Faculty of Cognitive Sciences and Human Development

VISUAL LITERACY: AN INVESTIGATION INTO THE INTERPRETATION OF VISUALS AMONG PRIMARY LEARNERS

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Masters of Science (Learning Sciences)
2014
ACKNOWLEDGEMENT

I would like to extend my gratitude to my supervisor, Dr. Mohammad Nur Azhar for his guidance and support throughout this research.

Additionally, I would also like to thank Dr. Philip for willingness to share his advices and recommendations. To my lecturer, Mr. Hafiz, you have been tirelessly coordinating this course- thank you for all the efforts you have invested in us.

To my friends, classmates and parents who have been cheering me on when I faced difficulties during this research, thank you for the continuous support and encouraging words.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acknowledgement</td>
<td>i</td>
</tr>
<tr>
<td>Table of Contents</td>
<td>ii</td>
</tr>
<tr>
<td>List of Figures</td>
<td>v</td>
</tr>
<tr>
<td>List of Tables</td>
<td>viii</td>
</tr>
<tr>
<td>Abstract</td>
<td>ix</td>
</tr>
<tr>
<td>Abstrak</td>
<td>x</td>
</tr>
</tbody>
</table>

## CHAPTER 1 - INTRODUCTION

1.0 Introduction
1.1 Background of the study
1.2 Problem statement
1.3 Research objectives
   1.3.1 General objectives
   1.3.2 Specific objectives
1.4 Research questions
1.5 Definitions of terms
1.6 Significance of the study
1.7 Limitations of the study
1.8 Summary

## CHAPTER 2 - LITERATURE REVIEW

2.0 Introduction
2.1 Importance of visual literacy
2.2 Defining visual literacy
2.3 Major principles of visual literacy
   2.3.1 Visual language exists
   2.3.2 People can and do process thoughts visually
   2.3.3 People are able to learn visually
   2.3.4 People can and should express ideas visually
2.4 Different Perspectives on visual literacy
   2.4.1 Interchangeble terms
2.5 Proposed guidelines
2.6 Visuals, theories and findings
2.7 Interpretation of visuals
   2.7.1 Influence of socio-cultural background on visual interpretations
   2.7.2 Influence of media exposure on visual interpretations
2.8 Assessing visual literacy
2.9 Summary
### CHAPTER 3 - RESEARCH METHODOLOGY

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.0</td>
<td>Introduction</td>
<td>30</td>
</tr>
<tr>
<td>3.1</td>
<td>Research design</td>
<td>31</td>
</tr>
<tr>
<td>3.2</td>
<td>Population, sample and sampling procedure</td>
<td>31</td>
</tr>
<tr>
<td>3.3</td>
<td>Research instruments</td>
<td>32</td>
</tr>
<tr>
<td>3.3.1</td>
<td>Think-aloud task</td>
<td>33</td>
</tr>
<tr>
<td>3.3.2</td>
<td>Semi-structured interview</td>
<td>34</td>
</tr>
<tr>
<td>3.3.2.1</td>
<td>Visuals and their intended message</td>
<td>36</td>
</tr>
<tr>
<td>3.4</td>
<td>Data collection procedures</td>
<td>43</td>
</tr>
<tr>
<td>3.4.1</td>
<td>Pilot testing</td>
<td>44</td>
</tr>
<tr>
<td>3.4.2</td>
<td>Approval and ethics</td>
<td>45</td>
</tr>
<tr>
<td>3.4.3</td>
<td>Steps in data collection</td>
<td>46</td>
</tr>
<tr>
<td>3.5</td>
<td>Data analyses procedures</td>
<td>47</td>
</tr>
<tr>
<td>3.6</td>
<td>Summary</td>
<td>48</td>
</tr>
</tbody>
</table>

### CHAPTER 4 - RESEARCH FINDINGS

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>4.0</td>
<td>Introduction</td>
<td>50</td>
</tr>
<tr>
<td>4.1</td>
<td>Visual 1</td>
<td>51</td>
</tr>
<tr>
<td>4.1.1</td>
<td>Thinking about baking a cake</td>
<td>51</td>
</tr>
<tr>
<td>4.1.2</td>
<td>Thinking about eating a cake</td>
<td>52</td>
</tr>
<tr>
<td>4.1.3</td>
<td>Thinking and talking about a cake</td>
<td>53</td>
</tr>
<tr>
<td>4.2</td>
<td>Visual 2</td>
<td>54</td>
</tr>
<tr>
<td>4.2.1</td>
<td>Order of consumption is bottom to top</td>
<td>55</td>
</tr>
<tr>
<td>4.2.2</td>
<td>Vegetables and fruits should be consumed the most</td>
<td>56</td>
</tr>
<tr>
<td>4.3</td>
<td>Visual 3</td>
<td>58</td>
</tr>
<tr>
<td>4.3.1</td>
<td>Inaccurate interpretation of an ant trap</td>
<td>58</td>
</tr>
<tr>
<td>4.3.2</td>
<td>Larvae is larger than depicted</td>
<td>59</td>
</tr>
<tr>
<td>4.4</td>
<td>Visual 4</td>
<td>61</td>
</tr>
<tr>
<td>4.4.1</td>
<td>Application to send messages</td>
<td>61</td>
</tr>
<tr>
<td>4.4.2</td>
<td>Application to search for information</td>
<td>63</td>
</tr>
<tr>
<td>4.5</td>
<td>Visual 5</td>
<td>64</td>
</tr>
<tr>
<td>4.5.1</td>
<td>Ball bounces down and is caught by hands at the bottom</td>
<td>64</td>
</tr>
<tr>
<td>4.5.2</td>
<td>Ball is thrown by both hands continuously</td>
<td>65</td>
</tr>
<tr>
<td>4.5.3</td>
<td>Ball is thrown up by person below</td>
<td>65</td>
</tr>
<tr>
<td>4.6</td>
<td>Visual 6</td>
<td>66</td>
</tr>
<tr>
<td>4.6.1</td>
<td>The national day parade</td>
<td>66</td>
</tr>
<tr>
<td>4.6.2</td>
<td>Inability to interpret visuals</td>
<td>68</td>
</tr>
<tr>
<td>4.6.3</td>
<td>Interpreting the sun’s position</td>
<td>69</td>
</tr>
<tr>
<td>4.7</td>
<td>Visual 7</td>
<td>67</td>
</tr>
<tr>
<td>4.7.1</td>
<td>Facial features and age of characters</td>
<td>68</td>
</tr>
<tr>
<td>4.7.2</td>
<td>Grandparents and parents</td>
<td>68</td>
</tr>
<tr>
<td>4.7.3</td>
<td>Older couple is married</td>
<td>69</td>
</tr>
<tr>
<td>4.8</td>
<td>Visual 8</td>
<td>71</td>
</tr>
<tr>
<td>4.8.1</td>
<td>Blue bin is for paper</td>
<td>71</td>
</tr>
</tbody>
</table>
CHAPTER 5 - DISCUSSIONS AND CONCLUSIONS

5.0 Introduction 83
5.1 Summary of the study 84
5.2 Summary of the findings 84
5.3 Discussions of the findings 86
  5.3.1 Interpretations of visual conventions 86
  5.3.2 Interpretations of icons and symbols 91
  5.3.3 Physical features and gender roles 98
  5.3.4 Interpretation based on common knowledge 99
  5.3.5 Influence of prior exposure to similar visual 100
  5.3.6 Interpretations based on colours 101
5.4 Implications for practice 105
5.5 Recommendations for future studies 107
5.6 Conclusions 108

References 110

Appendices 115
LIST OF FIGURES

Figure 2.1
Dual coding theory 20

Figure 2.2
Toilet signs used in commonly used in western context 24

Figure 3.1
Visual 1: Woman thinking of a cake 34

Figure 3.2
Visual 2: The food pyramid 35

Figure 3.3
Visual 3: Ant-trap and mosquito larvae 35

Figure 3.4
Visual 4: E-mail interface 36

Figure 3.5
Visual 5: Ball thrown on stairs 36

Figure 3.6
Visual 6: National Day parade 37

Figure 3.7
Visual 7: Family tree 38

Figure 3.8
Visual 8: Recycle bins 39

Figure 3.9
Visual 9: Passage of time 40

Figure 3.10
Visual 10: Stranger at the door 41

Figure 4.1
Visual 1: Woman thinking of a cake 42

Figure 4.2
Thinking about eating a cake by participant H. 50
Figure 4.3
Visual 2: The food pyramid

Figure 4.4
Accurate labeling by Participant C

Figure 4.5
Participant D labels the food pyramid by numbers

Figure 4.6
Visual 3: Ant-trap and mosquito larvae

Figure 4.7
Interpretation of participant B

Figure 4.8
Visual 4: E-mail interface

Figure 4.9
Interpretation of participant C

Figure 4.10
Visual 5: Ball thrown on stairs

Figure 4.11
Accurate interpretation of the visual 5

Figure 4.12
Visual 6: National Day parade

Figure 4.13
Participant B's interpretation.

Figure 4.14
Visual 7: Family tree

Figure 4.15
Designation of familial roles

Figure 4.16
Participant B indicates an accurate interpretation of the visual

Figure 4.17
Visual 8: Recycle bins
Figure 4.18
Interpretation by participant F. 73

Figure 4.19
Visual 9: Passage of time 73

Figure 4.20
Interpretation by participant G 75

Figure 4.21
Interpretation of participant B. 76

Figure 4.22
Visual 10: Stranger at the door 77

Figure 4.21
Interpretation of Participant E 78
LIST OF TABLES

Table 3.1
Sample of the study 31

Table 3.2
Overview of the research instrument 32
ABSTRACT

VISUAL LITERACY: AN INVESTIGATION INTO THE INTERPRETATION OF VISUALS AMONG PRIMARY SCHOOL LEARNERS

Elysia Chua Chiat Wei

This research investigated the interpretation of visuals among primary school learners based on currently prescribed textbooks. Ten primary three learners from two schools were used as samples for this study. This case study employs a think-aloud task that requires participants to label 10 visuals and a semi-structured interview to determine the learners’ interpretations and how they derive their interpretations. These sessions are transcribed and analysed. From the findings, a model is developed to illustrate how primary learners interpret visuals. Results from the research showed a wide range of interpretations that are influenced by the knowledge of gender roles, understanding of visual conventions, common knowledge, prior experiences, identification of salient features, facial gestures and also expressions. This inevitably implies that primary school learners have varying levels of visual literacy and that they encounter difficulties in understanding visuals due to their different backgrounds and experiences. It is found that, iconic images are easier for learners to interpret; therefore, the presence of additional contextual elements in visuals is critical to help learners in understanding visuals more accurately. Contextual elements can be in the form of texts, colours and relevant visual elements that can help define the image further. This study also highlights the need to explicitly teach these young learners how to critically interpret visuals; in particular symbol-based visuals, as some participants in this study relied only on context to interpret visuals.
ABSTRAK

LITERASI VISUAL: PENYIASATAN KEATAS INTERPRETASI VISUAL DI KALANGAN PELAJAR SEKOLAH RENDAH

Elysia Chua Chiat Wei

Kajian ini menyiasat keupayaan interpretasi visual di kalangan pelajar sekolah rendah berasaskan buku-buku teks yang kini digunapakai di sekolah. Sepuluh pelajar daripada dua buah sekolah rendah merupakan sampel dalam kajian ini. Kajian ini merupakan kajian kes (case study) yang menggunakan kaedah penyuaran fikiran spontan (think-aloud) bagi tugas melabel visual dan wawancara berstruktur separa (semi-structured interview) untuk mengetahui interpretasi dan juga kaedah yang digunakan untuk interpretasi visual dikalangan pelajar sekolah rendah. Sesi-sesi ini kemudiannya ditranskripsi dan dianalisa. Dapatan daripada kajian ini kemudiannya digunakan untuk membina model yang menunjukkan cara visual diinterpretasi oleh pelajar. Keputusan kajian ini menunjukkan pelbagai interpretasi pelajar yang berlaku kerana pengaruh daripada pengetahuan peranan jantina, konvensyen visual, pengetahuan umum, pengalaman lepas, ciri-ciri ketara dalam visual, riak dan expresi muka. Implikasi daripada pengetahuan bahawa pelajar mempunyai tahap literasi visual yang berbeza, dan mereka menghadapi masalah dalam memahami visual kerana latarbelakang serta pengalaman yang berbeza. Juga didapati, imej ikonik adalah lebih mudah untuk ditafsir pelajar; oleh itu, kehadiran unsur-unsur ikonik tambahan yang berkonteks adalah penting untuk membantu pelajar dalam memahami visual dengan lebih tepat. Elemen kontekstual boleh dalam bentuk teks, warna dan elemen-elemen visual yang berkaitan. Kajian ini juga menegaskan perlunya guru mengajar pelajar cara menginterpretasi visual secara kritikal, terutamanya untuk visual berasaskan simbol kerana ramai peserta dalam kajian ini hanya bergantung kepada konteks untuk menginterpretasikan visual.
CHAPTER ONE
INTRODUCTION

1.0 Introduction

This present study researched the interpretation and understanding of visuals among Primary Learners in Malaysia. This chapter details the background of the study, statement of the problem, research objectives, research hypotheses and research framework of the study. The significance of the study, limitation of the study and definition of important terms used in the study will also be elaborated in this section.
1.1 Background of Study

John Debes introduced the term ‘Visual literacy’ in 1969 along with its definition “a group of vision competencies a human being can develop by seeing and at the same time integrate with other sensory experiences” (p. 25). He also outlined four major principles for promoting visual literacy; namely, visual language exists; people can and do process thoughts visually; people can and do acquire knowledge visually; people can and should convey ideas visually.

Eventhough the term was introduced as far back as 1969, the need for visual literacy education has generated more interest in recent years. This is as 21st century marks the increasing need for students to take on more responsibility for their own learning. Being presented with prospects of using image resources, it is apparent that the ability to interpret visuals is needed because such inadequacy may hinder the learners from achieving their full potential (Sims, O’Leary, Cook & Butland, 2002). Communicating via visuals is no longer a field dominated by domain specialists, phasing into the domain of public communication (Kress & Van Leeuw, 1996).

The significance of visual literacy is also highlighted in various literatures. The changing applications of technology and social needs is also one of the main reason this skill is important (Duncum, 2004). This is further agreed by Sinatra (1986) who said that, “A culture’s predominant mode of literacy depends on the technology and mass media it embraces” (as cited in Stokes, 2002).

Even though younger learners have progressively embraced technology and media as part of their daily lives, no guidance has been provided in teaching young people how to critically read, interpret and evaluate this information in
class, ‘viewing’ remains a neglected communication process (Flood, Lapp, & Wood, 1998). Instructions in class remain text-dominant, while outside the class young people are dealing mostly with media and images (Ausburn & Ausburn, 1978; Hobbs, 1997).

Visual information is rather implicit in nature (Karabeg, 2002), as studies have shown that there are major differences between the creator’s intended message and how this message is perceived. Yenawine (1997) suggests that visual literacy starts when viewer uses prior knowledge to determine the meaning of visuals. Every individual have different previous visual experiences, which may influence the way they see visuals. Stokes (2002) points out, in support of Mitchell (1998)’s opinion, that there is a need to emphasize on the re-occurring premise in visual literacy education which states that visuals are culturally specific like language literacy is; anchored to the learners socio-cultural background (Stokes, 2002; Arif & Hashim, 2009). In our meaning making processes, the network of cultural meanings act as mediators, however, new signs are constantly created by people throughout their lives, socially (Csikszentmihalyi & Halton, 1981).

Another problem faced by learners is the inability to create original visual artifacts (Metros, 2008). Though enthusiastic about visual imageries, these learners sometimes resort to copying images online because they lack the skills and ability to express their thoughts visually. This problem extends to faculty members who choose visuals in teaching and research; they encounter difficulties in creating images themselves or to locate support within the institution to produce quality images (Metros & Woolsey, 2006).
Integrating visuals in instructions is also proven to benefit teaching and learning. The incorporation of visuals in instructions can engage and motivate visual learners (Clark & Lyons, 2010), material retention can be improved (Sims et al., 2002) and understanding of the material can be reinforced (Gambrell & Jawits, 1993).

This research focuses on the concept of visual literacy, specifically, on the ability primary learners to interpret the intended meaning of visuals used in prescribed educational materials and how they derive their interpretations.

1.2 Problem Statement

Teachers and instructional designers often utilise visual materials in their teaching materials but it is not established how these visuals are interpreted by their young viewers (Bruski, 2012). Researchers have found that children who face problems in language literacy and accessing information have to depend on external help from parents, teachers and also visuals (Yu, 2008). In beginners’ language class, visuals provides the clues in understanding the meaning of words (Bruski, 2012; Arif and Hashim, 2009), therefore it is important that intended meanings of visuals in prescribed education materials are interpreted correctly.

With the society turning increasing multimodal where a variety of modes is used to communicate; it is an important challenge to understand how visuals function and are constructed so that our learners would be able to do the same (Callow, 1999). Early developed ways of seeing the world through traditional literacies and lack of research in visual literacy makes it difficult for researchers to make sense of how visual literacy fits in the education landscape (Mostafa,
The ability to interpret visuals is a crucial skill in visual literacy. The inability to do so may cause difficulty in learning in general as many local textbooks utilise visuals to supplement texts. The research therefore, aims to determine whether learners are apt at interpreting visuals and how these visuals are derived. It is focused on visuals that educators and instructional designers assume to be universally understood by Malaysian primary learners.

1.3 Research objectives

1.3.1 General objectives

The general objective of this study was to investigate Malaysian primary school learners’ visual literacy that is, the ability in identifying the intended meaning of visuals used in educational materials that educators and instructional designers assume to be generally understood.

1.3.2 Specific objectives

The study intended to achieve the following objectives:

1. To identify the interpretations of primary school learners based on visuals commonly found in prescribed textbooks.

2. To determine how primary school learners derive their interpretation of visuals.

3. To develop a model of primary school learners’ interpretations based on visuals commonly found in prescribed textbooks.
1.4 Research questions

Based on the data collected, it is hoped that the study is able to answer these research questions:

1. What are the interpretations of primary school learners based on visuals commonly found in prescribed textbooks?

2. How do primary school learners’ derive their interpretation of visuals?

3. What is the model of primary school learners’ interpretations based on visuals commonly found in prescribed textbooks?

1.5 Definition of study

1.5.1 Interpretation

The conceptual definition of the term 'interpretation' refers to an educational activity, which attempts to uncover the meanings and relationships, rather than merely communicating factual information (Tilden, 2009). The act of interpreting could be done either by utilizing original objects, by direct experience, or through illustrative media (Tilden). Philosopher Charles Peirce devised a triadic model to explain the relationship between interpretant, representamen and referent, where interpretant refers to the thought evoked in a person's mind when observing a sign (Siegel, 2006). This thought differs in individuals based on experiences, social and cultural context (Siegel).

The operational definition for 'interpretation' in this study refers to primary learner's recognition of visuals and their ability to apply meaning to these images based on their prior experiences. Interpretations of visuals are different for every
individual as everyone has different experiences and associations, which results in unique ways of perceiving the world (Dake, 1995).

1.5.2 Visual Literacy

‘Visuals Literacy’ is a term conceptually defined by John Debes (1969) as “a group of vision competencies a human being can develop by seeing and at the same time integrate with other sensory experiences” (p. 25).

Visuals are a form of language; as theorised by Ausburn & Ausburn (1978) who explained that visuals has its own syntax, similar to textual literacy. Further, Ausburn & Ausburn (1978) also said that other than decoding images, a visual literate should also be able to read and express using their face and body gestures. Daley (2003) visual literacy should include the ability to understand how media can manipulate their viewers.

Operationally in this study, visual literacy refers to the skills possessed by a visually literate person to decode or interpret the actions and representations that he encounters in this case, visuals used to teach in currently prescribed Malaysian primary textbooks. Visuals used to teach are also termed as ‘instructional graphics’ or ‘iconic expressions of contents’ (Clark & Lyons, 2010).

1.5.3 Visual Conventions

We interpret visuals by analysing them using codes and conventions. Terms used to describe visual conventions in literature include, graphic devices (Bruski, 2012) and visual vocabulary (Kostelnick & Hassett, 2003). Visual conventions are also defined as a set of visual rules learnt by prolonged exposure
(enculturation) and mediate our interpretation of visuals (Kostelnick & Hassett, 2003). Kostelnick & Hassett, 2003 also elaborates that visual conventions can be divided in three modes: spatial, textual and graphic. Examples given by McTigue & Flowers (2011) to better illustrate the meaning of visual conventions are “labels, a map key, arrows, cutaways, or magnifications”.

In this study, the term is defined as symbolic graphics devices, which learners are thought to easily understand. The instrument in this study employs various visual conventions in its 10 visuals, which are adapted from prescribed textbooks to investigate learners’ interpretation of visuals.

1.6 Significance of study

Studies on visual literacy are important for many reasons. In order to teach visual literacy, it is imperative that we know if learners understand the available educational materials. Secondly, we can identify the underlying reason for the gaps in their understanding of the visuals. This study can help educators to identify visuals that may be difficult for their young learners to interpret based on their background and the way they interpret the visuals. By paying attention to types of visuals that their learners have problems with, they can improve and correct misconceptions that may arise during lessons.

On the other hand, illustrators, desktop publishing artists and publishers for various education materials, not confined to only textbooks', can identify and find ways to improve visuals that learners have difficulty with. Additionally, this study will also highlight the pedagogical attributes of visuals. This will bring
more awareness to stakeholders in this area that visuals can be used concurrently with text to educate rather than merely as a complementary decoration.

In scholarly research, this study is able to contribute towards literature on visual literacy, particularly in the multicultural and geographically challenged Malaysian context. Based on a realist approach, a qualitative study offers, to a degree, an actual picture of the situation and people being studied (Gibbs, 2007).

1.7 Limitation of study

Visual literacy covers a broad range of skills as elaborated in literature. However, this study only looks at ability to interpret visuals as its main scope, which is just a fraction of what a visual literate is expected to possess.

The sample size is considerably small; it is therefore not representative of whole population of learners in Malaysia. Additionally, this study does not take gender into consideration when selecting samples. It also does not take into account teacher’s instruction or his/her point of view.

Furthermore, this study only utilized 10 visuals to test learners’ ability to interpret visuals, which may not be representative of their full capability. Moreover, this research is not content and subject based, therefore primary learners are neither required to memorise any texts before the interview nor need to be prepare for the impending tasks.

It is also important to note that, the participants of this study are young and may feel intimidated by people that they are unfamiliar with. The presence of a researcher whom they are unfamiliar with may cause their responses to be biased.
Moreover, not all participants can be assumed to be articulate with their words and perceptive (Creswell, 1994).

1.8 Chapter Summary

This chapter details the issues relating to visual literacy, its importance and the aims of this study. Four research questions are formulated and it is hoped that the study is able to uncover the nature of interpretation among primary learners and to develop a model to explain the occurrence. Results of this study could be a guide for further action to teachers, instructional designers and policy makers on the affective characteristics of visuals in learning. Further definitions and theories will be reviewed in the next chapter.
CHAPTER TWO
LITERATURE REVIEW

2.0 Introduction

This chapter details the related literature relevant to this present study. It discusses studies that relate to the importance, definition, perspectives and theories of visual literacy. Guidelines and assessment methods is also detailed in this chapter.
2.1 Importance of Visual Literacy

The 21st century is known as the era of information abundance, termed as the ‘Knowledge Age’. This is when knowledge and ideas act as the main source for economic growth, of more importance than the conventional industrial resources. The rapid economic and technology growth requires educators to scramble for ways to teach and prepare our learners for jobs that have not even existed yet. Jobs requiring a new mix of skills and higher levels of knowledge like expert thinking and complex communicating are in demand, quickly replacing low paying routine jobs (Thrilling & Fadel, 2009).

The 21st century learning is a not a new theme in education. Partnership for 21st Century Skills, a non-profit organisation, created the framework for 21st century learning. The organisation believes that a 21st Century learner should be: a collaborator, networker and communicator. He should also be able to adapt and create, to source for information and media, to be technology savvy and to be dependent on media in its many forms.

Communicating via visuals is gradually becoming less of a field led by domain specialists, phasing into the domain of public communication (Kress & Van Leeuwen, 1996). In this form of communication, visual literacy plays a big role in supporting learners in understanding and evaluating media as well as creating artifacts (Metros & Woolsey, 2006).

With the increasing need for students to take on more responsibility for their own learning and being presented with prospects of using image resources, it is apparent that such skill development is needed because such inadequacy may
hinder the learners from achieving their full potential (Sims, O’Leary, Cook & Butland, 2002).

Literacy is dynamic; evolving over time in reaction to changing applications of technology and social needs (Duncum, 2004). This is further agreed by Sinatra (1986) who said that, “A culture’s predominant mode of literacy depends on the technology and mass media it embraces” (as cited in Stokes, 2002).

Even though young learners have progressively embraced technology and media as part of their daily lives, no guidance has been provided in teaching young people how to critically read, interpret and evaluate this information in class- ‘Viewing’ remains a neglected communication process (Flood, Lapp, & Wood, 1998). Instructions in class remain text-dominant, which is an irony when out of the classroom, they face media and images (Ausburn & Ausburn, 1978; Hobbs, 1997).

While people see visual literacy as trivial and non-academic (Bleed, 2005), visual literacy is important because it is a crucial skill for the future. Hudson (1987) as cited in McMaster (2011) said that over 85% of all our information was attained visually. Additionally, the classic Edgar Dale's cone of experience, developed in the 1940s, alleged that we retain information better by seeing (30%) and even better if combined with audio (50%) versus reading (10%) (Molenda, 2003).

2.2 Defining Visual Literacy

‘Visual literacy’ is a term introduced by John Debes in 1969. He defines visual literacy as “a group of vision competencies a human being can develop by