequate drawing experiences in children. It is also required of them to provide prompt feedback on children's drawing outcomes to motivate children to draw more since many of the children studied indicated that they feel happy and like to draw more when they receive feedback from their teachers at school or parents at home.

Since educators have key roles to play in ensuring a convenient environment is provided for the enhancement of children's drawing capabilities, the study calls on teachers and parents in the study area to live up to expectations. They should endeavour to provide regular facilitation and guidance to children during drawing activities. Educators should also create an environment that positively portrays art (drawing) and culture to children by exposing children to cultural activities and other artistic activities of their immediate society in order for the children to appreciate and internalise their cultural ideals which could easily be replicated through drawing. Lastly, educators should provide equal drawing opportunities for all children by ensuring the availability of adequate tools and materials for the children to undertake varied drawing activities**.**

5.4. Suggestions for Further Studies

There are future research opportunities presented by this study. One of such future research opportunities is understanding the role of drawing in revealing the emotional state of children. This kind of study is expected to be useful for understanding children's mental health status, and determination of therapeutic interventions to enhance children's concentration and interest in school. Further

research could also compare and contrast the impact of the home environment and the school environment in building children's drawing capabilities. This study should demonstrate the difference in the extent and direction of the influence of these separate environments on children's drawings. There is the possibility of antagonism in their influence as shown in this study and therefore through such studies better understanding of collaboration between home and school for children's artistic development could be achieved.

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APPENDICES

APPENDIX I

OBSERVATION GUIDE FOR CHILDREN'S DRAWING

ENVIRONMENTAL INFLUENCE ON DRAWINGS OF CHILDREN IN LOWER PRIMARY: A STUDY OF SELECTED DISTRICTS IN GHANA

INSTRUCTION:

The observation will be conducted by the researcher, the Art teacher of each class and an outsider with expertise in art/drawing;

Spontaneous Drawings

(Children are asked to draw any object of their choice for 30 to 45 minutes)

1. Name of object children draw_____
2. Reason for choice of object_____
3. How well does the drawing represent what each child intended to draw? (comment)

   _____
   _____
   _____
   _____

4. How will you describe the competent the child in the use of art tools (pencil, paper, eraser etc.)

_____
_____
_____
_____

5. What is the mood of the child throughout the drawing process? (excited, stressed, nervous, uninterested, frighten, etc.?

   _____
   _____

_____

_____

6. Rate drawings of each child in a scale of 1 to 6 to indicate how well the drawing is factual/fiction, Narrative/Separate Object; and borrowed or self-generated. 1 in row 1 if factual and 6 if fiction. From 2 to 5 if partly fiction depending on proportion

7. Any other general observation

_____

_____

_____

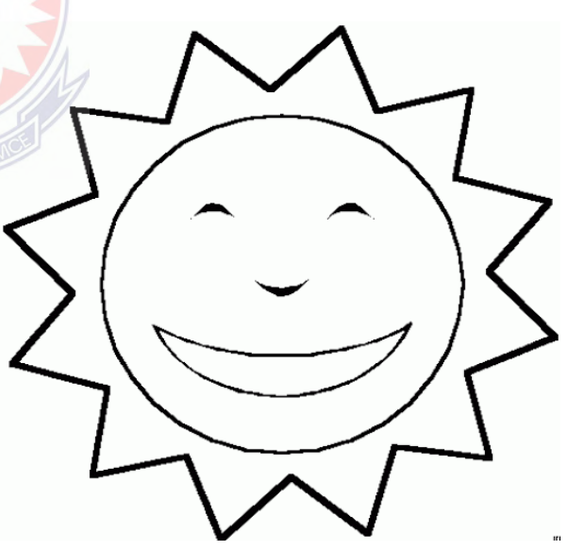
___

Directed drawing

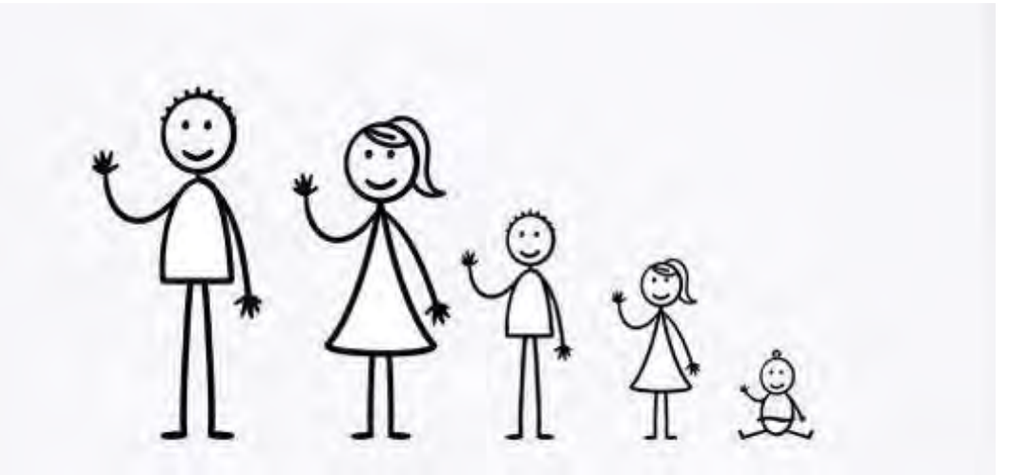
(Children directed to draw object 'b' and 'c' and paint object 'a' in 30 to 45 minutes)

a. House (for painting)

b. Sun



c. Family of Five (5)



8. Are the children able to draw the selected objects? (yes/no)

9. How will you describe the painting of object 'a'?

_____

_____

_____

_____

10. How easy was it for each child to draw the selected objects?

11. Comment on drawing skills and capabilities based on object draw?

12. In your observation, how will you describe the children feeling towards the drawing task?

_____

_____

_____

_____

13. What is the mood of the child throughout the drawing process? (excited, stressed, nervous, uninterested, frighten, etc.?

_____

_____

_____

_____

14. Any other general observation

_____

_____

_____

_____

APPENDIX II

INTERVIEW GUIDE

ENVIRONMENTAL INFLUENCE ON DRAWINGS OF CHILDREN IN LOWER PRIMARY: A STUDY OF SELECTED DISTRICTS IN GHANA

INTERVIEW GUIDE FOR CHILDREN

1. Do you like to draw? Yes [ ] No [ ]
2. If answer is yes to question 1, what makes you like to draw?

_____

_____

_____

_____

_____

3. If answer to question 1 is no, why don't you like to draw?

_____

_____

_____

_____

_____

4. How many times do you draw in a day?

_____

_____

_____

_____

_____

5. What are some of the things you draw?

_____

_____

_____

_____

_____

6. What makes you draw some of the things you draw? (*probe for physio-emotional factors*)

_____

_____

_____

_____

_____

_____

7. What are some of the things that you often draw (e.g. cars, stool, houses, people etc.)?

_____

_____

_____

_____

_____

8. Do you think your drawings are getting better with time? Yes [ ] No [ ]

9. If yes, explain why?

_____

_____

_____

_____

_____

10. Do you seen the things you draw most often around you? Yes [ ] No [ ]

11. Are there some things that you draw that you do not see at home or school? Yes [ ] No [ ]

12. How are you able to draw things that are not near you? (imaginations, see picture, receive facilitation etc.)

_____

_____

_____

_____

13. Do you find it easier draw things not in your surrounding as much as those in your surroundings? Yes [ ] No [ ]

14. Do you believe you are good at drawing? Yes [ ] No [ ]

15. If yes to question 13, what make you think so?

_____

_____

_____

_____

16. If no to question 13, why is it so?

_____

_____

_____

_____

_____

_____

_____

17. Do you have someone who guides you to draw? Yes [ ] No [ ]

18. If yes to question 16, how does the person help you?

_____

_____

_____

_____

_____

_____

APPENDIX III

INTERVIEW GUIDE

ENVIRONMENTAL INFLUENCE ON DRAWINGS OF CHILDREN IN LOWER PRIMARY: A STUDY OF SELECTED DISTRICTS IN GHANA

INTERVIEW GUIDE FOR TEACHERS

1. Are you interested in drawing?

_____

_____

_____

_____

2. How often do you observe your child drawing?

_____

_____

_____

_____

3. How will you describe the drawing capabilities of your children in lower primary?

_____

_____

_____

_____

4. In your observation, if you were to ask the children to draw anything of their choice, what are some of the things you think they will draw?

_____

_____

_____

_____

5. Why will they draw the items you mentioned in question 3 above?

_____

_____

_____

_____

6. Do the school, home physical or cultural environment influence the child in his/her drawing? Yes [ ] No [ ]
7. If yes to question 8, explain why?

_____

_____

_____

_____

_____

_____

8. How does each of the following influence the drawings of children in your opinion?

a. Past experience

_____

_____

_____

_____

_____

_____

_____

_____

b. facilitation/evaluative feedback

_____

_____

_____

_____

_____

_____

_____

c. Physio-emotional status

_____

_____

_____

_____

_____

_____

9. What do you think educators can do to enhance drawing capabilities of children?

_____

_____

_____

_____

_____

_____

10. Any other relevant comments?

_____

_____

_____

_____

_____

_____

11. What are the benefits of drawing?

_____

_____

_____

_____

_____

APPENDIX IV

INTERVIEW GUIDE

ENVIRONMENTAL INFLUENCE ON DRAWINGS OF CHILDREN IN LOWER PRIMARY: A STUDY OF SELECTED DISTRICTS IN GHANA

INTERVIEW GUIDE FOR PARENTS

1. Are you interested in drawing?

   _____

   _____

   _____

   _____

2. Do you draw at home?

   _____

   _____

   _____

   _____

3. How often do you observe your child drawing?

   _____

   _____

   _____

   _____

4. Are you involved in any visual art activity?

   _____

   _____

   _____

   _____

5. How will you describe the drawing capabilities of your children in lower primary?

   _____

   _____

   _____

   _____

6. In your observation, if you were to ask the children to draw anything of their choice, what are some of the things you think they will draw?

_____

_____

_____

_____

7. Why will they draw the items you mentioned in question 3 above?

_____

_____

_____

_____

8. Do the school, home physical or cultural environment influence the child in his/her drawing? Yes [ ] No [ ]
9. If yes to question 8, explain why?

_____

_____

_____

_____

_____

_____

10. How does each of the following influence the drawings of children in your opinion?

    a. Past experience

_____

_____

_____

_____

_____

_____

_____

_____

    b. facilitation/evaluative feedback

_____

_____

_____

_____

c. Physio-emotional status

11. What do you think educators can do to provide the environment and needed self-efficacy to enhance drawing capabilities of children?

12. Any other relevant comments?

13. What are the benefits of drawing?

APPENDIX V

INTERVIEW GUIDE

ENVIRONMENTAL INFLUENCE ON DRAWINGS OF CHILDREN IN LOWER PRIMARY: A STUDY OF SELECTED DISTRICTS IN GHANA

INTERVIEW GUIDE FOR CULTURE COORDINATOR

1. What is your general observation regarding the drawing capabilities of lower primary school children in your district?

   _____

   _____

   _____

   _____

2. What do you think are some of the factors influencing the drawing capabilities of children lower primary school children in your district?

   _____

   _____

   _____

   _____

3. How does culture influence what children draw and how they draw them?

   _____

   _____

   _____

   _____

4. How does each of the following influence the drawings of children lower primary school children in your district?
   b. Past experience

   _____

   _____

   _____

   _____

   b. facilitation/evaluative feedback

   _____

   _____

   _____

   _____

   c. Physio-emotional status

   _____

   _____

   _____

   _____

5. What cultural element do you think educators can utilized to provide the environment and needed self-efficacy to enhance drawing capabilities of children?

   _____

   _____

   _____

   _____

6. What are the benefits of drawings?

   _____

   _____

   _____

   _____

APPENDIX VI

INFORMED CONSENT FORM

University of Education, Winneba
School of Creative Arts
Adult Participant Written Informed Consent

Informed Consent Form

Responsible Project Investigators: Dr. Ebenezer Acquah and Dr. Patrique deGraft-Yankson
Investigator: Ishmael Issah
School of Creative Arts
University of Education, Winneba
P. O. Box 25
Winneba-Ghana

Purpose of this Research
The purpose of this research is to examine environmental influence on the drawings of children in lower primary: A study of selected districts in Ghana.

What you will be expected to do
If you agree to participate in this research, you will be asked to participate in a guided interview with the investigator. Then, you will be recorded while conversing about matters relating to effect of cultural policy on art and art education. This study will take approximately 35 minutes of your time.

Your rights to confidentiality
The obtained data will be treated with absolute confidentiality. A random number will be assigned to you in order to conceal your actual identity. No information will be released to expose your identity. The audio recordings and background information will be stored in a secure location and only the responsible project investigator and his research consultants will have access to them.

Your right to ask questions at any time
You may ask questions about the research at any time by emailing the responsible project investigators or contact them on 050 -739-1013 or 020-251-1622.

Your right to withdraw at any time
Your participation in this research is voluntary. You may withdraw from it or discontinue participation at any time. You may also request for the destruction of your data without any consequences.

Benefits
Your participation in this research may contribute to policy development in basic education and practice, and knowledge that can transform the educational system of Ghana for sociocultural development. In the first place, by examining the influence of the environment on children's drawings from selected districts in the country, an understanding of children's drawings from different cultural backgrounds would be established to help inform teachers on environmental context instruction. The findings of the study would also inform policies regarding art education (Creative Art) in Ghana.

Possible risks
To our knowledge, there are no risks or discomforts involved in this research beyond those found in everyday life.

Dissemination
The results will be disseminated through a Ph.D. dissertation. They may also be disseminated at conferences and in journals.

Page 1 of 2

University of Education, Winneba
School of Creative Arts
Adult Participant Written Informed Consent

Giving consent to participate
By signing the consent form:

- You certify that you are 18 years of age or older, that you have read, and understand the above, that you have been given satisfactory answers to questions concerning the research, that you are aware that you are free to withdraw your consent and to discontinue participation in the research any time, without any prejudice.
- In case of persons below 18 years, the headteacher/class teacher can consent to the child's participation in the drawing exercise, acting *in loco parentis* (in the place of a parent).
- If you cannot obtain satisfactory answers to your questions, or have comments or complaints about your participation in this research, you may contact: Dr. Ebenezer Acquah on 0507391013 or Email: ekacquah@uew.edu.gh or dr. Patrique deGraft-Yankson on 020-251-1622 or Email: p.degraftyankson@gmail.com

Participant: I have read and understand the above information and voluntarily agree to participate in this research.

Moses Mills Toppah
Name

Signature

04/04/2022
Date

Please keep a copy of this consent form for your records.

HEADMASTER
R·C·BASIC SCHOOLS
ANLO-AFIADENYIGBA-V/R
0243364089

APPENDIX VII

INTRODUCTION LETTER

UNIVERSITY OF EDUCATION, WINNEBA
SCHOOL OF CREATIVE ARTS
DEPARTMENT OF MUSIC EDUCATION

Ref: SCA/DME/REF/Vol.1/107 — 13th September, 2021

KUGRAGO NABRIM
GES
TEMPANE / UER
0247520919

Dear Sir/Madam,

INTRODUCTION LETTER – SUMAILA ISSAH (200021999)

Sumaila Issah is a final year student pursuing PhD. Arts & Culture at the University of Education, Winneba, Graduate School.

He is currently writing his thesis on the topic ***"Environmental Influence on Drawings of Children in Lower Primary: A Study of Selected Districts in Ghana."*** and therefore needs your assistance to enable him acquire the necessary information for his thesis.

I am officially introducing him to your organization/institution to provide him with the necessary information and assistance that he might need.

We count very much on your cooperation and understanding in this regard.

Thank You.

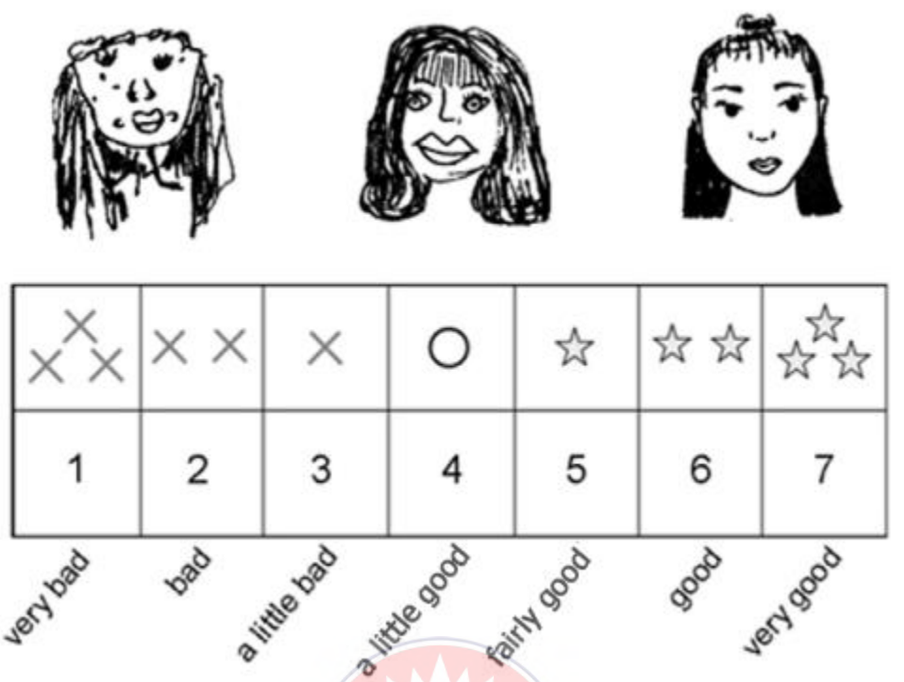
Yours faithfully,

John Francis Annan
Ag. Head of Department

THE HEADTEACHER
KUGRAGO NABRIM SCH.
P.O. BOX 2.
TEMPANE
Tel: 0247520919

APPENDIX VIII

RATING SCALE



Seven-point Likert scale used to guide children's ratings by Chevallier et al. (2012).