Case study

Teachers' Perception of Visual aids in Students Learning

Abstract

It is extremely important that teachers use various stategies to esure that all children learn and achieve the best results. There are many ways to enrich teaching- learning process; curriculum, teacher approach, cooperative learning, differentiated instructions, professional development programs for teachers, collaboration and parental involvement, motivation, use of ICT and online resources. One of the approaches for teachers is the use of visual aids as a teaching tools to facilitate effective teaching and learning in the classroom. This study sought teachers insights into how they perceived visual aids in student learning. To accomplish the aim of the research, the researcher used the qualitative case study approach as a research design. Five school teachers were interviewed for the study. The data were collected through the use of semi-structured interviews. The interviews were audio-taped, transcribed, and then analyzed using a thematic analysis approach, and compared to previous research gleaned from the extensive literature review.

Similarities were found between the previous research and the present research on teachers' perception. The findings of this study further support the existing literature and the previous research. The study revealed that teachers had positive perception about visual aids. They perceived visual aids as one of the crucial and significant tools for teaching and learning. It made teaching-learning more effective leading to improved student learning. Children learned better through visuals in a number of ways. Evidences from this study suggest that teaching becomes more effective and easier for teachers through the use of visual aids.

The study also revealed some of the problems faced by the teachers in using modern visual aids. The participants in the study clearly pointed out erratic and unreliable internet connection as a barrier to the use of ICT in teaching –learning process. The study also found out heavy workload of teachers as one of the impending factors in the preparation of visual aids in their lesson. The study is expected to create awareness among teachers, and other stakeholders such as Ministry of Education (MoE), about the significance of visual aids in student learning.

Introduction

Almost 2000 years ago, Plutarch a Platonist philosopher, best known to the general public as the author of his "Parallel Lives" of paired Greek and Roman statesmen said, "the mind is not a vessel to be filled but a fire to be kindled". It is crucial to teach children to be critical thinkers, make them experiment creatively, challenge respectfully, understand biases, and challenge existing worldviews which are all much more important than filling their minds with knowledge.

> Education is indispensable for everyone. It is one of the strongest tools to change people and the world at large. Quality in teaching-learning is determined by many factors. Teaching-learning resources are the pillars of success in education. Teaching and learning work better with quality resources and they have a direct impact on the students' performances. We cannot deliver quality education programs without the use of effective equipment in teaching. This is because teaching learning materials help both teachers and

students in the teaching-learning process. Quality of education can include so many aspects such as issues related to learners, content, processes, environments, and outcomes (UNICEF, 2000).

Visual materials and devices are means of providing rich, concrete experiences to learners. It has been observed as a powerful strategy to bring about effective teaching and learning. The availability, adequacy, and relevance of instructional materials in classrooms influence the quality of teaching and have a positive effect on students' learning, and results in good academic performance. Ikerionwu (2000) defined instructional materials as objects or devices that assist the teacher to present a lesson to the learners in a logical and manner. According to Fadeiye (2005), instructional materials are visuals and audio-visual aids, concrete or non-concrete, used by teachers to improve the quality of teaching and learning. Instructional material makes abstract learning concrete. Teaching-learning without the use of instructional material is dry and boring. According to Atkinson (2000), textbooks, charts, maps, audiovisual and electronic instructional materials such as radio, tape recorder, television, and videotape recorder contribute much in making learning more interesting. Furthermore, Adeogun (2001) claimed that the importance of instructional materials is also evident in the performance of students. Teachers who use more instructional resources perform better than schools where teachers do not use instructional materials. The different approaches used by the teacher have a substantial effect on students learning. Chacko (1981) suggested that good learning resources can help solve certain language barrier problems as they provide an accurate visual image and make learning easier for the student.

Ngozi, Samuel and Isaac (2012) confirm that visual materials are very important and useful in education because, the normal learner in as far as the functions of his preceptor mechanisms are concerned, gains understanding in terms of multiple impression recorded through the eye, ear, touch and other series. Visual resources play an important role in the teaching-learning process. King (1990) indicated that audio-visual resources, wisely selected and intelligently used, arouse and develop intense and beneficial interest and so motivate students to learn; and properly motivated learning means improved attitudes, permanency of impression and rich experience and ultimately more wholesome living. Ouellette (2004) claimed that visuals help children to remember lessons for a longer time. It is important to prepare and use visual materials in teaching learning. Visuals are effective means of helping students to learn. Clark et al (1986) state that good teachers can be better teachers when they prepare plenty of visual learning aids for instruction process. This research was carried out to study the perceptions of teachers on the use of visual aids in students learning in the classroom.

The Significance of the study

The performance of the students is always associated with the types of teaching learning resources used by the teachers. Teachers cannot teach effectively without the use of resources. Learning is facilitated when the learners make use of at least three of the sense organs namely: seeing, hearing and touching. Visuals are one of the tools for making lessons effective. Every curriculum requires the use of visual aids. The use of supplementary device helps teachers to clarify, establish and correlate accuracy, concepts, interpretations and appreciations, and ignites children’s interest in the lesson.

Many studies have been conducted on audio-visual aids in other countries. Ozaslan and Maden (2013) established in their study that students learn better when materials are

presented through some visual tools. Allen, Kate and Marquez (2011) also observed in their study that visual aids impact and add interest to a presentation. All these studies conducted elsewhere show that visuals are important in teaching and learning process. Unfortunately, no studies have been conducted in the Bhutanese context on teachers' perception of visual aids in student learning. The context here in this research refers to "where, who, what and when." Realizing the gap in the extant literature, it has motivated the researcher to explore the teachers' perception of visual aids in our Bhutanese context. Perceptions are thoughts or mental images teachers have about their students. Human perception differs from culture to culture because culture shapes the view of our world. The culture that teachers live in is not same. Studies have revealed that people from different cultures see and perceive things differently. It is influenced by background knowledge and life experiences. Therefore, every person perceives the world and approaches life problems differently. Perception not only creates our experience of the world around us; it allows us to act within our environment. Perception is very important in understanding human behavior. Hence, understanding teachers' perception of the use of visual aids in students learning in a Bhutanese classroom setting is important. This study was conducted to find out the perceptions of primary school teachers on the use of visual aids in one of the schools in eastern Bhutan.

Teachers' perception is linked to students' learning. The professional behavior and activities of a teacher is shaped by perceptions. It influences teaching-learning either positively or negatively. It is important to find out how visuals aids are regarded, understood or interpreted by our Bhutanese teachers. The study would be significant in several ways. The knowledge obtained from the study would help teachers to reflect on their practices and make them put more emphasis on the use of visual aids to improve student learning. The study would also influence principals to consider the availability of visual aids as one of the most important components of the everyday teaching-learning process. It would give a clearer picture of how teachers regard, understand or interpret the use of visual aids in students learning in a Bhutanese context. It would also reveal the problems of the teachers that they face in using visual aids. In particular, the findings from the study would be particularly useful to the principals and teachers. It would guide them in improving instructional strategies in the classroom through the use of visual aids. The study would reveal various visual aids used in a Bhutanese classroom and their impact on student learning.

Thus, it is important to find out how visual aids are regarded, understood, or interpreted by our Bhutanese teachers. The entire study was guided by the following research questions.

Research Questions

How do teachers perceive visual aids and their influences on student learning?

What are the different visual aids used in students learning?

What are the issues confronted by teachers in using visual aids?

Objectives of the study

The study will be based on the following objectives

1.5.1. To investigate the teachers' views about the use of visual aids.

1.5.2. To find out various visual aids used in students learning.

1.5.3 To find out teachers' problem in using visual aids in students learning

2.1 Literature Review

Literature review is one of the most significant aspects of the research process. According to Creswell (2009), literature review means locating and summarizing the studies about a topic. Hart (1998) defined literature review as the selection of available documents both published and unpublished on the topic, which contain information, ideas, data and evidence written from a particular stand point to fulfill certain aims or express certain views on the nature of the topic and how it is to be investigated, and the effective evaluation of these documents in relation to the research being proposed. A considerable amount of research has been conducted by different researchers on the use of visual aids in student learning. It is not a new concept in education. The review of literature on visual aids has been critically examined and established.

2.2 Children's Learning Process

Every child has learning preferences and styles that are best suited for their way of learning. Teaching can be effective if the teacher understands the learning style of the learner. Children learn in many different ways. Gardner (1983) suggests that the intelligence of the learners differs from individual to individuals. All the learners do not learn in the same way. Some children learn by seeing, some by listening, some by reading, some by doing, some through play, and some learn by using objects. Considering the preferred styles of the learners, Gardner (1983) proposed that educators individualize teaching as much as possible and use important materials in several ways. Visual learning strategies help students better understand and retain information which otherwise would be difficult.

2.3 What are visual aids?

According to Collins English Dictionary, "Visual aids are things that we can look at, such as a film, model, map, or slides, to help us understand something or to remember information. Visual aids are things, pictures, videos, visual photographs. Rather (2004) says that visual aids are those instructional devices which are used in the classroom to encourage learning and make it easier and motivating. Teaching aids are recognized by different names. They are also known as instructional material, instructional technology, instructional media, and audio-visual material.

2.3.1 Types of visual aids

Posters

Posters are tools that enable visualization in the classroom to foster student learning. They are colorful, attractive learning media used in the class to help children learn. According to Osa and Musser (2004), learning posters are usually grouped into four categories. Those that; illustrate a concept or thing, demonstrate a process, differentiate between similar things, capture interest and stimulate emotion.

Videos and Television

Video is an effective educational tool. Video is a form of multimedia that conveys information through two simultaneous sensory channels: aural and visual.

Internet

Internet contains a wealth of information, knowledge and educational resources. It provides opportunities for learning beyond the classroom. Teachers can filter and use online materials to prepare lesson. Knowledge can be accessed by everyone and internet has also changed us the way we learn.

Chalkboard and whiteboard

They are the basic tools of teaching in the classroom. They are usually black, white or green and are easy to set up.

Flashcards

Flash cards are cards with picture on one side and writing on the other.

Projector

It is a device that can be used by connecting with a laptop. It makes teaching learning more interesting. Music and videos can be played with the use of a projector

Realia

They are the real objects and materials used in the classroom. It can be any items or materials related to real-life situations.

Overhead projector

It is also one of the most helpful visual aids. Teachers can create images of many kinds on transparencies and use it in the classroom for teaching.

Wall pictures and wall posters

They are used to show scenes, people, and things and learners can see them easily.

Word cards and worksheets

Work cards and worksheets are used for activities with individual students and as well as with students working in small groups.

Authentic printed materials

They include anything that is written and printed such as newspapers, magazines, publicity, technical instructions for equipment, holiday brochures.

Charts

A chart is one of the resources to facilitate presentation in the classroom. They are used to bring scenes from real life into the classroom without visiting the real and actual situation. The purpose is to give life to theoretical learning.

Diagram

It is a plan, drawing, sketch, or outline to show how something works or the relationships between the parts of a whole. Delinda (2007) assert that diagrams can be used as a tool for teaching students with learning difficulties to solve mathematics problems.

Graphic organizers

It is a visual display to illustrate relationships between facts, terms, and or ideas within a learning task. Graphic organizers are known by different names. They are called knowledge maps, concept maps, story maps, cognitive organizers, advance organizers, or concept diagrams. Hanley (2018) defines graphic organizers as visual learning strategies that guide student thinking and enhance their understanding of subject matter. It is one of the tools to organize, simplify, and scaffold students' thoughts and ideas. Teachers can use graphic organizers to visually display connections and correlations between facts and concepts. Tayib (2015) suggest that graphic organizers can be an effective support in teaching writing of learners of English as a foreign language.

PowerPoint Slides

It is one of the multimedia technologies. It is a presentation program that allows us to create and show slides containing text, images, and other media, such as audio clips and movies using a computer or laptop. Mutar (2009) establishes that the use of PowerPoint slides helps the teacher to deliver their lectures in dynamic ways which becomes interesting to the learners.

2.4 Significance of visual aids

Most early studies as well as current literature reveal evidence of the advantages of visual aids. It is one of the most important tools for both the teachers and students. The prominent Chinese philosopher Confucius puts it, “one picture is worth a thousand words”. In general, visual aids are those instructional materials used by teachers in classroom teaching to encourage students learning process. Burrow (1986) says that visual aids are useful in supporting a topic, and the amalgamation of both visual and audio stimuli is particularly effective since the two most important senses are involved.

2.4.1 Visual aids reinforce attention of the learners

Attention is the most fundamental step in learning. It is described as a cognitive process of selectively concentrating on one aspect of the environment while ignoring the other aspects. Learning cannot take place without gaining the attention of the learners. Jimmerson et al., (2006) observed that attention problems contribute negatively to academic achievement. Visual aids stimulate the attention of the children and support children to concentrate on the lesson. Students become aware of the expectations through visual aids because it allows them to use their senses. It makes the learning atmosphere interesting and conducive.

2.4.2 Visual aids motivate children to learn

Motivation to learn is paramount to student success. Brown (1994) defined motivation as an inner drive, impulse, emotion, or desire that moves people to a particular action. Keller and Litchfield (2002) defined motivation as the student’s desire to engage in a learning environment. Visual aids provide a stimulating environment and support students’ academic learning. Mathew and Alidmat (2013) concluded that visual aids are often viewed to be an inspiration and provide motivation in classroom instruction and that effective use of audio-visual aids substitutes monotonous learning environments. Domin (2007) explains that, a safe comfortable and attractive classroom stimulates learning and helps building classroom community. Pateşan, Balagiu and Alibec (2018) conducted a study on visual aids in education. The study revealed that well-prepared slides increased students' motivation, got their attention, and brought clarification of the situations presented or of the information communicated. Learning environments must be integrated with visual aids to motivate the learners. Harmer (2001) maintains that visual elements can motivate students for better learning. Crookes and Schmidt (1991) asserted that intrinsic motivation, the one that stems from the interest in the activity itself independent from extrinsic reward, should be favored in the classroom.

Tang and Intai (2017) established that audiovisuals increased students' interest and ability to remember the contents. Students were motivated to learn when audiovisuals were incorporated in the teaching-learning process. Yunus et al., (2013) conducted a related study about teachers’ perception of the use of visual aids. Katherine (2009) also found learning takes place effectively in children when the teacher used visual materials. Visual aids offered a learning situation for children to react to the materials provided. The analysis of the data showed that the majority of the teachers had positive perceptions of the use of visual aids. Glulam et al. (2015) research on the impact of visual aids confirms that using visuals aids as a teaching method stimulates thinking and improves the learning environment. It substitutes monotonous learning environments.

2.4.3 Vocabulary presentation through visual aids

Learning for children can be made easier by using a wide variety of teaching techniques. Visual aids are one of the effective techniques in the teaching of vocabularies. Vocabulary is one of the most crucial skills and components in language learning. Harmer (2001) argues that it is language structures make up the skeleton of language and it is vocabulary that provides the vital

organs and the flesh. Thornburry (2002) asserts that visual aids greatly improve information retention and improves student understanding of the unfamiliar. One type of visual aids is using still pictures. Hill (1990) emphasizes that pictures are one of the valuable aids which bring images of reality into the unnatural world of the language classroom. Furthermore, Scot and Ytreberg (1990) state that words are not enough; most activities for the young learner should include movement and involve the sense. The teacher will need to have plenty of objects and pictures.

2.4.4 Concept presentation through visual aids

Prasad (2005) presents that conceptualizing is clearer and concrete as the use of audiovisual aids appeals, activates, and utilizes the five senses of the individual student i.e., see, hear, touch, taste, and smell. Appropriate visuals make abstract and difficult concepts more tangible. Learning becomes more effective and long-lasting. The effective uses of visual aids decrease learning time, improve comprehension, enhance retrieval, and increase retention. Gopal (2010) also emphasized that audio-visual materials help the teacher to overcome physical difficulties of presenting subject matter. Therefore, we can say that with audio-visual materials, the barrier of communication and distance is broken.

2.4.5 Language learning through visual aids

Teaching a second language is difficult. Pateşan, Balagiu, and Alibec (2018) found that visual aids are powerful tools and it can be used to assist the teachers in teaching a foreign language. It can be used to display complex information clearly and introduce variety into the activities in class. There are several ways to teach a foreign language to the learners. Pateşan, et al., (2018) validate that visual aids help English-language learners build their vocabulary, speaking, listening as well as writing skills, making them more creative and develop their deep thinking. According to Harmer (2001), pictures should be appropriate not only for the language to be learned but also for the classes they are being used for; if pictures are too childish, students may not like them and if they are culturally inappropriate, they can offend people. Carpenter and Olson (2011) examined the effect of teaching new vocabularies through pictures. Their results showed that both the teacher and students who took part in this study had positive attitudes towards using the pictures. Gilakjani (2011) identified some of the problems of the English Foreign Language learners in classrooms. They include demotivation, less exposure to the English language, lack of emphasis on pronunciation, and the intervention of the sounds and rules of the first language. These issues can be solved by introducing Audio visual aids in the classroom. Natoli (2011) states audio-visual materials are rich opportunities for learners to develop communication skills while actively engaged in solving meaningful problems. Abebe and Davidson (2012) advocate the view that student is eager to learn vocabulary with the assistance of visual materials, and that the use of visual materials enhances the students' ability and opportunity to use language to express their ideas and feelings.

2.4.6 Differentiated instruction through visual aids

All learners are not the same. Each learner has its own unique set of intellectual strengths and weaknesses. Howard Gardner (1983) proposed a theory of multiple intelligences in his book "Frames of Mind". He introduced eight different types of intelligence consisting of logical, linguistic, musical, spatial, bodily-kinesthetic, naturalist, interpersonal, and intrapersonal. Every learner is born possessing one of the intelligences. The use of visual aids in the teaching-learning process is rooted in Gardner's multiple intelligences theory. Visual aids help learners with visual-spatial intelligence. Learners with high visual intelligence process information best-using

pictures, visuals, and imagery. They are good at visualizing and mentally manipulating objects. The use of visual support such as video, pictures, photos, charts, posters are always preferred by visual-spatial learners. Learners with strong visual-spatial intelligence possess a strong visual memory. Lestage (2009) stressed that audio-visual materials provide a means of individualizing instruction. Learners learn better if they are engaged in important and appealing activities.

3.0 Problems related to Teaching Learning materials

Visual aids play an important role in the academic performance of learners. However, there are many difficulties and challenges which negatively affect the teaching-learning process. Teachers face constraints while handling visual aids mainly due to the non-availability of resources and some teachers face while using due to lack of technical know-how. Domin (2007) reported that, in most of schools especially in developing countries, teachers have a lot of periods and subjects for teaching; hence time for preparation for teaching is limited. Mushi (1996) adds that most of the local and government schools in developing countries have financial crisis which prevents the possibility to buy modern technology visuals for teaching. Cakir (2006) also established that the main disadvantages are cost, inconvenience, maintenance, and some cases the fear of technology.

One of the significant challenges that the present-day teachers face is the integration of technology into education. There are several factors that impede teachers from using technology in teaching. According to Haydn and Barton (2008), these concerns are identified as perceptions, attitudes, motivations, and also feelings that teachers experience while implementing something new. Ertmer (1999) has classified the barriers into two extrinsic barriers or first-order barriers, like lack of time, support, resources and training and intrinsic barriers or second order barriers, like attitudes, beliefs, practices and resistance to change. Pelgrum (2001) categorize the barriers as material barriers (lack of real or physical equipment) and nonmaterial barriers (lack of knowledge, confidence or time).

One of the biggest drawbacks of the use of visual aids is the investment costs. Teachers face problems with financial problems because the costs are huge. It is not a question of simply setting up the equipment on a one-time basis, the technological equipment needs to be maintained. Teaching aids such as software teaching aids need to be constantly upgraded. Another factor is the technical know-how. Teachers need to learn how to use teaching aids properly and effectively. Technology is evolving at a fast pace both the hardware and software. Sometimes, software becomes redundant as a new one takes over or some hardware's features become more sophisticated. Therefore, it is becoming a challenge for teachers to grasp technology very quickly so this involves a need to train them first. Teachers also face problems when it comes to the use of the internet.

3.1 Methodology

This section presents the research methodology, a case study which was used in the research. Qualitative case study methodology provides tools for researchers to study complex phenomena within a context. The purpose of this study was to investigate the teachers' perceptions on the use of visual aids in students learning in one of the primary schools under Wamrong Dungkhag. It was aimed to find out various visual aids used in students learning. It was also intended to study teachers' problems in using visual aids.

3.2 Research Approach

This research adopted a qualitative approach. Qualitative research is an approach for exploring and understanding the meanings that individuals or groups ascribe to a social or human problem. Merriam (1998) notes that qualitative research, which is field focused, has a constructivist claim, an inductive nature, a descriptive form, emergent nature, and flexibility. Denzin and Lincoln (1994) state that, in recent years, qualitative research has increasingly been used by educators, anthropologists, sociologists and psychologists. Qualitative studies aim to provide illumination and understanding of complex psychosocial issues and are most useful for answering humanistic 'why?' and 'how?' questions.

3.3 Research Paradigm

Every research paradigm holds a different worldview. Creswell (2003) maintains that, research paradigm has its philosophical assumptions about 'how they will learn and what they will learn during their inquiry. The research paradigm for the study on teachers' perception of visual aids in student learning is a social constructivist view. Social constructivism is a perspective usually seen as an approach to a qualitative study. According to Creswell (2013), social constructivism is an interpretive framework whereby individuals seek to understand their world and develop their particular meanings that correspond to their experience. These meanings are not etched or innate within each individual. Rather, meanings are formed through interaction with others.

3.4 Research Design

Research designs are types of inquiry within qualitative, quantitative, and mixed methods approach that provide specific direction for procedures in research design. Denzin and Lincoln (2011) state, research design is often called strategies of inquiry by others. The qualitative case study was chosen as the research method for this particular study.

A case study is a research strategy and an empirical inquiry that investigates a phenomenon within its real-life context. It is a detailed study of a specific subject, such as a person, group, place, event, organization, or phenomenon. It is generally used in social, educational, clinical, and business research. It is based on an in-depth investigation of a single individual, group, or event to explore the causes of underlying principles.

According to Yin (1984), case study as a research method helps us respond to how and why questions about a contemporary set of events. There are various kinds of case studies proposed by different authors and have distinct meanings as well as some similarities. Gerring (2007, p.20) describes case study "as the intensive study of a single case where the purpose of that study is – at least in part – to shed light on a larger class of cases (a population)". Case studies provide a humanistic, holistic understanding of complex situations, and as such are valuable research tools. Creswell (2002) defined a case study as a problem to be studied, which reveals an in-depth understanding of a "case" or bounded system, which involves understanding an event, activity, process, or one or more individuals. Silverman (2005) states that, case study research taken seriously provides the opportunity of producing a thorough, analytically interesting research study to deepen the understanding of the phenomenon investigated. Gerring (2004) maintains that, a case study is a research design best defined as an intensive study of a single unit (a relatively bounded phenomenon) where the scholar aims to elucidate features of a larger class of similar phenomenon. Yin (2014) categorizes case studies as explanatory, exploratory, and descriptive. Because of theory building, explanatory and exploratory designs are useful while descriptive is useful for an understanding of case or cases. Stake (1994) group case study into intrinsic, instrumental, and collective. He believed that the most important role of the case study researcher was that of an interpreter. In an intrinsic case study, a researcher examines the case for its own sake. In an instrumental case study, the researcher selects a small group of

subjects to examine a certain pattern of behavior and in a collective case study; the researcher coordinates data from several different sources, such as schools or individuals. Unlike intrinsic case studies which are set to solve the specific problems of an individual case, instrumental and collective case studies allow for the generalization of findings to a bigger population.

Content analysis is used in assessing the data from case studies. Content analysis involves the examination of communication messages. The researcher searches for patterns and themes. Content analysis is a research tool used to determine the presence of certain words, themes, or concepts within some given qualitative data. Using content analysis, researchers can analyze the presence, meanings, and relationships of certain words, themes, or concepts. Thus, this study fits with the instrumental case studies and is aimed to develop an in-depth understanding of how teachers perceive visual aids in student learning.

3.5 Research Site

The study was conducted in one of the schools under Wamrong Dungkhag. The case school chosen for the research study was Moshi Primary School. Written approval for the study was sought from the Dungkhag Education Office, Wamrong. (Refer to appendix C). Objectives of the study were clearly explained to the teachers. A copy of the approval letter from the Dy. CDEO office, Wamrong were given to all the teachers. Teachers were informed about the interview to find out their perceptions on the use of visual aids in student learning.

3.6 Sampling

In research, a sample is a group of people, objects, or items that are taken from a larger population. It is representative of the population. The findings are generalized from the research sample to the population as a whole. There are three broad approaches to selecting a sample for qualitative studies; convenience, judgment, and theoretical. This research used judgment or purposeful sample. It is also known as purposive and selective sampling; purposeful sampling is a sampling technique that qualitative researchers use to recruit participants who can provide in-depth and detailed information about the phenomenon under investigation. It is highly subjective and determined by the qualitative researcher generating the qualifying criteria each participant must meet to be considered for the research study. Purposive sampling is one of the most cost-effective and time-effective sampling methods available. That is why purposive sampling was favored in my study.

There were five participants for the research and all of them were interviewed. The researcher selected all the experienced teachers who could articulate their experiences to find out, or have insights into the research theme. Creswell (2007) succinctly states that “most importantly, they must be individuals who have experienced the phenomenon being explored and can articulate their lived experiences.”

3.7 Data Collection Tool

According to Koul (2009), a researcher will require many data gathering tools and techniques which may vary in their complexity, design, administration, and interpretation. Research tools are very important instruments to gather information. Kvale (1996, p. 112) ascertain that, “It is determined as ‘an attempt to see the universe from the subjects' point of sight, to unfold the meaning of peoples' experiences, to uncover their lived world prior to scientific explanations”. Yin (1994) identified documentation, archival records, interviews, direct observation, participant observation, and physical artifacts as the six primary sources of evidence for case study research. They are the tools to collect data in qualitative inquiry.

The study used qualitative interviewing as a research tool for data collection. Interviews are one of the most important sources of information for case study. Bogdan and Biklen (1982)

refer to *'Qualitative Interviewing'* as *a "purposeful conversation."* Patton (1990) further states that, interviewing is a method to gain access to the other person's perception and experiences. The qualitative research interview is a uniquely sensitive and powerful method for capturing the experiences and lived meanings of the subjects' everyday world. Interviews allow the subjects to convey to others their situation from their perspective and in their own words.

For this study, the semi-structured interview was used as a tool to collect data for the research. The interview aimed to gather data through an interactive process of communication between the interviewee and the interviewer. All the interviews were recorded, which were later transcribed.

3.8 Data Collection Procedure

The researcher completed the formalities and procedures before conducting the research. The research proposal was submitted to Paro College of Education for approval. After the approval from the college, the researcher got approval from District Education Officer. At the same time, consent was sought from the research participants. The participants were debriefed about the interview and the nature of the research. The researcher explained why they were being interviewed and their anonymity was guaranteed. They were requested for their genuineness and honesty in sharing the correct information as it had the utmost significance for this study.

3.8.1 Interviewing Process

Yin (1994) recommended that the researcher must possess or acquire the following skills: the ability to ask good questions and to interpret the responses, be a good listener, be adaptive and flexible to react to various situations, have a firm grasp of issues being studied, and be unbiased by preconceived notions. The questions for the semi-structured interview were prepared in advance. The researcher used a mobile phone recorder for the recording of the interview. The researcher conducted the study at the convenience of the selected participants. The interviews were conducted in a conducive environment in consultation with the research participant. The researcher probed, rephrased, and re-worded the interview questions during the interview to make the question clearer and to get the correct information. The medium of language used for the interview was English. However, questions were translated and transcribed further to Dzongkha when the research participants were uncomfortable and unclear with the English language.

3.9 Data Analysis

The process of data collection and data analysis are interrelated and often go simultaneously in the research project. The data analysis process involves moving deeper into the understanding, representation, and interpreting the larger significance of the information. Glesne (1999) ascertain that, "It involves 'organizing what you have experienced, heard, or read so that you can make sense of what you have learned." The information or the data collected from the interviewees were transcribed for analysis purposes. The responses of the participants under each interview question were written down. For a better understanding of the phenomenon experienced by the participants, themes were be derived. The study used Creswell's (2003) six steps of analyzing data.

3.10 Validity and Reliability

Reliability refers to how consistent a research procedure or an instrument is. It is the procedures researchers use to check and determine or convince readers if their approaches are consistent and reliable. In the words of Enon (1995), validity refers to the quality that a procedure or an instrument (tool) used in the research is accurate, correct, true, meaningful, and right. It therefore means, the degree of consistency demonstrated in a study.

In this research, to ensure the reliability of the data from the interview, interview transcripts were checked thoroughly to make sure it did not contain mistakes. Validity was ensured through member checking. Member checking is a qualitative technique used to establish the tenet of credibility in trustworthiness. Credibility involves establishing the truth of the research study's findings; in laymen's terms, it means showing that the findings are accurate and honest. Transcript review an aspect of member checking was used in the study. A copy of interview transcript was given to each respective participant to review the document. This ensured that each participants have an opportunity to review what they said, add more information if they want to, and to edit what they said. The final reports were shared with the participants to let them check and feel that the research report was accurate. The researcher spent a prolonged time in the field to get and develop an in-depth understanding of the phenomenon under study. Creswell (2007) assert that the more experience that a researcher has with participants in their actual setting, the more accurate or valid will be the findings.

3.11 Subjectivity

Subjectivity is generally conceptualized as the way research is influenced by the perspectives, values, social experiences, and viewpoint of the researcher. It is a belief founded on one's personal understanding, feelings and prior experiences. According to Scriven (1991), it is a view which has no objective truth or value. The researcher being a principal and a teacher as well, personal experience, observation and the literature review carried out can intervene and influence the data collection and its interpretation. However, in order to best understand it through the voices of the participants, bracketing was strictly followed in this study. The researcher's personal beliefs and preconceived ideas about the phenomenon were suspended through bracketing. Bracketing is a method used by researchers to mitigate the potential deleterious effects of unacknowledged preconceptions related to the research. It is a scientific process where a researcher suspends or holds in abeyance his or her presuppositions, biases, assumptions, theories, or previous experiences to see and describe the essence of a specific phenomenon. The researcher's personal experience, preconceived ideas and observations do not have any impact on the data collection and subsequent interpretation in this study.

3.12 Ethical Issues

Ethical issue was considered the most important moral of the study. Researchers have to stand by the professional code of conduct during the entire course of research. There are three main ethical issues raised in research; codes and consent, confidentiality, and trust. Punch (cited in Creswell, 2003) asserts, "Ethical issues arise in a discussion about codes of professional conduct for researchers and commentaries about ethical dilemmas and their potential solutions." Creswell (2009) further states:

> Ethical issues may arise in different components of research: ethical issues in research problem, ethical issues in the purpose and questions, ethical issues in data collection, ethical issues in data analysis and interpretation, and ethical issues in writing and disseminating the research.

Therefore, consideration of the ethical issue is believed to be the most important moral of the researcher in the inquiry. Therefore, the researcher followed all the ethical issues during the entire course of the inquiry.

4.1 Data Analysis

This section presents an analysis of data collected from the participants through semi-structured interviews. It is one of the most significant aspects of the research components. There are different techniques of data analysis and each varies in its presentation depending on the nature

of the research method used for the study. Data analysis in qualitative research is the process of systematically collating and arranging the interview transcripts, observation notes, or other non-textual materials that the researcher accumulates to deepen the understanding of the phenomenon. Data analysis involves making sense out of the raw data (Creswell, 2003). Different techniques are used in data analysis and each varies in its presentation depending on the research method used for the study. According to Clark and colleagues (1996), the data analysis section of qualitative study comes from the words and voices of the people involved (p. 203). Furthermore, Miles and Huberman (1994) stated that words, especially organized into incidents or stories, have a concrete, vivid, meaningful flavor that often proves far more convincing than pages of summarized numbers. The purpose of this study was to find out the perceptions of teachers on visual aids in student learning. Thus, it was set to generate responses to the following questions.

1.1.1 How do teachers perceive visual aids in student learning?
1.1.2 What are the different visual aids used in students learning?
1.1.3 What are the issues confronted by teachers in using visual aids?

4.2 Presentation of qualitative data

Creswell's (2003) six steps of data analysis are used in this study.

4.3 Research Setting and Participant Description

The research was conducted in one of the semi-remote primary schools in eastern Bhutan. The consent to choose the research site and participants was approved by the different stakeholders as required by the research norms. To protect the identity of the participants, T1, T2, T3, T4, and T5, pseudonyms are used instead of their real names in this study. The minimum professional qualification of the participants ranged from Primary Teacher Certificate to Bachelor Degree of Education.

4.4

There were five participants selected for the case study. To get the best response, each participant in this study was asked twenty-two straightforward questions in a clear and non-threatening manner. The interview lasted of 30 to 40 minutes. The interview was audio-taped using a mobile phone. The interview produced several pages of transcripts. The transcripts were critically examined and carefully interpreted. The interview transcript was interpreted based on the responses as recorded on the mobile phone. The interviews were conducted at different times depending on the convenience of the participants.

In general, participants responded differently to the same question with different ideas because each looks at things from different angles and is right in their own ways. However, it was interesting to note that all the participants who took part in this research interview shared similar perceptions and a common experience of teaching children in primary schools. The participants' terms of experiences in the teaching service differed. The minimum teaching experiences of the participants ranged from three years to twenty-two years being the maximum. Listening to the experience of these teachers has helped me understand their perception of visual aids in student learning. Teachers use visual aids for various reasons. The following themes emerged from the interview.

4.4.1 Effective Pedagogy

Teachers have control over many factors that influence teaching-learning. One such factor is the pedagogy which plays a crucial role in the student learning. Pedagogy becomes effective through

the use of visual aids. All the teacher participants in this study referred to visual aids as one of the most important teaching-learning materials used every day in the classroom to make teaching-learning effective. This study shows that visuals are used to make teaching-learning effective. One of the participants in this study clearly stated that;

T3: "To me, Visual aids are those materials which are used to make the learning experience more real, more accurate, and more active". It is displayed in the classroom to stimulate the interest of the students so that the lesson taught is understood more easily. In gist, teaching-learning becomes more effective and efficient through the use of visual aids.

This same statement was restated by another teacher who said,

T5: *"I have been using various teaching aids in different subjects for the last 22 years. To me, teaching aids are those things used in the classroom in the process of teaching-learning to help the learners understand better and help teachers to teach better."*

Teachers utilize various instructional strategies to be effective in assisting students' learning. Visual aid is one of the key levers for bringing about improvement in the academic performance of the students. When teachers use visual aids in teaching, pedagogical methods become more effective and promote student learning.

T3: *"To support children's learning, I usually use charts, flip charts, worksheets, graphs, tables, maps, models, real objects, manipulative materials such as base ten blocks, pattern block, coins, spinner, notes, clocks, games cards for teaching math, and video clips to support children's learning. I use locally available materials and the visual aids supplied by the Ministry of Education."*

T4: *"The use of visuals differs from subjects to subjects. It depends on the nature of the lesson topic and the objectives. For example, when I teach the properties of the 3-D shapes in Mathematics, I usually use real visual aids, which is a 3-D shapes model to give them a clear concept. When I teach language lessons, I give handouts, display pictures, and play videos to help them comprehend better."*

The above statements indicate that the use of visuals such as charts, graphs, images, pictures, diagrams, articles, models, and real objects facilitates student learning. The majority of teacher respondents also reported that they use visual aids in all the subjects they taught viz. English, Dzongkha, Mathematics, Science, and Social Studies.

4.4.2 Time Management

Time management is an essential aspect of teaching-learning, organizing the classroom, deciding how much time to spend on each part of the lesson. Sanjaya (2007) states that, a teacher has six roles in managing a class during teaching and learning process, they are the teacher as learning source, facilitator, manager, demonstrator, guide, and motivator. Time management is the art of arranging, organizing, scheduling, and budgeting one's time to generate more effective work and productivity. Freiberg (2002) states, organizing strategies include effective planning, lesson design, and attention to the time on task, and pacing.

One of the teacher participants pointed out that they often face problems in finding time to cover everything prescribed in the curriculum. They need more time but cannot get more time. An alternative means to manage time better in the class is through the use of visual aids. It helps teachers to keep children focused on the activities and complete tasks on time. It also helps teachers to cover more activities in less time. It helps teachers to optimize learning opportunities for students. Visual aids help teachers to manage time effectively in the class by engaging students meaningfully. The majority of participants commented that;

T1: "They are also very helpful for completing the lesson on time and covering the prescribed syllabus in time. For example, we can write some information in the chart and display it on the board, and do the necessary explanation. Here we can save lots of time. We need not have to write on the board while teaching."
Two other participants added that;
T2: "Furthermore, we don't need to explain everything given in the textbook that way it saves our time in teaching. For example, draw a diagram or any information on the chart and display to the class, do key explanation rather than writing on the board and explaining from the text."
T3: "It also helps children to grasp the content easily. It also helps me in the management of time because children become more engaged through the use of visual aids."

Lacks of visual aids rob teachers and students of valuable instructional time. The use of visual aids is a practical way to allow students to complete the task in less time by keeping their attention focused Visual aids help teachers in the smooth flow of the lesson. Thus, this study revealed that visuals aids helped teachers to manage time effectively.

4.4.3 Instructional Clarity

All the teacher participants referred to visual aids as one of the tools for instructional clarity. Clarity of instruction refers to the ability of the teacher to provide instruction to help students come to a clear understanding of the lesson taught. Visual aids make concept teaching easier which is one of the hardest aspects of teaching and learning. Kunari (2006) states, using audio-visual aids in teaching is one way to enhance lesson plans and give students additional ways to process subject information. Wilson (2001) states that among the benefits of visuals it can be said that visuals help to make a concept, event or situation more authentic. Pictures, which are meaningful, can supplement curriculums to help the learner associate words with the objects they see in daily life. Pictorial representations help children in learning difficult concepts. Thus, this study indicates that visuals bring clarity to classroom instruction. The teacher participants said;
T2: "With visual aids, we can convince students more easily and effectively with great clarity. It also helps us to explain better in the classroom and retain the concept permanently in students."
The same statement was reiterated by other teachers, they said
T3: "Visual aids help me to make concept lesson easier to teach the children. It also helps children to grasp the content easily."
T4: "I use visuals to make concepts clear."
Visuals make complex information easy for students to understand. The teacher's presentation and demonstration of the lesson become effective. Visuals have a connection with the words when the teacher explains. McKendrick and Bowden (1999) asserted that visuals promote a student's ability to organize and process information.

4.4.4 Learning Environment

Several factors contribute to learners' success. One such factor is a conducive learning atmosphere. A conducive learning atmosphere refers to a positive learning environment. Students need a relaxed classroom environment because students who study in a favorable learning environment are more attentive and motivated. Learning cannot take place without good attention and motivation. On the other hand, students in a poor learning environment are uncomfortable, distracted, inattentive, and demotivated. The findings of this study further support the idea of Mohanty (2001) and Burrow (1986) as discussed in the literature review. They confirmed that that the use of visual aids in the teaching-learning process has manifold values. They also established that visual aids are useful in supporting a topic, and the

amalgamation of both visual and audio stimuli is particularly effective since the two most important senses are involved. The teacher participants said that visuals make teaching easier and interesting. These comments demonstrate;

T2: "By bringing visual aids into the classroom, we can make children understand better, inspires creativity, deeper thinking, and retain information for a longer time. They also feel learning interesting and relaxing when they get to explore with the real objects and hands-on experience."

T1: "They feel interested and relaxed when they see the real or created object in the classroom."

T5: "Thirdly, visual aids make my lesson very enjoyable, interesting that helps students to complete the assigned task on time."

T3: "Visuals promote interaction in the class and make children critical thinkers through communication."

4.4.5 Encourage Student Learning

Many contributing factors affect learning in children. The quality and quantity of learning in students are influenced by attention; motivation and retention of the learners. This study shows that teachers motivate unmotivated students in the learning process by using visuals in the classroom. Visuals play an important role in student motivation. Motivation and learning behavior are two very important factors in determining students' learning achievement Students who are not motivated are inactive, disruptive, and do not take part in learning. Students are unmotivated for a variety of reasons. Dörnyei (2001) believes that most learners‟ motivation can be improved. Teachers play a critical role in both classroom innovations and student learning. Gottfried (1990) defines academic motivation as "enjoyment of school learning characterized by a mastery orientation; curiosity; persistence; task-endogeny; and the learning of challenging, difficult, and novel tasks". Saefurrohman (2004) highlights that in teaching-learning; motivation can be said as everything of the activator inside the students who grow in a learning activity. Visual aids are one of the means to motivate children in the teaching-learning process. Appealing images and objects, engaging videos, interesting pictures, colorful charts motivate students to take an active part in the learning process. As discussed in the literature review, the results are consistent with those of Harmer's (2001) findings which maintain that visual elements can motivate students for better learning. In addition, visuals help teachers to keep students' attention focused on the lesson. One of the participants mentions;

T2: *"When we use visual aids in teaching, students tend to develop curiosity and excitement in learning. That way we can keep them focused without diverting their attention which helps the children to understand the lessons easily and quickly. Visual aids also motivate and enhance learning in students. More so with the help of visual aids, their retention power increases and whatever they learned remains in their mind for a longer time."*

Regarding concept learning, children understand the terms easily and much better if they are taught with the help of visual aids. Images are the simplest and the most effective way to make retention of information. It helps teachers to increase students' engagement, motivate and attention span in lessons. Visual aids help teachers to gain sustained attention from the students. One of the respondents remarked,

T1: *"If children are taught with the help of visual aids, their retention power increases, and whatever they learned to remain in their mind for a longer period or even for the whole life. About concept learning, children understand the terms easily and vividly if they are taught with the help of visual aids."*

Visuals stimulate the attention of the students in the learning process. It is the first step in the learning process. One of the ways to manage attention in the class is by using visual aids. The teacher participants alluded;

T3: *"Visual aid stimulates children's attention; they can focus on the lesson without diverting their attention. It motivates them to learn because the learning environment becomes interesting. I had observed that they can retain information better by associating ideas from the visual aids provided. They draw concepts of the lesson more easily from the visual display."*

Another teacher participant mentioned similar views;

T4: *"I find students being attentive when I use visual aids. Visual aids arouse the interest of the children and they become motivated to learn. It helps children to retain information. Visuals make learning more concrete and clearer. To cite an example, explaining a water cycle to children become easier through visuals. The concept of the water cycle can be easily learned by the children."*

Students pay more attention to the learning process when the visuals are exciting and interesting. John Ratey (2001) states, attention is more than just noticing incoming stimuli. It involves several processes including filtering out perceptions, balancing multiple perceptions, and attaching emotional significance to these perceptions. The results of this study illuminate that visuals can be used as motivational teaching-learning tools in the classroom.

4.4.6 Assessing Learning

Assessment is an integral part of teaching and learning. Teaching and learning without assessment are as good as a program without purpose and direction. This study reveals that, by using visual aids, teachers can continually assess students learning and look for ways to generate alternatives to make teaching effective. Teaching is about responding to diversity in learning needs in a classroom. Assessing children through visual aids provides an alternative method in addition to other forms of assessment.

When the students perform well, it depicts that the teachers are teaching well. On the other hand, when the students experience setbacks in their performance, the teachers need to conduct an analysis of the limitations and formulate measures to bring about improvements. Therefore, assessment strategies are a key factor in facilitating student learning and visual aids help teachers to carry out an assessment of and for learning. Visual aids also help teachers to assess the effectiveness of their teaching by reflecting on how visuals impact students learning. The teacher participant remarked;

T1: *"I usually use visual aids more often in the lesson development part. In this part of the lesson, I give information about the lesson that I teach and give extension activities to further check the understanding of the lesson."*

Statements of the same claim were made by the other teacher participants,

T5: *"I use visual aids during the introduction part of the lesson to relate the topic, revise the previous lesson, and introduce the new topic. Visual aids are used in the lesson development to make the lesson more interesting and enjoyable. It also helps me to explain the content, a concept clearly to make the student understand better. I use visual aids in the activity part to make the student more active and make them participate in the activity in a meaningful manner. I use visual aids in the closure part of the lesson to make students summarize the lesson and allow them to reconnect the lesson. I use visual aids to assess students learning by asking questions."*

T4: *"I use visual aids in the lesson introduction to arouse the interest of the children. In the lesson development, I use visuals to give more and detailed information about the content of the*

lesson. I use visuals in the activity part to make them apply the knowledge that they have learned from the visual display and at the end of a lesson to recapitulate the main ideas."

4.4.7 Differentiation

In general, the most common learning styles are: Visual, audio, and kinesthetic. Every learner is a little bit of each type, but in most learners, one style prevails over the other two. Students learn better when they engage their dominant bits of intelligence; they expand their abilities to use other intelligence. The feeling of success positively affects students' willingness to work at other learning tasks. Individuals who are audio learners do their best when physically listening to the content being taught to them. They benefit from more voice-over videos and audio recordings. They retain information by listening. Kinesthetic learners learn through learning by doing. They retain information with their senses as they learn through experience. This includes tasting, touching, and smelling. Visual learners learn best when information is presented visually.

Designing visual material for meaningful learning is one of the fundamental tenants of instructional design to cater to the visual learners. Visuals serve as concrete clues to meaning. Concrete referents enhance communication and understanding through clarification of abstract concepts. Ausubel (1968) notes that material presented is comprehended in the process of internalization. Visuals cause a faster and stronger reaction than words. Children learn from visuals by being able to read, understand, and interpret visuals accurately. Thus, the students decode the information that they see. Mooij (2008) maintains that a good teacher should be able to adapt to modifications in teaching methods. Roman and Kay (2007) emphasize that by using visual tools, non-verbal gestures, and providing nods of agreement or simply maintaining good eye contact while allowing learners to feel safe in their learning environment helps teachers to communicate and transmit knowledge effectively.

T5 said: *"Visual aids make students use their sense of sight leading to increased attention. The information displayed in the form of visuals helps children retain in their minds for a longer duration. The information displayed visually is well remembered. Retention of information is greater when information is presented visually. According to psychologist Bruner, he states that students remembered 80% of what they see and 20% only what they read. Children become attentive towards the lesson while using visual aids and get a clear concept of the lesson or topic."*

T3 said: "*In the classroom, there are multiple learners with different learning styles. We have to cater to the needs of the different learners using different teaching strategies. Some learners learn through the use of visuals, some through audio, and some by involving their body movements. I address the need of the visual learners in the class using visual aids. I design different types of activities so that children can learn by using one of the activities.*"

Another said T4: "*One of the biggest challenges for me is making every child learn and succeed. It is really difficult as there are different types of learners. To meet this challenge, I reflect on my teaching style. Not only that, I keep in mind the learning style of the different children. One of the learning styles is learning through visuals. My particular motive behind using visuals is to cater to the need of visual learners. Similarly, I use other teaching strategies to cater to the needs of the other differently-abled learners.*"

From the above statements, it clearly indicates that visuals are used for differentiated instructions. Differentiated instruction can be addressed through visual materials. Visual learners use the sense of sight. In visual format, learners can process information much faster and retain the information better. Walker-Tileston (2004) argues that children learn best through their

dominant senses, seeing, hearing, and touching. Visual aids help visual learners to develop visual thinking, which is a learning style whereby the learner comes better to understand and retain information better by associating ideas, words, and concepts with images. This study clearly supports Howard Gardner's theory of multiple intelligences as discussed in the literature review.

4.4.8 Classroom Interaction

Leaning cannot take place in isolation, it is indispensable for the individuals to interact with each other and form cordial terms and relationships. The learning of the students is influenced by the amount of interaction that takes place in the classroom. Effective teachers make learners think and allow them to interact and ask questions; activate prior knowledge to impart new knowledge and to build new skills. One of the ways to ways to make teaching-learning effective is to make the students interactive. Visuals create opportunities for learners to think and a forum for interaction. It is one of the ways to keep children active in the class during the learning process. It engages both teachers and students in classroom discussions. The following comment from the participants demonstrates that visual aids promote interaction in the classroom.

T5: *"Secondly, while using visual aids; it helps to develop more interactions between teacher and the students."*

Visual aids make the teaching-learning process more interactive and engaging and as a result, a student learns better. Some research has also proven that students have sharper observation skills and they can understand the concepts by observing (visual aids).

Student interaction is critical to a student during the learning process. Visual aids help teachers to prompt discussion, explain processes, and reinforce prior learning. When students are uninterested in learning; a barrier to learning is created. One of the current methods of delivering instruction to make students interact is to engage with the use of visual aidsTherefore, it can be concluded from this study that classroom interaction can be promoted through visual in the lesson.

4.4.9 Perception and attitude

All the participants who took part in this study show that they are clear and aware that visual aids are a powerful means to help students learn. Teacher's value visual aids because visual aids support classroom instruction and encourage students to make associations between pieces of information, soak up chunks of course content quickly, and function as a memory aid. They use them to organize instructional information, save time, and design organized projects.

T3:*"I was a teacher who makes and uses different teaching-learning material. I use the prescribed visual aids received from the Ministry of Education. I use locally available resources by improvising them to cater to all different learners. The teaching-learning materials are part and parcel of the daily lesson to make teaching effective."*

The teachers hold the belief that the use of visual aids is relevant and enjoyable. This was probably because the use of visual aids makes it easier for the students to learn.

T4:" *Teaching learning materials is one of the components of the lesson plan. It is the responsibility of the teacher to prepare teaching-learning materials and use them in teaching to make learning effective."*

The teacher participants in the study also highlighted some of the considerations that teachers need to bear in mind while improvising visual aids. Visual aids are the fundamental components of lesson organization. The majority of teacher respondents referred to visuals as one of the fundamental components of any lesson plan. It is used in all the stages of the lesson; introduction, lesson development, activity, monitoring, and lesson closure. The following

statements from one of the teacher participants signify clearly that visuals are fundamental parts of teaching-learning.

T1: *"I use visual aids during lesson introduction to check whether the students have their prior knowledge and ideas about the lesson that I am going to teach. I also display the definition of terms and meaning with examples. I use visual aids during the lesson development part to give information about the lesson that I teach so that students can understand the lesson very easily and quickly. I use visual aids during lesson activities because students can easily understand the questions and instructions. They are very clear about the activity need to carry out. They can complete the activity on time which in turn helps the teacher to complete the lesson on time. I use visual aids during lesson closure, to sum up, the lesson quickly and effectively."*

One of the teacher respondents emphasized that visual aids can be also used to make judgments and to evaluate the effectiveness of one's teaching.

T3: *"I use visual aids during lesson introduction to check their prior knowledge of the topic. During lesson development, I use visual aids so that students can explore more about the topic of the lesson. During lesson activities, it helps to let children explain and elaborate on the lesson. During lesson closure, I can evaluate children's learning as well as I can even judge my lesson delivery."*

4.4.10 Challenges

Over the years around the world, there has been extensive investment in information and communication technology. Technology is changing the world rapidly. Technology is now part of our life and it continues to benefit us. Information and communication technology has greatly impacted both societies as a whole and individual life.

The use of ICT has become popular in the field of education. Access to ICT generally is viewed as important for students (Kennewell 2001; OECD 2001). Incorporating technology into teaching is a great way to actively engage students. Many open educational resources are freely available online to everyone. There are podcasts, digital libraries, textbooks, and games. It helps teachers to update knowledge and to look for the latest information. The classroom setting is now changing from traditional teacher-centered to student-centered.

Most participants in this study viewed ICT as important for teaching-learning. It makes teaching-learning easier for children and teachers. ICT is used to improve the learning environment for teachers and students. It is an important tool both for teaching and learning. It is a medium through which the teacher can teach and the students can learn. ICT can enhance relationships between teachers and students. When teachers effectively incorporate technology into subject areas, teachers grow into roles of adviser, content expert, and coach. It makes teaching and learning more meaningful and fun. Teachers are trained to use ICT in teaching and learning. However, it turned out that there are no reliable ICT facilities in the school. All the teacher participants in this study expressed dissatisfaction in using ICT.

T3 expressed, *"The main problem in using modern visual aids is that in our school we do not have adequate modern facilities like ICT lab, projectors, and computers. I use a data card to access resources from the online internet. I face difficulties in browsing extra information because of poor internet connectivity."*

Another participant T4 also expressed similar challenges:

"I am working in a small school and I face lots of difficulties. Firstly, our school is not equipped with a computer laboratory. We don't have a good internet connection and our students are not familiar with modern technologies such as computers, laptops, and smartphones. Teaching using modern visual aids remains a challenge for me."

T3:*" Modern visual aids such as the internet are sometimes easy as well as difficult to use. We have to depend on a stable network. Not only that, the internet cannot be used when there is no electricity and when the network is unstable. The planned lesson cannot be taught as planned when there is no supply of electricity, and a poor network, we cannot present our planned lesson effectively as per the plan. Sometimes, I also fail to operate modern gadgets due to lack of ICT knowledge."*

All the above-stated responses indicate their frustration with the poor ICT infrastructure in the school. Without proper ICT facilities, teaching and learning remain a major challenge. The presence of a teacher is vital in the classroom and bringing technology in the classroom is equally important. Most teacher participants said that they are not able to access teaching-learning resources online because the school is not equipped with adequate ICT facilities. Moreover, the internet connectivity is slow and sometimes no connectivity at all. The participants pointed out that reliable internet connectivity would result in more effective teaching-learning. ICT results in more independent and self-directed learning for students. There is a need to provide teachers and students with access to the technology. Technology is engaging from the students' perspective and a teaching tool for teachers. ICT changes the roles of teachers and students with the teacher moving towards the role of a facilitator, a knowledgeable guide, and away from the traditional methods. Interestingly, one of the participants in the study also clearly mentioned that modern gadgets are difficult to operate due to a lack of ICT knowledge.

Another challenge that the participants pointed out is the time constraint due to teacher shortage. The workload of teachers becomes more when there are fewer teachers. The quality of academic achievement in students' learning is impacted by the teacher shortage. The participants pointed out that they are over-burdened and get bogged down with no single free period left. Because of the heavy workload, they do not get time to prepare quality visual aids. They make sacrifices of their time and manage time to prepare visual aids. The teacher participants remarked;

T2: *"Some of the challenges that I face while making visual aids are due to poor connection of internet in the school I am not able to browse for digital resources. Besides that, I don't get enough time to prepare visual aids due to packed teaching periods."*

T3: *"One of the major challenges that I face while using visual aids is lack of time. I am always occupied with the teaching loads. I teach children the whole day morning till evening without free periods. There is a shortage of teachers in the school. The other challenges are lack of resources and modern ICT facilities in the school."*

T4: *"Time is a major constraint. I don't get enough time to prepare teaching-learning materials. I spent my time teaching and planning my lesson. I prepare almost four to five lesson plans in a day. We don't have enough modern facilities to teach the children. The other constraint is with the source of finance to purchase teaching-learning materials."*

The teachers struggle a lot having to teach many subjects the whole day. The teacher participants expressed that over workload gives them no time get time to prepare teaching-learning materials.

Findings, Recommendations and Limitations

5.1 Findings and Discussion

The purpose of this case study was set to answer three important questions. The first objective of the study was to explore how teachers perceived visual aids in student learning. The second objective was to examine the different types of visual aids used in students learning and the third

objective was to find out challenges faced by the teachers. Finding from this case study suggests that there are several benefits in using visual aids in teaching.

All the teacher participants perceived and understood the use of visual aids on a similar note. None of them deviated or differed widely in their perception of visual aids from one another. All the participants expressed their perspectives of visual aids based on experiences in teaching and the following themes emerged.

The study revealed that the use of visual aids in teaching makes pedagogical methods more effective and promotes student learning. Teachers perceived visual aids as one of the most important keys to effective pedagogy. Visuals have a great impact on the teaching-learning process and affect students' performance and as well as influence teachers' instruction. Visual aids support teachers in transmitting knowledge, skills, and attitudes to the learners in an organized manner within an instructional situation. Honey and Moeller (1990) state that an important element affecting how and whether teachers use technology in their classroom is their pedagogical beliefs on learning and instruction.

One of the implications of this study suggests that one of the alternative means to manage time better in the class is through the use of visual aids. Teachers use visual aids to keep children focused on the activities and to complete tasks on time. It also helps teachers to cover more activities in less time. It helps the teacher and the student both work together to facilitate learning and minimize disruptions.

The basis for any teaching-learning in the classroom is the teaching of knowledge, skills, values, and attitudes. The achievements of the learners depend on the clarity in teachers' instruction. Teaching and learning complex ideas are difficult. Visual aids are powerful means for teachers to supplement and prompt students about what they are learning. The presentation and explanation of difficult concepts can be made easier using images, pictures, wall posters, photographs, symbols, and graphic organizers. Visuals are used to stimulate curiosity and engage learning capacities. The visuals that students see and touch are perceived peripherally as well as directly by the brain peripheral stimuli can play an important part in accelerating the learning process. This study reveals that visual aids help teachers to communicate or transmit knowledge of the subject matter successfully to the learners. Visual aids can simplify the complex concept and help children in learning difficult concepts. Students find visual aids useful in understanding difficult concepts. Thus, this study indicates that there is a direct link between the visual aids that the teachers use and the students' learning. Alley and Jansak (2001) assert that the teachers' best strategy to prepare for teaching is to use learner-centered teaching principles, translate these principles into practices, and think creatively while using technology instruction methods. Utilizing these technological aids with innovative teaching practices makes the teaching-learning process more effective and interesting.

This study shows that one of the factors that contribute to learners' success is a conducive classroom. Visual aids contribute to the creation of a positive learning environment for students. Peter (2011) claims that teaching theories are based on learning theories; learning conditions and learning components. Students who study in a favorable learning environment are more attentive and motivated. Learning in children is affected by the physical environment and psychological comfort in the classroom.

The findings of the study suggest that using visual aids as a teaching method stimulates thinking and improves the learning environment in a classroom. Effective use of visual aids substitutes monotonous learning environments. Students develop and increase personal understanding of the areas of learning when they experience successful and pleasant learning in

the classroom. Dawes (2001) rightly points out that new technologies have the potential to support education across the curriculum. The use of visual materials generally improves students' understanding of concepts and led to high academic achievements.

The findings of the study support that integrating visual resources have a positive impact on the teaching-learning process. Lack of motivation, attention, and retention can be improved by using visuals in the classroom. Visual aids facilitate and encourage unmotivated and inattentive to take active participation in their learning. The performance of the learners is determined by attention; motivation and retention of the learners. Inadequate use or lack of use of visual materials in the teaching-learning situation negates the objective of teaching. This implies that the schools with inadequacy of visual aids and instructors are likely to perform low whereas schools with adequate instructional materials and instructors are likely to perform high The use of visual aids increases retention, attention, and motivation. Students taught with visual aids perform significantly better in academics. These results agree with Babayomi's (1999) findings which revealed that private schools performed better than public schools because students and teachers are provided with sufficient and quality teaching and learning resources. From this, schools at all levels of education must have quality and adequate instructional facilities to raise the academic performance of the students. Visual aids are a powerful element of qualitative education. The quality of instructional processes experienced by a learner determines the quality of education. Teaching is inseparable from learning but learning is separable from teaching. Teachers do the teaching to make the students learn, but with quality and adequate instructional facilities, students can learn without the teachers. Mwiria (1995) equally supports that students' performance is affected by the quality and quantity of teaching and learning resources. This implies that the schools that possess adequate teaching and learning materials stand a better chance of performing well in examination than poorly equipped ones.

This study revealed that teachers value the support that visuals lend to classroom instruction. Teachers use visual aids as one of the tools to assess student learning, an important parameter in measuring success in students. Visuals aids are proven to be one of the effective tools used in the assessment for and assessment of learning. Visual aids are an alternative method in addition to other forms of assessment. The study also revealed that visuals make teachers responsive and make them generate alternative means to cater to the needs of the children. Visual aids serve as tools for assessing the effectiveness of one's lesson delivery and make teachers reflect on their instructional practices. Assessment tools are numerous. The use of visual aids as an assessment tool places assessment more within a holistic approach.

Teachers need to understand the learning styles of the learners and how they impact their academic achievement. Teachers must provide instructions accordingly to the learning styles of the students. There is a diversity of learners in the classroom and every student is unique. All learners come from different socioeconomic backgrounds. There are differences in their learning needs, learning styles, and in their learning abilities. Visual learners learn best when information is presented visually in a picture or design format. This study indicates that visuals are one of the ways of addressing differentiated instruction. Therefore, the key to improving students learning is to understand the way students learn and then accommodating those learning styles in teaching. This is in agreement with the findings of Nilson (2003) who supported that visual learners organize knowledge in terms of the spatial interrelationship among ideas and store it graphically. Silverman (2003) states that 'visual-spatial learner' are individuals who think in pictures rather than in word. Visual-spatial learners are individuals who think in pictures rather than in words. Visualization is a key element in the mental processing of visual-spatial learners.

They learn better visually than auditorally. They are whole-part learners. They need to see the big picture first before they learn the details. They do not learn from repetition and drill. They are non-sequential.

Febiri (2002) adds that if the classroom is to motivate students to learn effectively, efficiently and with joy rather than pain, the differences in their learning styles should be taken into account in the design and delivery of courses. It may also be noted that even the mismatches may be appropriate to the students because there are also opportunities for students to experience new ways of learning rather than the ones they already have. Kranzler (1999) asserts that approximately 65 percent of all people are visual learners who relate most effectively to written information, notes, diagrams, and pictures. Equally, on the other hand, effective instruction should reach out to all the learners irrespective of whatever their learning styles are. Smith and Renzulli (1984) also assert that students should have exposure to different teaching methods to develop a full range of learning skills and strategies. A similar study conducted by Dunn et al. (1995) claimed that students who were taught by an approach compatible with their learning style did better than those whose learning styles were not matched with the teaching methodologies. They indicated that learning styles make an impact on the students' overall achievement.

Learning is not a process of passively receiving knowledge. Stimulation is the key to learning and it begins with our sensory perceptions. Learning is based on the principle that learning is an interactive process whereby a person absorbs information and skills within his or her current knowledge base and attaches personal meaning to them. In educational literature, constructivists view learning as an interactive, constructive process that "involves the explicit and implicit negotiation of meanings" as students work through real-life problems. The findings here were consistent with Erlauer (2003) who puts forward that, while most people can read, hear, observe, memorize, or figure something out by themselves, they are usually more efficient and effective learners if they work with others. Visuals are used by the teachers in the teaching-learning process to make the classroom interactive and dynamic.

People look at things from different angles and everyone is right in their way. Individually, people differ in their ideology but similar work and experiences remove can remove such differences. The study shows that teachers perceived visual aids on a similar note. Visual aids are considered a powerful means by the teachers to help students learn. It is one of the fundamental components of the everyday lesson. Therefore, visuals are used in all stages of the lesson; introduction, lesson development, activity, monitoring, and lesson closure. The teachers prepare visual aids based on the lesson objectives. The visuals used are appealing, relevant, simple, and clear. It should be displayed in the class and used consistently by both the teachers and students to reinforce continuity.

The third objective was to examine the issues confronted by teachers in using visual aids. One of the issues emerging from this finding relates specifically to lack modern visuals in schools. The school lack information communication technology (ICT). Because of these problems, teachers are not able to use modern visual technology in the teaching-learning process. As a result, teachers spend most of their time using traditional visual aids. There is an urgency to ensure that teachers have access to adequate and reliable ICT facilities to

According to UNESCO (2004), the use and rapid spread of electronic communications can affect the quality and efficiency of basic education throughout the world. The need to use a modern scientific approach in teaching and learning processes in our schools has become inevitable. Aina (2013) maintains that at present there is universal recognition of information and

communication technology as a major force in the dissemination of knowledge. One of the major challenges that teachers face is the lack of exposure and limited accessibility to modern instructional facilities. The finding of this study reveals that teachers do not have access to reliable information communication technology (ICT) which can relieve the shortage of visual aids. The majority of teachers have been trained under the Chigphen Rigphel Project. The ICT facilities are as good as non-existent due to erratic and unstable network connectivity. Teachers and students are not able to open educational resources that are freely available online to everyone. Hence, the traditional chalk and duster approach still dominates the teaching-learning process. Teaching and learning remain a major challenge. The findings show that schools lack reliable internet connections. Conventional classroom instruction such as written content or book based is soon going to become a function of the past and will be replaced by digital technology.

Another issue that emerged from this finding is that teachers are not comfortable with the teaching workloads. They hardly get time for preparing visual aids as they need time for planning, correction, and teaching. They expressed that the heavy workload to be an impending factor in the preparation of visual aids in teaching-learning. They are bestowed with other non-curricular responsibilities.

5.2 Recommendations

In the light of the findings of the case study on the perceptions of teachers' on visual aids in student learning, the following recommendations are made;

First, the findings of the study recommend the school leaders to ensure that the school is well equipped in terms of visual aids. The results suggest that visual aids have multiple advantages in teaching-learning process. However, in a situation where there are no adequate visual aids, schools teachers need to be creative in preparing instructional materials. Teachers are a key factor in teaching. Teachers must be resourceful and make alternate solutions or ways on how to sustain the needs in teaching. Teachers should encourage active student's participation in teaching-learning by using different visual aids. The success or failures of students depend on the accessibility to teaching-learning materials. Visual aids are one of the most important materials for teaching-learning. Without these materials, effective learning cannot take place. Schools should be supplied with all the visual aids required for all the subjects.

Second, it is evident from the study that teachers are overburdened with heavy teaching loads due to teacher shortage. Teachers find it difficult to cope with the heavy workload leaving no time for them to prepare visual aids. There is a need for educators to look at the workload of the teachers and give serious thought to this issue. Teachers cannot prepare visual aids when there are heavy workloads. It is not practical for teachers to prepare visual aids considering the heavy teaching workloads and time constraints. Frustration is the result when teachers are overloaded with a heavy teaching workload. It is important to lighten the workload of teachers in schools. One reasonable approach to tackle with heavy work load is to deploy enough teachers to school. Therefore, Ministry of education should deploy enough teachers to schools where there is a teacher shortage.

Third, the data reported here appear to support the assumption that there is less collaboration between teachers and parents. The study recommends parent involvement. Practically, parent involvement in school is a critical element of a good and effective school. Parents are one of the main stakeholders of the school and should play a supportive role in schools. The school must make parents aware that all of them have strengths and skills which they can support the school to improve student learning. The schools should enlighten children's

parents on the importance of improving and promoting good visual materials. Regardless of the socio-economic background, parents can contribute a lot to educating their children. Teachers and parents must work collaboratively that encourage the best educational opportunities for children because the schooling of a child is a shared responsibility. Everything cannot be left in the hands of the school. Parents have equal responsibilities. Parents must take up proactive roles and support the goals and process of education in the school. The parents should identify the problems of the school and can play their part by providing support. One of the areas of support that parents can give is donating teaching-learning resources. It will be a big help for the improvement of the school. The parents should not wait for the government because government alone cannot do everything for the school. So, the study urges parents to effectively participate physically and financially where possible for the development of the schools to enhance students learning outcomes.

Fourth, the study proposes a material development workshop at the school level. It is a reasonable approach to tackle the problem conveniently within the boundary of the school administration. The school principals are the ones who manage the school. The role of the principal is to identify the problems that the teachers encounter and to devise solutions to a particular problem. A good administrator will lead to a good school. One of the alternatives in schools to manage visual aids is to conduct materials development workshops by involving parents' support groups and develop visual materials from the low-cost locally available materials. Parents should be made aware of the power of visual aids and the support that visuals lend to classroom instruction. Teaching-learning materials development workshops should be arranged from time to time to develop visual aids. Through a material development workshop, parent's ownership of the school can be enhanced. With the support of the parents, the school can achieve set goals more easily.

Fifth, the evidence from this study has shown that; unstable internet connection, lack of resources, and lack of training as major challenges faced while using ICT. Teachers have crucial role in helping students learn how to use technology and in preparing them for the digital world. However, this effort can fail if schools are not equipped with ICT and if teachers themselves are not well prepared with sufficient ICT competencies. If the schools are well equipped with ICT facilities, it will be easier for teachers and students to gather information over the Internet virtually on any topic and has the potential to transform the instructional content; pedagogical practice and minimize the challenges in accessing digital resources. ICT should be an integral part of the teaching-learning process. Therefore, a school should be well equipped with reliable internet connectivity and adequate ICT facilities to facilitate the integration of ICT in the teaching-learning process.

With modernization, we are in the age of digital technology. Change is the law of nature and it is inevitable. Times have changed, so are the needs of the learners. Our educational system is by far the most visually stimulated generation. With the introduction of digital technology, the requirements of the students have changed dramatically. The present-day learners are truly visual learners with the coming of the digital age. They grow up with the internet and computer software that educates and entertains. To meet the needs of the changing times, digitization in teaching-learning is necessary. Digitization in education contributes to significant shifts in the way education is taught and consumed. Since, the Ministry of Education is currently working on ICT expansion in primary schools across the country. It is almost certain that every school will have ICT facilities and access to adequate and reliable internet connectivity.

5.3 Limitations

The study has several limitations. Firstly, I found it very difficult to bracket my preconceived notions throughout the study. In this inquiry, preconceptions might have crept in but they are not intended. Nevertheless, to accurately establish the validity of the data collection and analysis process, every effort was made throughout the study to put aside my predetermined knowledge, beliefs, values, and experiences.

Secondly, one major limitation of this case study is that it is being used only with five interviewees and the findings from the individual studied may not be generalizable throughout the whole system. However, these limitations do not deteriorate the findings of this study but serve as a starting point for novice researchers and future research.

Thirdly, the tool employed was a semi-structured interview and the questions designed for the interview may lack standard and may perhaps limit my findings. The participants seemed to be excessively aware of the conversation that was being recorded, and therefore they took more care in responding to the interview questions. As a novice researcher, the inability to conduct the interviews, analyzing and interpreting the data may have further limited the study.

Finally, time constraint was another limitation that hindered the progress of this study because the researcher did not get adequate time as there were lots of other obligations to be fulfilled in the school. The unreliable internet connectivity in my workplace and the burden of heavy workload having to teach children and as well as looking after the school administration also impeded in carrying out this study. Nevertheless, the constant support and encouragement from the supervisor and assistance from colleagues gave me added strength to carry out the study. On the whole, everyone had been very cooperative in my study. They made invaluable contributions to the study by way of freely and frankly expressing their views in the interview.

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