Høgskolen i Bergen

Masteravhandling

M120UND509

Predefinert informasjon

Startdato:	12-05-2016 17:06	**Termin:**	2016 VÅR
Avslutningsdato:	18-05-2016 12:00	**Karakterform:**	Norsk 6-trinnsskala (A-F)
SIS-kode:	M120UND509 1 MG	**Studiepoeng:**	45
Eksamensform:	Masteravhandling		
Intern sensor:	Zoltan Varga		

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Informasjon fra deltaker

Jeg godkjenner avtalen om tilgjengeliggjøring av masteroppgaven min i BORA:	Valgt

HØGSKOLEN I BERGEN

BERGEN UNIVERSITY COLLEGE

Implementing Graphic Novels to Affect Visual Literacy in an 8th Grade Classroom

Innføring av grafiske romaner for å påvirke visuell literacy i en 8. klasse

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Master i undervisningsvitenskap med engelsk fagdidaktikk
Institutt/program for: Engelsk
Avdeling for: Lærerutdanning
Innleveringsdato: 18.05.16
Antall ord: 38 584

Abstract

Visual literacy has for the past 50 years been an area of research, ever since the term was coined by John Debes (Baylen & D'Alba, 2015, p. xiv), and in the current society, the need for visual literacy skills is only increasing. Research has found that humans can detect and retain visual information after viewing a picture for only 13 milliseconds (Potter, Wyble, Hagmann & McCourt, 2014, p. 274), which is an argument for a further focus on visual literacy in schools. The utilisation of graphic novels is one way to improve visual literacy skills (Rimmereide, 2013, p. 135), and yet classroom teachers seem hesitant to employ graphic books (Thompson, 2007, p. 29). The present thesis explores whether the graphic novel format can be utilised to affect visual literacy in one 8th grade class in Norway. The author procured a sample of two 8th grade classes in Norway, assigning one as the experimental group and one as the control group. Pre- and post-tests were employed to assess the visual literacy level of the pupils in both groups, and the experimental group were the subject of an intervention. The intervention entailed reading of graphic novels, as well as lessons focused on conventions of the graphic novel. The pupils in the experimental group also created their own graphic stories based on panels from pre-existing graphic novels. The present thesis divides visual literacy into two main groups of skills, terming these perceptive and expressive skills. *Perceptive visual literacy*, the ability to decode visual stimuli, was examined in a quantitative manner, comparing scores on the pre- and post-tests. *Expressive visual literacy*, the ability to encode visual stimuli, was examined in a qualitative manner, exploring the free forms of expression found in the graphic stories created by some of the pupils in the experimental group. The analysis of the data found a statistically significant increase in the experimental groups' visual literacy score ($t(25) = 3.38$, $p < 0.01$) with a moderate effect size ($d = 0.6$), while the control group did not have a statistically significant increase ($t(25) = 0.92$, $p > 0.05$). When examining the graphic stories created by the pupils in the experimental group, there also seemed to be a relationship between the degree of perceptive visual literacy measured on the tests and the expressive visual literacy the pupils displayed through their work. This thesis concludes that, in the sample procured for this research project, graphic novels can be utilised to affect visual literacy to a moderate degree, and based on a brief analysis there are indications of a relationship between expressive and perceptive visual literacy.

Sammendrag

Visuell literacy har de siste 50 årene vært et forskningsområde, helt siden termen først ble ytret av John Debes (Baylen & D'Alba, 2015, p. xiv), og i dagens samfunn øker vårt behov for visuell literacy. Forskning har vist at mennesker kan fange opp og lagre visuell informasjon etter å kun ha sett et bilde i 13 millisekunder (Potter, Wyble, Hagmann & McCourt, 2014, p. 274), noe som er et argument for videre fokus på det visuelle i skolen. Grafiske romaner er et verktøy man kan benytte for å påvirke visuell literacy (Rimmereide, 2013, p. 135), men allikevel er lærere nølende når det kommer til å benytte seg av grafiske bøker (Thompson, 2007, p. 29). Denne masteroppgaven utforsker om formatet grafisk roman kan bli benyttet til å påvirke visuell literacy hos en 8. klasse i Norge. Forskningsprosjektet benyttet seg av et utvalg bestående av to 8. klasser i Norge, hvor en klasse var eksperimentgruppe og en var kontrollgruppe. Pre- og post-tester ble brukt for å vurdere elevenes nivå av visuell literacy, og eksperimentgruppen deltok i en intervensjon. Intervensjonen bestod i å lese grafiske romaner, i tillegg til undervisningsøkter som fokuserte på den grafiske romanens konvensjoner og hvordan man leser dem. Elevene i eksperimentgruppen laget også sine egne grafiske fortellinger basert på paneler fra grafiske romaner. Denne masteroppgaven deler visuell literacy inn i to ferdighetsgrupper, perseptive og ekspressive ferdigheter. *Perseptiv visuell literacy*, evnen til å dekode visuelle stimuli, ble vurdert på et kvantitativt grunnlag hvor elevenes nivå på pre- og post-testene ble sammenlignet. *Ekspressiv visuell literacy*, evnen til å kode visuelle stimuli, ble vurdert på et kvalitativt grunnlag, med fokus på de frie visuelle uttrykkene funnet i de grafiske historiene laget av noen av elevene i eksperimentgruppen. Gjennom dataanalysen ble det funnet en statistisk signifikant økning i eksperimentgruppens visuelle literacy ($t(25) = 3.38$, $p < 0.01$) med en moderat effektstørrelse ($d = 0.6$), mens kontrollgruppen ikke hadde en statistisk signifikant økning ($t(25) = 0.92$, $p > 0.05$). Under vurderingen av eksperimentgruppens grafiske historier så det ut til å være et forhold mellom graden av perseptiv visuell literacy, målt på testene, og ekspressiv visuell literacy, vist gjennom elevarbeidet. Denne masteroppgaven konkluderer med at i dette utvalget kan grafiske romaner benyttes til å påvirke visuell literacy i en moderat grad, og basert på en kort analyse er det indikasjoner på et forhold mellom ekspressiv og perseptiv visuell literacy.

Acknowledgements

Through the course of the development of this master thesis, several people have been instrumental for the completion of the project. Though most of these people cannot be mentioned by name here, due to confidentiality, they have been indispensable to my completion of the finished product.

Firstly, I wish to thank the teachers, pupils and schools who participated in the research for this master thesis. One school were a part of piloting the instruments utilised for measuring visual literacy, one school participated as a control group and the final school had a class in the role of experimental group. I, as a researcher, felt welcomed at all of the schools, and I cannot thank them enough for their co-operation.

Secondly, the librarian at Bergen Public Library, who helped me select appropriate graphic novels for this research project, deserves my sincerest gratitude. Her knowledge of age-appropriate books and assistance in deciding which books were suitable for the project was invaluable.

Thirdly, for his instrumental help with the statistics needed for this thesis, I wish to thank Kristian Andersen Rusten. He has helped me understand which tests I needed to analyse my data, and has also examined some of my work for accurateness. The faculty working in the English Department at Bergen University College must also be thanked for their willingness to assist me when their expertise was needed.

Furthermore, I wish to thank my family and friends for their support through this last year of writing. I could not have done this without you. Two people deserve special thanks. Firstly, my boyfriend Emil Reiertsen for his constant support and patience. Secondly, Jannicke Matre Nygård for her support, for helping me when I did not know what to do, and for keeping my spirits up.

Lastly, I wish to thank my supervisor Hege Emma Rimmereide for her continued support and help throughout this process. Her contribution, both as a supervisor and as a researcher and author who has previously examined graphic novels, has been vital to this thesis.

Table of Contents

Figures and tables

1.0 Introduction

The inspiration for writing the present thesis on the topics of graphic novels and visual literacy was based on several elements. Firstly, I have always enjoyed reading, be that in the form of novels, comic books, graphic novels or magazines. When examining different formats it is clear that different skill sets are needed to comprehend the narrative. In the reading of graphic novels, visual literacy is the primary skills set required. Secondly, when studying English at Bergen University College, the visual art forms of graphic novels, picture books and comic books intrigued me with regard to whether these art forms might contribute to pupils' enjoyment of reading in schools. Thirdly, through my almost seven years as a student at Bergen University College I have been surprised to rarely find the format of graphic novels or comics being used when observing teachers at different practice schools. Through the present thesis, I hope to support further the inclusion of the graphic novel, and other visual formats, in education in Norway. Furthermore, the present thesis seeks to affect visual literacy through the implementation of graphic novels in the teaching conducted in one 8th grade class.

1.1 Relevance of the present study

The graphic novel is a format that many researchers have attributed a great deal of positive aspects to with regard to education. The format has been said to help reluctant readers (Thompson, 2007, p. 29; Lamanno, 2007, p. 117; Brænden, 2015, pp. 48-49; Rønning, 2016), support reading comprehension (Rimmereide, 2013, p. 131; Basol & Sarigul, 2013, p. 1627) and help to develop visual literacy (Rimmereide, 2013, p. 135; Burwitz-Melzer, 2013, p. 63). However, there is an abundance of anecdotal evidence arguing for the utilisation of the graphic novel (Clark, 2013, p. 40), creating a need for research attempting to prove the format's usefulness through quantitative measures.

Humans can detect and retain visual information after viewing a picture for only 13 milliseconds (Potter, Wyble, Hagmann & McCourt, 2014, p. 274) and based on this, further developing an understanding of how we can aid visual literacy in the classroom is seen as an important notion. This thesis is concerned with examining whether the graphic novel format can be employed to affect visual literacy in one 8th

grade class. Research examining the concepts as a combination is not abundant and this thesis places itself as an addition in a growing field of research. Furthermore, the current research project aims to find a place for the graphic novel in the Norwegian English as a Foreign Language (EFL) classroom. An EFL classroom is defined as one in which the pupils are being taught English in a country where English is not the native language (CORE Languages, 2015). English is not the native language in Norway, and this term is thereby appropriate.

The terms *visual literacy* and *graphic novels* are both relatively new, as they were both coined in the last 50 years. Visual literacy has been a neglected part of teaching in the English classroom (Burwitz-Melzer, 2013, p. 68), and in our increasingly more visual society (Gillenwater, 2009 p. 33; Howells, 2003, p. 1) this needs to be rectified. The graphic novel format also appears to have been largely absent from the English classroom, perhaps due to the graphic novel's association with comics, and the comic's connotation of being juvenile (McCloud, 1993, p. 3).

No statistics exists regarding the popularity or utilisation of the graphic novel in Norway, but the related format comics has been examined through PISA. In 2009, it was found that 15 % of girls and 30 % of boys read comic books several times a week (Roe, 2010, pp. 106-107). Though this is a decrease from previous years, the data shows that there is an interest for visual formats among young people. Visual formats such as the graphic novel could potentially be a tool to help garnish higher visual literacy scores in our pupils (Rimmereide, 2013, p. 135; Burwitz-Melzer, 2013, p. 63).

This thesis seeks to further the research already done on the topics in question. Where some researchers (Brown & Lockyer, 2007; Arslan & Nalinci, 2014) have only presented tests designed for measuring visual literacy, but no results, and others (Palmer & Matthews, 2015) have presented test results, but lacked a control group, the present thesis provides the results of a test of visual literacy, and employs a control group to strengthen the projects validity. The thesis further presents and discusses the link between encoding and decoding skills related to visual literacy, in this thesis termed *expressive* and *perceptive* visual literacy, through the utilisation of graphic stories created by pupils in the experimental group. Graphic novels have been utilised both as reading material for the pupils in the experimental group, as well as a

source for discussing how one reads visual images. This study bases itself on previous research conducted on the topics of visual literacy and graphic novels. It seeks to cement a place for the graphic novel in Norwegian classrooms by showing how the format was employed to strengthen visual literacy in one 8th grade class in Norway.

1.2 Aims and scope

The present study aims to show a causal relationship between working with the visual format of graphic novels and the pupils' level of visual literacy, and also to further cement a place for the graphic novel format in the English/EFL classroom in Norwegian schools. To achieve these aims the research question that will be answered is:

> To what extent, if any, can graphic novels be utilised to affect visual literacy in one 8th grade class in Norway?

As the term visual literacy can be defined broadly, it will be split into two main halves for the purposes of this thesis. *Perceptive visual literacy*, or the understanding the pupils show when tested, will be measured in a quantitative manner, through scored pre- and post-tests. *Expressive visual literacy*, or what the pupils can produce when they are given a task, will be looked at in a qualitative manner, utilising graphic stories produced by pupils in the experimental group, in correlation with their perceptive visual literacy score. As the current research project seeks to examine visual literacy as a whole, the qualitative data derived from analysing the pupils' graphic stories is utilised to answer the question of whether there is any relationship between the pupils' perceptive visual literacy score and the degree to which they can express their visual literacy. This was accomplished by examining whether the pupils with a higher level of perceptive visual literacy were also able to more adeptly display expressive visual literacy.

One of the distinctive features that separate qualitative data from quantitative data is that qualitative approaches "employ words and *free forms of expression* rather than numerical data" (Befring, 2004, p. 75), while quantitative approaches can be defined as "any investigative procedures used to describe in numerical terms a setting and the things going on in it" (Brown & Rodgers, 2002, p. 118). The graphic stories made by

the pupils in the experimental group are easily identifiable as free forms of expression, while the results from the conducted tests resulted in numerical data after coding. Combining quantitative and qualitative approaches further defines this thesis as one utilising a mixed methods approach (Bergman, 2008, p. 1). The main rationale for focusing mainly on perceptive visual literacy is that this skill set is seen as fundamental to obtaining expressive visual literacy skills. Furthermore, the thesis will examine whether certain characteristics can be identified in the participants who either benefitted greatly from the project, or who did not seem to benefit to a great extent based on test scores. The characteristics that will mainly be examined here are gender and preferred reading format. The terms of *perceptive* and *expressive visual literacy*, and further reasoning for why perceptive visual literacy must be examined primarily will be further explored in section 2.1, 'Visual Literacy', while the methods of measuring visual literacy for this thesis will be further examined in chapter 3, 'Methods'. With regard to the term *graphic novel*, it will be explored in sub-section 2.2.1, 'The graphic novel and the comic book: Separating the formats'.

The intended target population for this thesis are 8th grade pupils, with a sample consisting of two 8th grade classes from two Norwegian schools. This thesis cannot aim to generalize to the target population, due to the utilisation of convenience sampling and the small sample size. To strengthen the external reliability of the thesis, the author aims to be as detailed as possible in the description of the conduction of the project and how results were obtained, facilitating future replications of the research. Replications of the present study would further strengthen its external validity, with regard to whether the results can be generalized (Abbuhl, 2012, p. 297).

1.3 Methods

The current research project employed a quasi-experimental design, incorporating an experimental group and a control group, pre- and post-tests, as well as a 3-week intervention in the experimental group. The pre- and post-tests were designed to measure the pupils' level of visual literacy prior to, and after, the project. The pupils also answered a questionnaire in conjunction with the pre-test and the post-test. In the questionnaire that followed the pre-test, the pupils were asked questions designed to get a sense of their preferred format when reading, their feelings towards reading

comics and whether they knew what graphic novels were. The questionnaire that followed the post-test asked questions that would make it clear whether this project had changed the pupils' attitudes with regard to the questions they were asked on the former questionnaire. In addition to these methods, the pupils in the experimental group had lessons regarding the conventions of graphic novels and also made graphic stories during the project. These graphic stories have been utilised as data in order to gain insight into expressive visual literacy, as the pre- and post-test only measure perceptive visual literacy. The methods are further examined in chapter 3, 'Methods'.

1.4 Visual literacy

Visual literacy is a relatively new concept, coined in 1968/1969 by John Debes (Baylen & D'Alba, 2015, p. xiv; International Visual Literacy Association [IVLA], 2012). Rimmereide (2013) states that visual literacy "refers to the idea that images can be "read", and that their meaning can be communicated through a process of reading" (p. 134). In our increasingly more visual society, where a lot of information is received through visual channels such as television and advertisements, the ability to deconstruct and understand the message we are receiving is more important than ever. A recent definition (Roswell, McLean & Hamilton, 2012) coins visual literacy as "the ability to make meaning from information in the form of an image" (p. 444). The concept is however much more complex than this definition makes it out to be, exemplified by Arslan and Nalinci (2014, p. 62) identifying eight separate elements or skills, which together comprise the concept of visual literacy.

The main reason for why visual literacy as a field of study has perhaps not been present in Norwegian classrooms is that Norwegian EFL teachers may not feel competent in the visual field. This is conjecture, as no research has been done on this particular topic in Norway. However, Robertson (2007, pp. 130-131) states that teachers not feeling competent with regard to teaching visual literacy was part the problem in Kansas at the time of her study. Mostafa (2010, p. 22) also found that the Egyptian teachers in his study had received no formal visual literacy training. Visual literacy has, through the course of this research project, proven itself to be a skill set that can be affected in a short period of time, with this particular sample. The experimental group that participated in this project had a statistically significant

increase in their perceptive visual literacy scores after the three-week intervention. The concept of visual literacy will be further explored in section 2.1, ‘Visual literacy’.

1.5 Graphic novels

The format of graphic novels is seen as a neglected realm of literature in the subject of English in Norwegian classrooms by the author of this thesis. Often associated with being juvenile (McCloud, 1993, p. 3) and not seen as appropriate reading in schools (Cleaver, 2008, p. 33), the format has, together with its older sibling comics (Connors, 2012, p. 33), not been justly incorporated in Norwegian classroom activities. When searching for schools to do the research for this master thesis, most teachers did not know what the term graphic novel entailed, though they all knew what comics were. However, the comic format was not something that was normally included in their syllabuses. Graphic novels are a visual format that tells a story through a combination of words and images. Exposures to this type of format, when the book is at an appropriate reading level, and the task of understanding this type of book in a school setting, can only aid the pupils as they mature in the multimedia age (Kreft & Viebrock, 2014, p. 86). What a graphic novel is, specifically, and how they can be utilised in our schools will be further examined in section 2.2, ‘Graphic novels’.

1.6 Main findings and limitations

The analysis of the data collected for the current research project unearthed several interesting findings. The visual literacy scores calculated from the pre- and post-test showed that the experimental group had had a statistically significant increase in their visual literacy score, while the control group had not. A statistically significant difference between the two groups had also emerged from the time of the pre-test to the post-test. Though these results cannot be generalized due to convenience sampling and the small sample size, these results show that graphic novels could be of use with regard to affecting the level of visual literacy in these 8th grade pupils. Replications of the present study are necessary in order to examine whether the results apply to the population, or merely the sample procured for this thesis.

A pattern that emerged from the data is that gender does not seem to be a factor with regard to visual literacy, or the degree to which the visual literacy score increased. An indication was also present in the data signifying that the pupils' preferred formats when reading can be an indicator of their visual literacy score. Pupils who preferred comic books and magazines had a higher average gain in visual literacy scores than those who claimed to prefer reading novels.

Several limitations can be noted for this study, as it can for any study conducted in the field of education. One major limitation is that of time. Schools are pressed for time from the Department of Education, through their own principal and teachers, and also from the pupils and their parents. When trying to find a school that would be willing to donate their time to a project such as this, certain concessions had to be made. One of these was, regrettably, time spent at the school where the experiment took place. Had the project lasted for three months, rather than three weeks, one might have seen a larger increase. This cannot be claimed for certain, but the indications are present in the data. Another important aspect is that of sample size. As only two classes were examined, the sample is too small to make any claims with regard to generalization. Generalization is also made difficult due to the convenience sampling (Dörnyei & Csizèr, 2012, p. 81). The limitations of this study will be examined in section 3.10, 'Limitations'.

1.7 Structure

Chapter 2 focuses on terminology, theory and previous research. Here the main areas of research, visual literacy and graphic novels, will be explored with regard to what each element entails, as well as previous research in each field. Why each element is essential as an active teaching element in schools will also be explored. A section will also present research that incorporates both visual literacy and graphic novels.

Chapter 3 explores the research methods utilised during the course of this master thesis. The chapter explores research design, research methods, variables, limitations and tools for analysis. Ethical concerns will also be discussed in this chapter.

Chapter 4 presents the results from the research conducted for this thesis. This includes the data from the pre- and post-tests, the responses to the questionnaire, and in-depth looks at three pupils' graphic stories. The three pupils' products are presented to provide an insight into expressive visual literacy. This chapter also includes the results from the re-coding conducted two months after the initial data processing.

In chapter 5, the research question is discussed based on theory, methods and results. Here it will also be discussed whether the aims of the research has been met, and further to what extent.

Chapter 6 entails a summary of the discussion, a presentation of the main findings from this thesis and a discussion as to what could constitute further research. Final remarks with regard to the present thesis will also be expressed in this chapter.

The appendices include the pre- and post-test, the books that were utilised during the course of this project, the categorization forms for the tests, the panels utilised as a basis for the graphic stories made by the pupils and the lesson plan that guided the intervention. It was seen as relevant to include all of these materials, as both the tests and the categorization forms are developed for this thesis, based on previous research. Presenting these materials makes replications of the research easier, strengthening the study's external reliability.

2.0 Background

This master thesis seeks to explore the format of graphic novels, and how the format can be utilised to affect visual literacy skills in 8th grade pupils. This chapter will serve the purpose of defining what the terms *visual literacy* and *graphic novels* entail, for the purposes of the current research project. It will also explore previous research on both topics, and further delve into how previous research has explored each topic, separately and combined. How each concept can be utilised in the context of schools will also be explored.

2.1 Visual literacy

The purpose of this section is to define visual literacy as a concept, as well as to explore previous research focusing on measuring this construct. The concept of literacy in general will be briefly explained first, as visual literacy is a type of literacy. Following this, visual literacy will be defined and previous research attempting to measure the construct will be presented. The chapter will also explain why visual literacy is a field of importance, and why there should be an expressed focus on visual literacy in our schools.

2.1.1 What is literacy?

This thesis aims to shed light on visual literacy. As visual literacy is a type of literacy (Robin, 2014, p. 432), what literacy in general is defined as will be briefly presented first. According to the online dictionary Merriam-Webster, literacy is seen as either the ability to read and write, or knowledge that relates to a specified subject (Literacy, 2016). Literacy as the ability to read and write is more relevant to this thesis, as visual literacy can be seen as the ability to read and create images.

Literacy, as visual literacy, is comprised of several elements. Frey and Fisher (2008, p. 1) state that these are reading, writing, speaking and listening. They argue that viewing (visual literacy) is normally not mentioned as a separate entity, but rather as something that supports the other entities that are required to be literate. In the society of the 21st century, with visual images flashing at us everywhere we go, it stands to reason that a visual element needs to be noted as a fifth element in the skill set that comprises literacy.

It must also be made clear that though this thesis is advocating for the need to focus on visual literacy, this in no way implies that literacy in the traditional sense, or print literacy as it is also known, should be abandoned. Gillenwater (2009, p. 36) and Howells (2003, pp. 4-5) both agree that though the visual field is an important area of focus today, we must not lose sight of literacy in the traditional sense. As Howells stated: "Despite the pre-eminence of visual communication today, we still need words and we still need to know how to read them in both the narrowest and the widest sense" (2003, pp. 4-5).

2.1.2 Defining visual literacy

John Debes, who coined the term *visual literacy* in 1968/1969 (Baylen & D'Alba, 2015, p. xiv; IVLA, 2012), defined the term as referring to "a group of vision-competencies a human being can develop by seeing and at the same time having and integrating other sensory experiences" (IVLA, 2012). It is in other words not an innate ability that is programmed and developed at the time of birth. Debes went on to state; "through the creative use of these competencies, he is able to communicate with others. Through the appreciative use of these competencies, he is able to comprehend and enjoy the masterworks of visual communication" (IVLA, 2012). As one can observe, the notion of visual literacy has from day one been defined as a combination of an expressive, or creative, skill set and a perceptive, or appreciative, skill set.

Debes' definition is not canon, and there are many definitions of the concept from which to choose. Visual literacy can simply be defined as "the ability to make meaning from information in the form of an image" (Roswell, McLean & Hamilton, 2012, p. 444). Based on this statement, a visually literate pupil will be able to extract the relevant pieces of visual stimuli, and also be able to transform this visual stimulus into information he or she can utilise further. Topiel (2015) terms these abilities decoding and encoding skills, while Krueger (2014, p. 52) uses the terms receptive and productive skills. Communication presented in a visual manner is always coded (Kress & van Leeuwen, 1996, p. 32). It is clear from the different definitions that visual literacy entails at least two main groups of skill sets.

As different terms have been used for the two groups of skills that comprise visual literacy, new terms will be utilised in the present thesis, to avoid confusion as to what is intended when using a certain term. For the purposes of the current research project, all skills that embody decoding skills will be termed *perceptive visual literacy*. To be perceptive is to have or show "an ability to understand or notice something easily or quickly" (Perceptive, 2016). A pupil with perceptive visual literacy skills will therefore be able to understand the intended meaning of an image (or other visual stimuli) and will be able to decode the information to make use of it. All skills that embody encoding skills will be termed *expressive visual literacy*. The term *expressive* can be defined as "effectively conveying meaning or feeling" (Expressive, 2016). Therefore, a pupil with expressive visual literacy skills will be able to communicate their message visually, in a way that can further be perceived by another member of the visually literate society. The ability to draw can be seen as an element related to expressive visual literacy, but it falls beyond the scope of the present thesis. As one can create a graphic story on a computer for example, where the ability to draw is not needed, this ability is not seen as a relevant part of expressive visual literacy for the purposes of the current research project. Further rationales for not including the ability to draw as a part of expressive visual literacy will be further examined in section 3.10, 5.2.1 and 5.4.1. Visual literacy is, in the current research project, seen as a set of skills, separated mainly into two groups of skills, termed perceptive and expressive visual literacy. A visually literate person embodies both perceptive and expressive visual literacy skills.

The concept of visual literacy is a complex notion. Arslan and Nalinci (2014, p. 62) identified eight separate elements that together comprise the concept of visual literacy (figure 1).

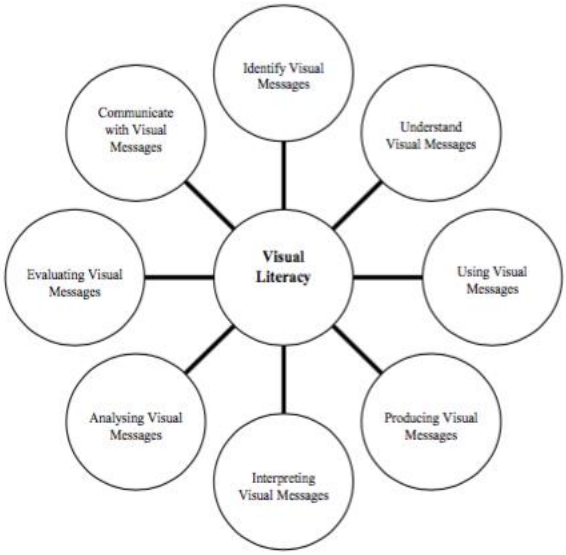

Figure 1: Fields of Visual Literacy (Arslan & Nalinci, 2014, p. 62)

Figure 1, developed by Arslan and Nalinci (2014), clearly shows that there are both expressive and perceptive elements comprising the concept of visual literacy. The abilities of understanding, identifying, evaluating, analysing and interpreting can be viewed as perceptive skills; while using, producing and communicating can be viewed as expressive skills. If one were to make a scale to determine the difficulty of these skills one could transfer the terms to Bloom's taxonomy (Figure 2), which is a hierarchical framework for categorizing educational goals (Bergem & Dalland, 2010, p. 65).

Figure 2: Bloom's taxonomy (n.d.)

The hierarchical nature of Bloom's taxonomy indicates that the challenges the pupils face both increase in difficulty and demand a higher level of cognitive development (Bergem & Dalland, 2010, p. 65). As one can see based on Figure 2, most of what we

classify as perceptive skills would be defined as easier to obtain than the skills defined as expressive. Another way to put this would be to categorize the perceptive visual literacy skills as fundamental to developing expressive visual literacy skills. The exception is perhaps what in Bloom's taxonomy is termed *applying*. Applying visual literacy skills can be interpreted as a reference to a person expressing what she/he understands perceptively, but it could also be understood as a reference to using what one knows perceptively in an expressive manner. Figure 3 shows an adapted Blooms taxonomy, created for this master thesis, based on Figure 1 and 2. The purpose of combining these two figures is to further show that visual literacy combines multiple skills, some perceptive and some expressive, and that these skills build upon each other. Figure 3 will be used as a basis for discussing the relationship between perceptive and expressive visual literacy skills in sub-section 5.2.1.

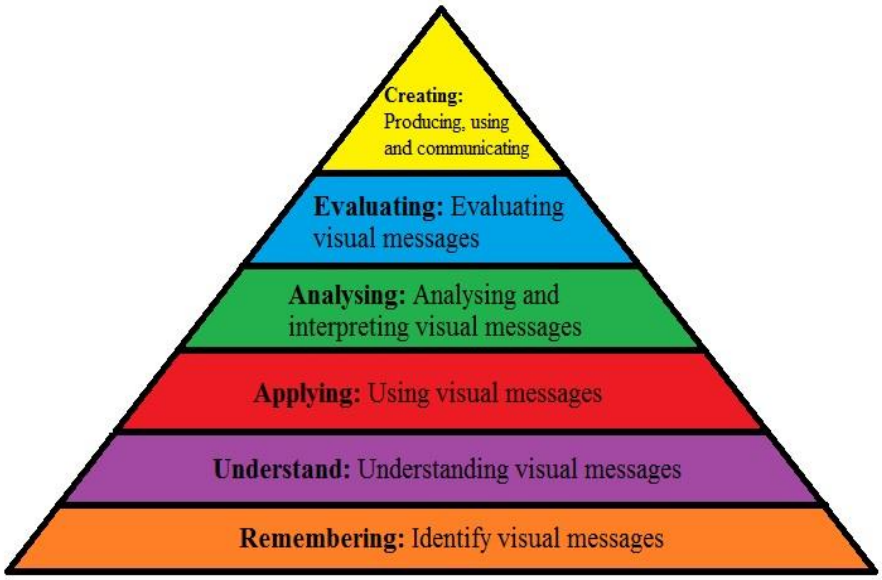

Figure 3: Adapted Bloom's taxonomy

This revised model suggests that the three expressive skills are more difficult to obtain than the skills defined as perceptive, as the expressive skills build upon the perceptive skills. In other words, the expressive skills demand a higher level of cognitive development. Before the pupils are able to effectively produce and communicate using visual messages, they must be adept at analysing and evaluating the visual messages they can identify.

Baker (2012, p. 44) claimed that visual literacy mainly has been the responsibility of the Art teacher. According to Williams (2008, p. 14) visual formats, such as the

graphic novel and the comic book, are classified as art and therefore belong in the Art classroom. Baker (2012, p. 41) argues that in our continuously more visual society, the need for pupils to be visually literate is increasingly important. Due to this, the concepts of visual literacy, taught through photography in Bakers' mind, should be taught in other subjects as well. "So much of today's culture is visual that we all need to be visually literate in order to function coherently in the contemporary world", Howells (2003, p. 2) stated. One only needs to look around the room one is currently sitting to be in need of visual literacy: An image hanging on the wall, an advertisement on the computer screen or television, or the cover of a book; understanding all of, or any of, these demand visual literacy.

2.1.3 Measuring visual literacy

Observing what happens in someone's mind, or cognitively, is clearly a complicated endeavour. This sub-section examines previous pieces of research that have attempted to measure visual literacy. Arslan and Nalinci (2014) sought to develop a scale for determining visual literacy levels. Their target population were university students. Using a sample of 414 3rd and 4th year students, they tested visual literacy based on seven dimensions, culminating in a descriptive research study evaluating the scale, which they found valid and reliable through the use of statistical measures. They provided no test-results in the aforementioned article however. However, their study showed that there is interest in understanding visual literacy, but the lack of test results in their paper is sadly indicative of most of the studies seeking to develop a scale to measure visual literacy.

Brown and Lockyer (2007) presented a multiliteracy test, with a specific focus on the visual, and three distinct levels of visual literacy. They separated the responses given on the test into *lower range responses*, *mid range responses* and *better responses* (Brown & Lockyer, 2007, p. 9). Students exhibiting *lower range responses* do not explore, they only describe, they neglect to compare and have simplistic responses. *Mid range responses* are characterized by a limited exploration of the topic, an ability to identify and descriptions rather than interpretations. A high level of evaluation, ability to discuss, supported claims, holistic accounts and well-articulated ideas characterizes the students with the highest score, *better responses*. The test utilised by

Brown and Lockyer (2007) was labelled a criterion-referenced test. They define this as “an assessment where individual’s performance is compared to a specific learning objective or performance standard and not to the performance of the other students” (Brown & Lockyer, 2007, p. 9). The test was conducted using a pre-/post-test-design, with year 10 pupils as the sample. As with the former test by Arslan and Nalinci (2014), the test results have not yet been published.

Visual literacy was also separated into three levels by Geltman and Mechlin (2014) at their 2014 presentation at the International Visual Literacy Association. Their levels were labelled *untrained*, *selective* and *highly visual*. A student with an *untrained* response spends very little time scrutinizing images, identifies very few details, cannot generate stories about images and believes there is only one interpretation of an image. *Selective* responses are signified by the identification of some details and an understanding that there can be multiple interpretations of an image, although the student believes that his/hers is the correct one. Students on this level are also able to tie the easily observable elements of an image into a story, as well as being able to describe images fully, but in a haphazard way. *Highly visual* students are able to identify many details, are well organized in their descriptions, can tie multiple elements of an image into a narrative, and can generate multiple interpretations. When Geltman and Mechlin (2014) conducted their test of visual literacy, they utilised Youtube and Skype to conduct an oral test. The sample were shown a series of images and they were then asked to comment on the following five points:

- Describe what you see.
- Identify what it is.
- What details do you notice?
- Tell us a story about the image.
- Other interpretations?

Geltman and Mechlin (2014) found, amongst other things, that there was a spectrum of visual literacy mastery in their sample population and that one individual can possess varying levels of visual literacy skills.

A pilot study conducted by McMullen and Woo (2002) utilised a module from the interdisciplinary curriculum ARTiFACT, which is specifically designed for developing visual literacy skills in middle school pupils. The goal here was to "build visual literacy skills by enabling students to form stronger connections between the use of formal features in photography and the meaning of an image" (McMullen & Woo, 2002, p. 2). The pupils' visual literacy skills were tested prior to and after the project. This was done by showing the pupils a photograph, and asking them what they noticed, what they thought the photographer was trying to convey and which choices the photographer had made when the image was taken. It was also tested whether the pupils' skills were transferrable, by showing them a new image. In addition to these measures, the pupils ranked images based in their effectiveness with regard to conveying a message (McMullen & Woo, 2002, p. 5). It was found that the module could be effective with regard to teaching visual literacy skills, showing that visual literacy can be taught when actively engaging with visual elements.

Few research studies have been presented where actual gain scores in visual literacy skills have been included. One of the exceptions to this is a study by Palmer and Matthews from 2015. Here they utilised an intervention with a pre-test and a post-test. The intervention included formal visual literacy instruction and they sought to, amongst other things, measure the students' increase in visual literacy. Though this study employs a one-group design, and hence there is no control group, their results were quite interesting. Based on paired *t*-test results they found that pupils who had been exposed to formal visual literacy instruction not only made more basic ($t(15) = 4.291$, $p < .001$) and advanced ($t(15) = 2.440$, $p < 0.14$) observations, but the pupils also connected the visual elements to their claims to a larger degree (Palmer & Matthews, 2015, pp. 4-6). Though there is no control group to further ensure that these results occurred due to the intervention and not for some other reason, the study indicates that visual literacy can be taught through formal instruction.

2.1.4 Why is visual literacy important?

As Gillenwater (2009, p. 33) and Howells (2003, p. 1) stated, we live in a visual society. In order to be able to understand visual messages, our pupils must be taught how to read visual communication, so that they may decode the visual messages and

understand the intent behind the information currently being provided. According to research conducted at MIT, humans can detect and retain visual information after viewing a picture for only 13 milliseconds (Potter et al., 2014, p. 274). Using visuals is therefore logically a way to speed up the process of learning, if the recipient can understand the message.

The development of visual literacy skills adds additional modes of making meaning (Gillenwater, 2009, pp. 34-35), which in turn can lead to pupils with a higher level of awareness about the world around them. Roswell, McLean and Hamilton (2012) claimed that "developing visual literacy invites students to reflect on and critique the production of a range of visual texts in their everyday lives such as websites, advertisements … and television shows" (p. 446). Newspapers, a medium once relying solely on traditional literacy, are now full of images, demanding a focus on the concept of visual literacy (Robertson, 2007, p. 6). One may claim that simply by existing in an increasingly visual society, everyone must already be visually literate. Howells (2003) disagrees with this notion, stating:

> Certainly, we are practised and experienced viewers of contemporary visual texts, but so much of this experience is grounded in habit rather than analysis. We are all too often complacent and accept visual literacy as a passive rather than an active pursuit (Howells, 2003, p. 5).

Gillenwater (2009, p. 34) states that we rely on prior knowledge in the form of mental images to mentally form a representation of what we are decoding via print literacy in our minds. Due to this, Gillenwater (2009, p. 34) proposes that visual literacy is a prerequisite for print literacy, employing the use of picture books as a learning tool for young children as a support for this claim. The visual is also seen as the fundamental form of literacy by Berger (2008, p. 1) who stated; "seeing comes before words. The child looks and recognizes before it can speak." These statements, in the least, supports a focus on visual literacy with younger pupils, but as other researchers presented in this chapter have stated, visual literacy must be an active pursuit also for older pupils, as well as adults.

2.1.5 Visual literacy in education

The case for why visual literacy is important in general has been made previously in this chapter, but what remains to be said is why and how one could and should teach this skill set in our schools. In the current society, visual expressions play a prominent role. Due to this, "…it may be incumbent on the system of formal education to pay more attention to students' abilities to both comprehend and create messages for these media" (Messiars & Moriarty, 2004, p. 480). This can be done through an active focus on visual literacy, dually examining perceptive and expressive modes of the concept. We should take every opportunity to help our pupils communicate in a visual manner (Burmark, 2008, p. 23). The following sub-section will briefly examine where other researchers have found that visual literacy should be taught in the educational system and also the role of the teacher in the visual literacy education of pupils today.

Gillenwater (2009) claimed that teachers "persist in teaching a one-dimensional concept of literacy, while students learn to negotiate their out-of-school experiences with images via informal, ad hoc methods picked up from trial and error, peers and from the media itself" (p. 33). This would indicate that visual literacy is not being taught in schools, a puzzling notion when images play an important role in the pupils' life outside of school (Kress & van Leeuwen, 1996, p. 16). Robertson (2007, pp. 130-131) found that teachers in Kansas had received little formal training with regard to teaching visual literacy, which led to visual literacy being seen as secondary to traditional literacy. Egyptian teachers also claimed to have received no formal visual literacy training in Mostafa's (2010, p. 22) study. Robertson (2007, p. 8) provides a chart (Table 1), which illustrates the areas the National Council for Teachers of English and the International Reading Association found that the English teacher should be responsible for.

Table 1: English/Language Arts Areas of Instruction (Robertson, 2007, p. 8)

	Aural/Oral	**Alphabetic**	**Visual**
Receptive	Listening	Reading	Viewing
Expressive	Speaking	Writing	Presenting Visual Information

Here it is clear that in order to include visual literacy in the English classroom we must include the visual as a field, equal to the teaching of oral and alphabetic skills. To do this, teachers need to be adequately educated and motivated for the task at hand. Burwitz-Melzer (2013, p. 69) proposes that visual literacy should be an explicit focus in teacher education, thereby aiding the problem of teachers being uneducated on the topic of visual literacy. Through the teachers feeling educated on the topic of visual literacy, their motivation for teaching the topic may increase. The teachers' motivation for teaching visual literacy may be lacking due to what Gillenwater (2009) terms "an ideological (and subsequently naturalized) preference for print literacy" (p. 33). He believes that this preference stems from the clear need pupils have for print literacy. To get a job and function in society, one must be able to read and write. The dilemma is that in order to function in todays' society, one also needs to be visually literate. Furthermore, it was suggested by Kress and van Leeuwen (1996) that there may be an opposition to visual media or visual literacy in areas where they can be an alternative to writing because this can threaten "the present dominance of verbal literacy among elite groups" (p. 16).

Visual literacy consists of elements that are relevant for many subjects in schools today, and where visual literacy should be taught is therefore a relevant question. Does the teaching of these sets of skills belong in the English/EFL classroom, where the concept of literacy is strong? Alternatively, should visual literacy be taught in the Art classroom, where the concept of the visual is already being taught? Robertson (2007, pp. 130-131) and Mostafa (2010, p. 11) both note this dilemma, and they both claim that the main problem seems to be that the English teacher might not feel competent enough with regard to visual imagery to teach visual literacy to his or her students. Conversely, the Art teacher may feel limited when teaching the concept of literacy. So where does that leave visual literacy? Robertson (2007, p. 4) and Mostafa (2010, p.3) both stated that an interdisciplinary approach is called for. If there is a lack of education on each individual teachers' part that is causing visual literacy to be neglected, then perhaps a collaboration between the English teacher and the Art teacher is needed.

If, as Gillenwater (2009, p. 34) claimed, visual literacy is a pre-requisite for print literacy, and furthermore that a pupil who is only literate in the traditional sense (print

literacy) is only partially literate, visual literacy training has an important place from early childhood through adulthood. This thesis examines the visual format graphic novels as a possible tool for affecting visual literacy. The role of the graphic novel in schools will be examined in sub-section 2.2.3, and through this examination, the notion of visual literacy in schools will be further exemplified.

2.2 Graphic novels

Since the dawn of the cave painting, humans have created and enjoyed visual literature. As we travel through history, we find a multitude of different formats through which this visual literature has been expressed. Today, one such format is the graphic novel, which was birthed through the comic. McCloud (1993) names Rudolphe Töpffer as the father of the modern comic (p. 17). As Töpffer lived in the early 19th century, the modern comic will soon celebrate its 200th birthday (Rudolphe Töpffer, 2016). When exactly the graphic novel originated is up for intense debate, but Will Eisner`s *A contract with God, and other Tenement Stories* from 1978 is by many seen as the first graphic novel in the United States (Murray, 2016), and Eisner is also seen as the person who coined the term graphic novel (Rimmereide, 2013, p. 133). Eisner (1985) defined the graphic novel as a form of sequential art (p. 141). Sequential art was further defined by Eisner (1985) as "the arrangement of pictures or images and words to narrate a story or dramatize an idea" (p. 5).

Versaci (2007, p. 2) claims that one of the reasons why graphic novels, and comics, are not being justly appreciated as the literature that they are, are their connotations to what he terms *escapism*. Literature, and other forms of entertainment, with the connotation of escapism, is "the kind of material that we engage with when we simply want to shut down our thinking centers" (Versaci, 2007, p. 3). Versaci's statement is further supported by Miller, who stated that there has been a stigma against comic books in America, claiming that this may be simply because other books are deemed more valid or that comics may not be accepted as serious literature (Cleaver, 2008, p. 30). "Historically, comics were marginalized in the art world, but they are getting more critical attention in current and contemporary media", Williams (2008, p. 14) stated. So perhaps the comic, and further the graphic novel, is finally being accepted as serious literature. As Brenner (2011) notes;

> Graphic novels and comics are a different way of both telling and digesting stories, neither better nor worse than prose as a delivery method for stories, and as they challenge how reading is defined, their addition to canon increases the variety and reach of storytelling (p. 257).

All forms of literature can have the connotation of escapism and what constitutes escapism is dependant on what each individual finds enjoyable. Versaci (2007) further claims that he does not believe that escapism and literature are mutually exclusive, stating; "the notion to escape lies at the heart of our engagement with all text" (p. 5). Including literature in school syllabuses that allow pupils to escape into the text, such as graphic novels, may increase the pupils' enjoyment of reading and further motivate the pupils to read (Jennings, Rule & Zanden, 2014, p. 272).

2.2.1 The graphic novel and the comic book: Separating the formats

This thesis is interested in assessing whether graphic novels can be utilised to affect visual literacy and for that reason it is appropriate to define what the graphic novel actually is. In the 21st century, the comic book; the picture book; and the graphic novel are perhaps our main sources of contemporary visual literature. These are all formats, not genres (Nix, 2016). The picture book is similar to the graphic novel in many respects (Burwitz-Melzer, 2013, p. 61). Picture books, as graphic novels, constitute a visual format that can be utilised when working with visual literacy in the classroom (Burwitz-Melzer, 2013, p. 63). Further examining the picture book falls beyond the scope of this thesis, but much of the research and examination executed regarding picture books as a visual format is transferrable to the utilisation of graphic novels focused on in the present thesis (e.g. Krueger, 2014; Burwitz-Melzer, 2013; Sipe, 2011; Pantaleo, 2011).

What exactly a graphic novel is cannot be discovered by simply reading an article or two. Most authors operate using their own unique definitions, albeit with certain common threads. A common definition of the graphic novel format is that it is "a fictional story that is presented in comic-strip format and published as a book" (Graphic novel, 2016). In this definition of the graphic novel, one can see the notion of how difficult it is to define this format. The very definition excludes non-fiction as a possible genre that can be found within the graphic novel format. There are however

numerous examples of non-fiction graphic novels, such as *Benjamin Franklin: An American Genius* (2006) by Kay Olson, which is a biography examining the life of Benjamin Franklin, and *Understanding Comics: The invisible art* (1993) by Scott McCloud, which is a textbook about comics, in a graphic novel format. Connors (2012) defines the graphic novel as "a book-length narrative written in the medium of comics" (p. 33) and further dubs the graphic novel as the younger sibling of the comic. Furthermore, McCloud (1993) defines the comic as "juxtaposed pictorial and other images in deliberate sequence intended to convey information and/or to produce an aesthetic response from the viewer" (p. 9). There appears to be as many definitions, or attempts at such, as there are graphic novels.

Graphic novels are similar to comic books in that they are sequential art that tell a story, but unlike comics, graphic novels are normally longer, have a more complex plot and are ordinarily stand-alone stories. Both comic books and graphic novels utilise the style of cartooning, albeit utilising different degrees of abstraction, from realistic to simplistic (McCloud, 1993, p. 45). Gillenwater (2009) calls the graphic novel a "self-contained, long-form comic book" (p. 35), a statement suggesting that there are not many characteristics separating the formats. Graphic novels can, according to Carter (2007) include "book-length sequential narratives featuring an anthology-style collection of comic art, a collection of reprinted comic book issues comprising a single story line (or arc), or an original, stand-alone graphic narrative" (p. 1). For the purposes of this thesis, the stand-alone graphic narrative was seen as the most relevant type of graphic novel to utilise, mainly due to its closer resemblance to the classic print novel. Though a graphic novel in this sense is a book with one main story that starts and ends in the same book, this does not mean that a graphic novel cannot be serialised, which is the case for the books about *Aya* by Abouet and Oubrerie.

In graphic novels and comics, one main element in both formats is that they utilise words and images in such a way that they are integrated and the story can only be told utilising the combination of the two (Brenner, 2011, p. 257). In other words, they employ what Sipe (2011) terms as synergy; "the effect that text and pictures produce together that would not be achieved if either were missing" (p. 242). The textual and visual elements in the graphic novel can inform or contradict one another. Examining

the notion of synergy with pupils can make them more aware of the underlying relationship between the elements in the story and can lead to a deeper understanding of the narrative.

There are few clear distinctions between comic books and graphic novels (Sipe, 2011, p. 249). This would mean that in order to define the graphic novel one would have to separate the format from comics. This is not as simple as it sounds. Two main distinctions, in addition to the graphic novel ordinarily being self-contained, are commonly utilised to distinguish the two formats, length and age appropriateness. When we pick up a comic book, as opposed to a graphic novel, the length and size of the literature we are examining are a feature that would appear to easily distinguish them from one another. As Brenner (2011) stated; "… all comic strips, comics, and graphic novels are essentially the same format. The shift between these are not differences in storytelling technique but in length, from (approximately) four panels to 30 pages to anywhere from 100 to 1'000 pages" (p. 257). Based on this we can state that an initial distinction would be that the graphic novel is much longer than a comic book. Fallis (2005) claims that the term *graphic novel* refers to "visual images presenting a story in a more self-contained, novel-like format as compared to the more juvenile, serial comic book" (p. 16). Based on this statement, one could state that the comic book has a younger target audience, while the graphic novel is for the more sophisticated or older reader. However, if one is delves further into the literature, it is clear that age appropriateness alone is not an adequate distinction. Graphic novels are seen by Nix (2016) as a "story told in a comic book format, for any age", and comics have dealt with mature subject matter since at least the 1970s (Versaci, 2007, p. 10). This would mean that age appropriateness cannot accurately be used as a distinction on a general basis.

Defining the graphic novel and the comic book

To lay this debate to rest, at least for the purposes of this thesis, it will be concluded that a piece of visual literature shorter than 30 pages, which utilises the style of cartooning, is classified as a comic/comic book. Comic books are not self-contained, but rather serialized, meaning that the main story arc continues in the next issue of the comic book series. If a book is more than ca. 36 pages long, is self-contained, and

employs the style of cartooning, it is classified as a graphic novel. These distinctions are vague at best, and will not always be adequate, but it is a starting point, and a clarification as to what is meant by the term graphic novel for the purposes of the current research project.

Hybrids

A different distinction, albeit an important one for the purposes of the present thesis, is the distinction between a graphic novel and a hybrid. Hybrids are sometimes referred to as graphic novels, but are characterized as hybrids here as they are something slightly different than what in the current research project is defined as a graphic novel. An example of such a hybrid is provided by Brenner (2011); "The Diary of Wimpy Kid is a true hybrid in that portions of the story are told as comics and portions are told in prose" (p. 257). In a graphic novel the story is told through images, or panels, where the text is incorporated into the panels. When the prose is a separate section of the book, the book is deemed a hybrid.

Features of the graphic novel

In order to utilise a format, in this case the graphic novel, to affect visual literacy, a knowledge of conventions and features are necessary (Basol & Sarigul, 2013, p. 1627). Rimmereide (2013, p. 135) notes *panels* and *gutters* as important features of the graphic novel, as well as comics. Panels can be defined as each "image" in the story. They are separated by visual or implied boundaries, and the space between them is called the gutter. It is in the gutter the reader has the opportunity to infer what is happening, and fill in the blanks. This process is termed closure by McCloud (1993, p. 63). These terms are both present in the realm of comics as well, including terms such as *speech bubbles/balloons* and *icons.* As the analysis of graphic novels is not of particular interest in this thesis, these features will not be examined further. They are merely mentioned here as important aspects that should be noted when one examines this format, and as conventions the pupils must be made aware of to be able to navigate the graphic novel and the comic for academic purposes. The intervention conducted for this thesis included a lesson where the pupils were taught certain conventions of the graphic novel. This will be presented in sub-section 3.7.

2.2.2 The Norwegian context

Before discussing why and how graphic novels can be utilised in our schools, it is necessary to paint a picture of the Norwegian context. As there is almost no Norwegian research with regard to graphic novels, this sub-section will focus on the graphic novels' older sibling, comics.

Research has shown that Norwegian pupils read comic books voluntarily. PISA 2009 (Roe, 2010, pp. 106-107) found that approximately 15 % of Norwegian girls read comic books several times a week, while nearly 30 % of boys did. This is a decline from 2006, when closer to 25 % of girls stated to read comic books several times a week, and almost 50 % of boys stated the same. In comparison, newspapers were the most popular format to read both years, with a little over 40 % of girls and approximately 50 % of boys reading this format several times a week in 2009. However, Norwegian girls were reading more comic books than Danish, Icelandic and Swedish girls, only being beaten by the Finnish girls. The Norwegian boys reign on top with regard to the Nordic countries' reading of comic books.

Comic books are slowly, but surely, making their way into Norwegian schools. At Veitvet school, a science teacher in the 10th grade employed the Norwegian comic book *Nemi* when discussing the environment and our climate (Sollien, 2010), and at Refstad school in Oslo, 3rd graders are not only reading comic books, but they are also making them (Osloskolen, 2016). Garmannslund and Amundsen (Rønning, 2016) stated that comic books can help aid textual understanding for struggling readers, and urge teachers to employ comic books in their classrooms.

When we discuss the Norwegian context, it is relevant to examine the framework that guides the work being done in our schools. *The National Curriculum for Knowledge Promotion in Primary and Secondary Education and Training* [LK06] will be discussed in the next sub-section (2.2.3), as it relates to how one can utilise graphic novels (and comics) in schools today. What will be noted here is that LK06 is quite open to interpretation, whereas the former framework, *Læreplanverket for den 10-Årige Grunnskolen* [L97], had a more explicit and detailed structure. The aims for grades 1-4 in the subject of Norwegian explicitly mentioned both picture books and comic books as a format the pupils must meet, as well as images as a visual element

that must be examined (Det Kongelige Kirke-, Utdannings- og Forskningsdepartementet [KKUF], 1996, pp. 117-120). In the 6th grade, the pupils were to be taught the concept of synergy, and in the 8th grade the pupils were going to apply the knowledge of this convention to their understanding of comic books (KKUF, 1996, pp. 123-126). The importance of a constant focus on visual literacy was understood by the creators of the aims and goals in the subject of Norwegian in the previous framework. The importance of images was also understood by the creators of the aims for the subject of English, where the aims for grades 1-3 explicitly notes images as an important tool in the learning of English (KKUF, 1996, p. 227). If one was hoping to find comic books (or graphic novels for that matter) as an explicitly chosen format here, one will be disappointed. As the pupils grew older, the focus on images disappeared as the pupils' skills in English were improving. That is not to say that there are not certain aims where one could use graphic novels or comics to accomplish an aim, but for such a detailed framework, the omission provides a clear statement of not wishing to include the comic as a tool in the subject of English. The present framework, LK06, opens up for a large degree of interpretation. This means that a teacher who sees the values of visual formats, such as graphic novels, is free to utilise them.

2.2.3 Why should we utilise graphic novels in schools?

There are several convincing reasons for utilising graphic novels in our schools, but there is no national data showing the use of the format in Norwegian schools. Researchers from other countries (Cleaver, 2008, p. 29; Lamanno, 2007, p. 28) claim that graphic novels are already being used as educational tools, as supplements to traditional literary work, and are being taken seriously as literature. However, Lykke (2000, p. 15), a Norwegian researcher, stated that both theoretically and in research in general, he finds that illustrated books as a whole are marginalized. Thompson (2007, p. 29) agrees with Lykke, claiming that classroom teachers are hesitant to embrace graphic books. Thompson (2007, p. 29) states that teachers may experience this hesitation because visual formats, such as graphic novels and comic books, were formerly viewed negatively and blamed for illiteracy. Teachers' hesitation to employ graphic books is further emphasised by Clark (2013, pp. 40-41). In Clark's study, the majority of the participating preservice teachers did not foresee value in graphic

novels prior to reading them, a view that drastically changed after engaging with the format. Opening teachers' eyes to the many benefits of utilising graphic novels in the classroom is a step towards further inclusion of the graphic novel in the EFL classroom in Norway. Marie-Lisbet Amundsen, a Norwegian researcher, also agrees that there is a lot of prejudice towards comics and advocates for the utilisation of visual formats in schools, based on findings showing that pupils want to read comics (Rønning, 2016). What must be emphasised and communicated to teachers, school leaders and librarians is that graphic novels "provide opportunities for learning visual literacy while simultaneously learning print literacy" (Gillenwater, 2009, p. 35). As Carter stated; "Teachers need to find a place in their classrooms for comic books and graphic novels because it is sound practice to do so" (Carter, 2008, p. 47).

One of the reasons that it is sound practice to include graphic novels and comics in the classroom is that they may be a tool when trying to encourage children to read voluntarily (Krashen, 2004, pp. 92-95). Kreft and Viebrock (2014, p. 86) found that graphic novels support the willingness to read for both genders. Comic books, and further graphic novels, can also be utilised as a bridge to more serious literature (Krashen, 2004, pp. 103-106). One note to make here is that stating that graphic novels are simply a bridge towards more serious literature is a blow to the graphic novels status as real books and appropriate literature. The graphic novel is not only a tool to help the struggling readers, though it can be this as well, but also a format appropriate for struggling and advanced readers alike (McTaggart, 2008, p. 33; Rimmereide, 2013, p. 131).

Critics of the graphic novel state that the books are dumbed-down reading, that they are not serious literature, and further not appropriate for the classroom (Shea, 2006; Hajdu, 2004; Cleaver, 2008). These aspects have largely been debunked by research presented formerly and later in this chapter. Thompson (2007) argues against the notion that graphic books are dumbed-down reading, stating; "comics and graphic novels are written at such a wide variety of levels of reading and around so many different areas of interest that opportunities for student interaction with the text at various instructional levels are plentiful" (p. 29). Furthermore, Brenner (2011, p. 257) notes that graphic novels are simply a different sort of literature. Poems, novels and short stories are all different from one another in many respects, but they are all seen

as a valuable part of education in the EFL classroom. The inclusion of visual formats, such as the graphic novel, which portrays narratives in a different way, can not only enrich the pupils' reading comprehension, but can also strengthen their ability to both decode and encode images in their daily lives.

The format of graphic novels has been said to attract reluctant and struggling readers and should therefore be incorporated in school libraries and on reading lists for different subjects (Crawford, 2004, p. 26; Thompson, 2007, p. 29; Lamanno, 2007, p. 117). Particularly boys who are struggling readers have been said to be helped by the graphic novel and comic book format with regard to their reading enjoyment and comprehension. Amundsen and Garmannslund found that 40 % of the boys they researched in their study on reading ability and motivation claimed to be worse readers than their peers (Rønning, 2016). However, 50 % of the boys in this study stated that they wanted to read comics. Brænden (2015, p. 55) found that the boys in her study that she classified as reluctant readers, had a positive change in attitude towards reading English after reading graphic novels. Kreft and Viebrock (2014, p. 83) found that particularly the boys in their study would like to have access to more graphic novels. Therefore, by utilising the graphic format in our classrooms we may be able to motivate a struggling portion of the classroom population, as well as further support the motivation of those pupils who are already strong readers (Jennings, Rule & Zanden, 2014, p. 260 & p. 272). The graphic novel also provides contextual clues, which is highlighted by Crawford (2004, p. 26) as important help for both reluctant readers and second language learners. Norwegian pupils normally have English as either a second or even a third language, and the visual contextual clues provided by a graphic novel can help the pupils grasp the meaning of the written texts.

There are several important aspects to note when one is considering whether to include graphic novels in the EFL classroom. The graphic novel can function as an aid for developing literacy skills, especially visual literacy, helping readers become more aware of images and their elements, and the books can also be a tool when teaching pupils about narrative structure (Rimmereide, 2013, p. 135). As the graphic novel is a format and not a genre, their place as literature is just as appropriate in the classroom as that of the "ordinary" novel. Utilising the format for its curricular support and the help it can provide when exploring thematic connections are other

aspects to consider when deciding whether to employ graphic novels in the classroom (Martin, 2009, p. 30). As previously stated in sub-section 2.2.1, there are an abundance of non-fiction graphic novels which can be utilised to start a discussion on a variety of topics in the EFL classroom.

Visual expressions can be utilised to support reading comprehension (Rimmereide, 2013, p. 131) and an example of such a visual expression can be found in the graphic novel. An experimental study that was conducted by Basol & Sarigul (2013) in a Turkish university, focused on utilising graphic novels to improve the skill of reading comprehension in EFL students. Here, the sample was separated into two groups, and were told to employ certain reading strategies. Both groups read the same book, but only one group read the graphic novel version. While both groups showed an increase in reading comprehension, the graphic novel group had slightly better results when the reading of the novel was tested (Basol and Sarigul, 2013, p. 1627). Furthermore, the researchers also found that pupils would like to read graphic novels in their EFL classes, but that they were apprehensive to a certain degree due to being unfamiliar with the structure of the format. Examples that were provided of such structural unfamiliarities were features such as panels, balloons/speech bubbles and gutters (Basol and Sarigul, 2013, p. 1627). Lamanno (2007) also found that using texts in non-traditional forms such as graphic novels could help increase reading comprehension. She researched high school students who were struggling readers, and used graphic novels, among other tools, to check whether these could improve the students` comprehension. The study examined 6 small groups of pupils who had low reading scores, three days a week for 30-45 minutes. Lamanno's (2007, p. 106) results were mixed, but she did find a slight improvement in reading comprehension, and most of the participants indicated that they would read more graphic novels if they were available in the school library. Lamanno (2007, p. 110) does however claim that her results do not support the use of graphic novels with students who have severe reading difficulties, due to distractions (such as weird fonts) and the level of difficulty with regard to the text portion of the graphic novel.

LK06 does not specify that one should, or must utilise graphic novels, or any specific format for that matter, in Norwegian schools. The graphic novel format can however

be used to help to fulfil several competence aims in LK06. The competence aims for year 7 in the subject of English state that pupils are supposed to be able to “read children’s and youth literature in English and converse about persons and content”, as well as ”express oneself creatively inspired by different types of English literature from various sources” (The Norwegian Directorate for Education and Training [NDET], 2013a, p. 9). The addition of the visual element in the text, which the graphic novel format provides, adds another dimension of understanding. The format also provides easier access into the conversation about the literature, by opening the door to conversing about synergy. When experiencing visual literature, the pupils can more easily express themselves visually (Rimmereide, 2013, p. 139). After year 7, the pupils must also ”understand the main content of texts one has chosen”, as well as ”read and understand different types of texts of varying length from different sources” (NDET, 2013a, p. 9). As stated by Rimmereide (2013, p.131) and Basol and Sarigul (2013, p. 1627), the graphic novel format supports reading comprehension. Brenner (2011) wrote; “Teenagers can instinctively read graphic novels, even if they’ve never read one before, much more completely than many adults” (p. 258). If this is true, then a teenager reading a book in the graphic novel format will gain an understanding of the text more easily, and reading graphic novels will thereby support their ability to read, discuss and analyse a work of literature, and ultimately it may help them express their own work more creatively.

The current research project focuses on 8th graders, in other words the pupils examined here are reaching for the competence aims of year 10. The aims for year 10 are similar, albeit more complex that those for year 7. In addition to being able to express oneself creatively inspired by English literature, the pupils must also “discuss and elaborate on different types of English literature from English-speaking countries” (NDET, 2013b, p. 10). It is also no longer enough to understand the main content of a text one has chosen. Now, the pupils must also understand the details. If the graphic novel format supports reading comprehension, as stated by Rimmereide (2013, p. 131) and Basol and Sarigul (2013, p. 1627), then the format should become even more important as the pupils grow older and are urged to develop an ever more detailed comprehension of the works they are reading.

2.2.4 How can one utilise graphic novels in the language classroom?

Graphic novels are merely a format, and as any other format, be that novels, magazines or picture books, they can be utilised in the language classroom. James Bucky Carter, the author of *Building Literacy Connections with Graphic Novels: Page by Page, Panel by Panel* was quoted by Cleaver (2008, p. 30) as saying "There's more desire to bring the medium into the classroom than ever", referring to comics. If there is a desire to incorporate visual formats in education, an exemplification of how they can be utilised is appropriate, as one of the aims of this thesis is to incorporate graphic novels in the EFL classroom.

Williams (2008, p. 13) notes deconstruction of the elements in the format as an important part of working with comics and graphics novels in the classroom. Deconstruction in her mind is everything from examining the story to the relationship between the words and the images in each panel, termed synergy previously in this thesis. Working with the deconstruction of a graphic novel can be done by adapting a suggestion from Burmark (2008, p. 20). Every day an image, or a panel in for the purposes of the present thesis, is put up on the power point before class begins. For the first three minutes, the pupils observe and interpret the image, before they discuss their interpretations and prior knowledge. This is a way to both share different views on what the panel represents, as well as a way for the pupils to share their knowledge. To be able to deconstruct the elements of the format, a prior knowledge of the features and conventions of the format, such as panels and gutters, are necessary (Basol & Sarigul, 2013, p. 1627).

The visual expressions in a graphic novel can have the function of starting a deeper discussion about the story. This is especially true when the book in question deals with real life situations. Rimmereide (2013, p. 138) notes Speigelman's *Maus* (1991), which deals with Jewish history during the Second World War, and Satrapi's *Persepolis* (2006), which examines the Iranian revolution, as examples of graphic novels that can be used for this purpose. This sort of endeavour opens up the door to an interdisciplinary collaboration between the Art teacher, the English teacher and the Social Sciences/History teacher.

Pupils who get experiences with reading images through formats such as graphic novels can be further inspired to create their own visual expressions (Rimmereide, 2013, p. 139). As formerly stated in section 2.1, the expressive mode of visual literacy may be more difficult to obtain than the perceptive mode. Pupils who have been exposed to graphic novels in the classroom, and who have had guidance in understanding them, may therefore be better prepared when endeavouring to make texts utilising visual elements. A fourth grade teacher in Arizona used the theme of superheroes, which is typical for comics and graphic novels, to inspire her pupils to create their own comic books. The pupils wrote and analysed essays before they eventually made their own comic books (Cleaver, 2008, pp. 29-30). The teacher in that article, Kathy Campbell, was cited as saying; "If we show kids how the written word actually has a visual component to it and teach kids how to think that way, I think they'll become much better writers" (Cleaver, 2008, p. 30). Visual literacy can in other words support print literacy, just as print literacy can support visual literacy.

There are numerous ways to utilise the graphic novel in the English classroom, and presenting them all does not fall within the scope of this thesis. Some examples are presented here as illustrations, and they are elements that have been drawn upon when designing the intervention that was executed in the experimental group examined in the current research project.

2.3 Graphic novels and visual literacy

The present thesis seeks to utilise graphic novels in the EFL classroom to affect visual literacy. The graphic novel is a format that employs many visual components, and based solely on this one could state that graphic novels promote visual literacy. However, this section will further justify why these two realms should be combined and investigated in unison.

An important note is made with regard to the text, or letters, in the graphic novel. Do these words promote literacy in the traditional sense (print literacy), or do they promote visual literacy? Basol and Sarigul (2013) state that "everything from which we retrieve information is called text, and they do not have to be written" (Basol & Sarigul, 2013, p. 1622). This statement indicates that an image can be called text. If

an image is text, then text could be an image. McCloud (1993) also states that letters are icons, which belong in the realm of the image, and the visual (p. 27). Elements such as font and design of the letters are clearly a part of the visual element of the graphic novel. Utilising this reasoning, the graphic novel can be looked at as solely promoting visual literacy, further justifying this thesis examining graphic novels and visual literacy, rather than graphic novels and multimodal literacy. Hammond (2009, p. 10; 2012, p. 22) claims that the graphic novel demands multimodal literacy skills, as the format combines print literacy and visual literacy. However, as the print in the graphic novel can be seen as icons, they are thereby an element demanding what we term visual literacy. This is not saying that graphic novels do not demand multimodal literacy skills, but simply stating that the graphic novel can be seen as a tool to boost skills regarding visual literacy, and that testing solely visual literacy for the purposes of this thesis is justified, even though some of the panels used in the tests utilised for the data collection incorporate words.

2.3.1 Why should we combine the realms?

Graphic novels are a format that incorporates visual elements to tell a story. Therefore, it is logical to assume that when one incorporates graphic novels as a form of literature in the classroom, one is simultaneously strengthening visual literacy. Gillenwater (2009) argues that print literacy has been given a pedestal in our classrooms, and some space should be given to visual literacy. He believes that graphic novels "can aid in correcting the disequilibrium between print and visual literacy" (Gillenwater, 2009, p. 33). As graphic novels employ both visual and textual elements, this seems to be an accurate assertion. Burwitz-Melzer (2013) states that working with graphic novels foster visual literacy competencies, such as learning to decode "a verbal and a visual mode and understand their interaction" (p. 63). The interaction between the verbal and visual mode was previously termed as synergy. As previously stated, by learning to decode, we gradually learn to encode. Williams (2008) supports this, stating, "Pairing visual images with words is an easy way to help students develop stronger visual literacy" (p. 13). It is important to note that all of these statements are merely providing anecdotal evidence for the link between the concepts of visual literacy and graphic novels. The present thesis aims to find

confirmation of the anecdotal evidence through the research presented in the following chapters.

An image may show something relatively concrete, but all images leave room for interpretation (Burmark, 2008, p. 18). In a comic book or a graphic novel, what McCloud (1993, p. 63) terms closure occurs in the gutter. The gutter is the area between each panel, and is equivalent to what is termed as blanks in literature (Gillenwater, 2009, p. 35). The term *blanks* was coined by Wolfgang Iser, and was a part of his reader-response theory. This theory was explored by Gordon (1999), and it was stated by him that blanks refer to "suspended connectability in the text" (p. 46). When information is lacking in the text, the reader must infer what information is missing and thereby create the missing portion of the story. Interpretation is an element in most visuals one encounters; therefore, it stands to reason that one must be taught strategies for how to interpret these visual stimuli.

Baker (2011) theoretically examined the benefits of using comics and graphic novels for English language learners. Baker (2011, p. 6) categorizes the graphic novel as a subset of the comics' genre. The present thesis views the comic book and the graphic novel as separate formats, which incorporates a similar style. The lack of existing research on the use of graphic novels in the classroom, here with regard to English language learners in general, was noted by Baker (2011, p. 5), as it is by the author of this thesis. As Baker (2011, p. 5) states, there are many resources available when examining the topics separately, but when merging the topics there is not a lot of conducted research to review. Exposure to comics and graphic novels force the reader to examine the relationship between visuals and text, and thereby evolve the readers' ability to think critically and deeply (Baker, 2011, p. 22).

In a graphic novel, visual literacy is needed to interpret the content of the panels (Hoover, 2009). It has been made clear through this chapter that as a visual format, graphic novels are prime tools for visual literacy instruction. Research into this field is limited however. Many claims are made, and assumptions stated, but to really argue the case for the graphic novel with regard to visual literacy, research is needed. The

remainder of chapter two will deal with research that can be utilised as a basis for combining visual literacy and graphic novels.

2.3.2 Former studies

This sub-section will present research into visual literacy and graphic novels as a dual focus of research. There is not much that has been done in this field. Books have been written on the comics', graphic novels' and picture books' effect on visual literacy, but the amount of generalizable research is not abundant, as most of the evidence is anecdotal (Clark, 2013, p. 40).

Previous studies have attempted to measure visual literacy, and these attempts of measurements can be adapted to support the use of graphic novels for visual literacy acquisition. Examples of such studies were presented in sub-section 2.1.3 (Brown & Lockyer, 2007; Arslan & Nalinci, 2014; Geltman & Mechlin; Palmer & Matthews, 2015). All of these studies utilised visual elements, mainly in the form of photographs, making the inclusion of panels from graphic novels a possibility.

As previously mentioned, McMullen and Woo (2002) tested a module of ARTiFACT called "developing history". The tasks that were utilised here can easily be transferred to work with graphic novels in order to help the pupils better understand what they are looking at. These researcher note guided and individual exploration, in addition to self-assessment as tasks that will aid visual literacy skills (McMullen & Woo, 2002, p. 17). Historical photographs were utilised by McMullen and Woo (2002, p. 4) in their study. To transfer their research to the realm of graphic novels all one needs is an appropriate book. This is where the skilled librarian and the educated teacher must work together in order to find a book that will both engage and challenge all the pupils in a given class.

Research has been done on the advantages of utilising visual support in the EFL classroom (Tang, 1989; Early & Marshall, 2008; Ajayi, 2009), but if one is to speak of studies that have examined graphic novels and visual literacy together, there is less solid ground to stand on. Gillenwater (2009) wrote about the two realms, but no original research was conducted. Cleaver (2008) provided examples of use, but did

not conduct research that would quantitatively support the utilisation of graphic novels as an aid for visual literacy acquisition in the EFL classroom. Rimmereide (2013) provides an array of examples regarding how one can utilise the graphic novel in the EFL classroom, but any research data clearly proving the formats' aid to visual literacy in a particular setting is lacking here as well. The remainder of this section will present two examples of research studies where graphic novels and visual literacy were shown to have a clear connection.

Pantaleo (2011) examined grade 7 students and the effect that learning to understand literary and illustrative elements had on the students' "understanding, interpretation and analysis of picture books and graphic novels" (p. 113). Pantaleo studied written responses to one of the graphic novels the pupils read, *Amulet*, as well as the students' opinions about the knowledge required to understand a graphic novel. The study lasted for 11 weeks, and in her article, Pantaleo chose to focus on only one of the four graphic novels that were read, as 12 out of the 25 students identified *Amulet* as one of their favourites. Pantaleo (2011, p. 121) noted that out of the 22 pupils who submitted written responses to the graphic novel, most of them commented on either elements relating to the art or to conventions common to graphic novels. Furthermore, it was found in this study that 11 of the pupils thought it to be important to learn the conventions of the graphic novel in order to be able to read it, and six pupils expressly stated that graphic novels demand a high level of creativity and are works of art (Pantaleo, 2011, pp. 124-125). Pantaleo (2011, p. 127) concludes that picture books and graphic novels are ideal tools for developing visual literacy skills due to the formats' multimodality.

Hammond (2009, p. 161; 2012, p. 28) highlighted the importance of teaching visual literacy skills, exemplified by teaching the graphic novel formats' conventions. She conducted a qualitative study and found that pupils reading the graphic novel *American Born Chinese* enjoyed reading the book, and that reading literature in this format was a new experience for most of the pupils (Hammond, 2012, p. 27). This study took place in a 12th grade political science classroom, with 23 students participating, over a period of eight classroom lessons. The researcher in this study was also the schools librarian and guest lecturer, creating similar, albeit not identical,

issues as one might encounter when the researcher acts as the teacher, as is the case for the present thesis. It was found in Hammond's study that the students enjoyed the format, and Hammond concludes that because the students found the graphic novel they read engaging, including the format in the curriculum might increase participation and learning in the classroom. The students' reactions to the book changed from the first to the second reading. This is claimed to be because the pupils had been exposed to conventions of the format, amongst other elements, between the readings, causing Hammond (2012, p. 28) to emphasise the importance of teaching visual literacy skills.

The present chapter has presented former research conducted on the topics of graphic novels and visual literacy, separately and combined. These former studies served as a foundation when constructing the research conducted for the present thesis. The next chapter will examine the research design, methods and tools utilised in the research conducted for the present thesis, as well as outline the projects' limitations and ethical concerns.

3.0 Method

The present chapter will serve as an in-depth review of the research design and methods used to answer the aims and research question guiding this master thesis. In addition to a review of the design, methods and tools for analysis, a review of the intervention will be presented, as well as matters regarding validity, reliability and objectivity. This chapter also includes an examination of limitations with regard to the methods and design, in addition to a sub-section focusing on ethical concerns when conducting a quasi-experimental research project in a school.

This research project incorporates qualitative and quantitative components, leading to what can be termed a mixed methods approach (Bergman, 2008, p. 1). The main part of the data collection, the pre-/post-tests and the questionnaire, are classified as quantitative approaches, as they are designed in such a way that they lead to numerical data utilised to describe and examine the sample and their perceptive visual literacy (Brown & Rodgers, 2002, p. 118). The graphic stories produced by the pupils during the intervention can be classified as a qualitative data, as the stories culminate in free forms of expression utilised to examine the expressive visual literacy of certain pupils in depth (Befring, 2004, p. 75). Additionally, certain items on the questionnaire are open-ended, meaning that the pupils wrote down their opinion on a matter, giving the researcher a deeper understanding of the pupils' view. The data derived from these open-ended items can be categorized as qualitative. Though the majority of this thesis bases itself on quantitative data, the inclusion of qualitative elements, such as graphic stories created by participants, categorizes the approach of this thesis as that of mixed methods.

3.1 Quasi-experimental intervention

To broadly define the research design of this master thesis, it will be said to employ an interventionist quasi-experimental research design. A quasi-experiment is so called because it in some way deviates from the requirements for a true experiment (Brown & Rodgers, 2002, p. 212). An experiment "looks at the effect of one variable on another, by making a change in one of the variables (the independent variable) and seeing how the other variable changes (the dependent variable), while keeping all other variables constant (controlling them)" (Winterbottom, 2009, p. 141). To

eliminate the effect of confounding variables a randomly chosen control group should be included (Winterbottom, 2009, p. 143). For this research project, neither group was chosen randomly, but rather from convenience. For this reason, in addition to the acknowledgement that all variables cannot be controlled in a classroom, this study is defined as a quasi-experiment. Confounding variables in a classroom could potentially be elements such as noise, seating arrangements and the length of each class.

Furthermore, The design of this master thesis can be defined as a "nonrandomized control group pretest-posttest design" (Dimitrov and Rumrill, 2003, p. 160). This definition is fitting due to the convenience sampling (Dörnyei and Csizèr, 2012, p. 81) and the lack of random assignment to a control group and experimental group. The research project also employs a pre-test and a post-test, in order to measure the effect of the intervention.

The sample for the current research project consisted of two classes of 8th graders, both consisting of 28 pupils, from two different lower secondary schools in Norway. Non-probability sampling, in the form of convenience sampling (Dörnyei and Csizèr, 2012, p. 81) was employed. The most important criterion in convenience sampling is the convenience to and resources of the researcher, in addition to the participants' willingness to participate in the study. The researcher contacted several lower secondary schools within an area that would make it possible for the researcher to conduct the intervention. Most of the schools that were asked replied that they could not find the time for a research project in one of their classes. After finding two schools to conduct the main research in, a third school agreed to participate, giving the study a pilot group consisting of six 8th graders. After having found all the participants for the study, one class was assigned as the experimental group, and one as the control group.

The control group completed a pre- and post-test, with a three-week interval in-between. In conjunction with the pre- and post-test, the pupils also responded to a questionnaire. In the experimental group, the sample was exposed to several lessons with a focus on the conventions of graphic novels and comics. The complete lesson

plan can be found in appendix 8.1. The experimental group also completed the pre- and post-test, with an attached questionnaire. The intervention will be further described in section 3.7, 'The intervention'.

3.2. Participatory intervention

During the intervention, the researcher also had the function of teacher for the pupils in the experimental group. This had several advantages, namely the added control over what was being done in the classroom. Other advantages included knowing what the pupils had been told in exact detail, as well as being able to adapt the lessons to the level of visual literacy the experimental group as a whole was on. Several limitations arise when the researcher acts as the teacher, such as issues with regard to objectivity, and influencing the pupils' unintentionally with regard to what the research wishes to accomplish. Pantaleo (2011, p. 120) functioned as both teacher and researcher in her study, and notes the issue of influence as a possible limitation. The limitations of the present research study will be further explored in sub-section 3.10, 'Limitations'.

The reason for the researcher acting as the teacher was one of convenience, as well as one of principle. The teacher in the experimental group did not feel comfortable teaching about the format of graphic novels, as she/he was not familiar with it. Both the teacher in the experimental group and the researcher also expressed that it would be more prudent for the researcher to teach the lessons. This was due to the researcher knowing what was supposed to be said, omitted and taught during the brief time the experiment lasted. The researcher acting as the teacher gave the researcher more control over the intervention.

3.3 Pilot

The pre-test and the questionnaire were piloted prior to the research conducted for this master thesis. According to Loewen and Philp (2012, p. 70) researchers choose to use a pilot to ensure that their instruments function in the intended way. The pilot was conducted to strengthen the internal validity of both the pre-test and the questionnaire, as well as the internal reliability of the categorization form created for scoring the tests. Issues of validity and reliability will be further discussed in sub-section 3.8.1.

According to Dörnyei and Csizèr (2012, p. 79) a pilot can be invaluable to a researcher for many reasons. Fine-tuning of the instruments, improvement of the clarity, finalizing the layout, rehearsing the administration process, a dry-run of the analysis, timing the completion of the instrument and general double-checking are all mentioned as important points (Dörnyei and Csizèr, 2012, p. 79). All of these elements proved relevant during work on this project.

The sample that participated in the pilot belonged to the same target population as both the experimental and control group, an important element when one is to accurately test an instrument (Dörnyei and Csizèr, 2012, p. 79). The group of pupils that participated in the pilot came from a different school, so as to not indirectly influence any of the pupils who participated in the remainder of the study.

Six pupils participated in the pilot, and completed the preliminary pre-test and questionnaire. They were given more time than they would likely need, and they were timed to give an indication of the time needed to complete the test in the experimental group and the control group. When the pupils had completed the test and the questionnaire, they participated in a discussion with the researcher. During the discussion, the researcher talked about each question on the test with the pupils. The pupils were asked what they thought each question asked them to do, whether there were any questions they did not understand and if any of the English language used in the instruments was too difficult. The results from the pilot led to some changes with regard to clarity and fine-tuning in both the pre-test and the questionnaire. The pilot was also helpful with regard to approximating the time needed to complete the test. After the completion of the pilot, the researcher had an opportunity to test the categorization form (Appendix 8.2) for errors when scoring and analysing the results and the categorization form was slightly changed with regard to clarity.

3.4 Pre-/post-test

The experimental and control groups were given the same pre-test (appendix 8.5) and the same post-test (appendix 8.6), and the conditions were made as similar as possible, though no two different classrooms will ever be exactly alike. The pre-test was conducted during the first lesson, and was meant to gather the pupils' entry level

of visual literacy. Originally, there were 28 pupils in each class, and all of these participated in the project. However, a few pupils were cut from the results with regard to the comparisons. The pupils who were cut did not participate in both the pre-test and the post-test. This resulted in there being 26 pupils in each group, and a total of 52 pupils in the study altogether. The tests regarding intra-rater reliability and certain descriptive data from the questionnaires includes all of the participating pupils. This means that some descriptive data includes 54 pupils, not 52. Where this is the case, it is expressed. The post-test was conducted in the last session of the intervention in the experimental group. In the control group the post-test was conducted three weeks after the pre-test, so that the same amount of time had passed between the tests in both groups. As McMullen and Woo (2002) and Palmer and Matthews (2015) did in their studies, the pre- and post-test scores were compared to assess the increase (or decrease) in visual literacy scores.

The pre- and post-test were largely based on the test and levels for visual literacy made by Brown and Lockyer (2007, pp. 9-12), as well as the levels of visual literacy used by Geltman and Mechlin (2014). Geltman and Mechlin (2014) and Brown and Lockyer (2007) both employ three levels of visual literacy. These are, respectively, *untrained*, *selective* and *highly visual* (Geltman & Mechlin, 2014), and *lower range*, *mid range* and *better* responses (Brown & Lockyer, 2007, p. 9). The two lists are fairly similar and were simply combined into one list for the purposes of this project. The labels utilised by Geltman and Mechlin (2014) were used as the names of each level. These levels have previously been presented in sub-section 2.1.3, 'Measuring visual literacy'.

The tests conducted for the current research project can be termed criterion-referenced tests. The pupils were not graded on a curve or in comparison to one another, but rather based on the criteria that were set forth ahead of time. For each test, a categorization form (Appendices 8.2 & 8.3) was created to score the pupils' responses to each item. The pupils could receive scores ranging from 0.0-3.0. A score of 1 meant that their response to a question largely matched the criteria for the level *untrained*, while a score of 2 meant that their response more closely matched the criteria for the level *selective*, and so on. The pupils could also get scores such as 1.5. This type of score meant that they fulfilled certain criteria from level 1 and level 2,

but none of them to an extent that they could be placed in either box. The pupils only received a score of 0.0 if they had not answered the question, mainly by not writing anything at all. The categorization forms are further discussed in section 3.8, 'Coding'.

3.5 The questionnaire

A survey in the form of a questionnaire was administered as a part of both the pre- and post-tests in both sample groups. Dörnyei and Csizèr (2012, p. 74) state that the written questionnaire is an instrument used to collect self-report data for the quantitative research method survey research. Questionnaires can also be used to collect qualitative data. Closed-ended items lead to mainly quantitative data, while open-ended items lead to qualitative data. Open-ended items can also be coded, and transformed into quantitative data. Questionnaires can be used to gather information regarding opinions, attitudes and knowledge (Dörnyei and Csizèr, 2012, p. 75). The questionnaire has been used for this purpose in the present thesis, asking questions about the pupils' preferred format when reading and whether they were familiar with graphic novels prior to the project. Both open-ended and closed-ended items were utilised, and the questionnaire yielded both quantitative and qualitative data.

Dörnyei and Csizèr (2012, pp. 75-80) list several key design issues that may occur when designing a questionnaire. Appropriate sampling of content is the first issue, and has been helped in this study by piloting the questionnaire, and also by designing the items based on theory. Choosing the type of items to include in the questionnaire is listed as the next issue. The Likert scale is named as the most common type of closed-ended item and is used to indicate to what extent a respondent agrees or disagrees with a statement. Likert scale items were utilised in the current research project to determine to what extent the pupils liked to read, to what extent they enjoyed reading comic books and whether they found it important to learn how to read images. This information was employed to see whether any of these characteristics were a common factor for pupils with an increase (or decrease) in visual literacy skills after the completion of the research project. Furthermore, formatting is an important issue. This issue was tackled through the piloting process, by asking the pupils who participated in the pilot whether any questions were too long

amongst other things. Through assistance from this project's supervisor, the formatting issue was also addressed. Length and space economy are the most important aspects with regard to formatting.

The questionnaire that the pupils answered in conjunction with the pre-test consisted of one page, and was identical for both groups. The pupils answered mostly closed-ended items. They were asked about their reading preferences, whether they knew of graphic novels and comics, and whether they were open to reading a graphic novel. They were also asked what they thought a graphic novel was, as it was assumed by the researcher that very few of the pupils would know what it was. On the post-test the questionnaire was different for each group. The control group were only asked the same questions as on the pre-test, in addition to an open-ended question where they could give comments on the test and their participation. The experimental group were in addition to these queries also asked questions regarding whether they enjoyed reading a graphic novel and their feelings toward learning to read images. Whether they felt it was important to learn how to read images can be linked to the insight they may have gained into the format during the project.

3.6 The graphic novels

The pupils in the experimental group chose between graphic novels provided by the researcher. The books that were available to the pupils were selected in collaboration with a librarian at Bergen Public Library, as well as this project's supervisor. The teacher in the experimental group was not involved in this process due to the teacher expressing a lacking knowledge of graphic novels as a format, as well as time constraints. The main criteria for selection were that:

1. The books were authentic graphic novels (for the definition see sub-section 2.2.1, 'The graphic novel and the comic book: Separating the formats').
2. They had to be age appropriate with regard to content.
3. They had to be varied in themes, genre, length and complexity.

In total, the 28 pupils in the experimental group had 45 graphic novels to choose from The full booklist can be found in appendix 8.4, 'Booklist'. As the primary focus of the

present thesis is the use of graphic novels to affect visual literacy, it was deemed necessary to exclude hybrids from the selection of books. This decision was made due to the larger amount of text found in hybrids, which could potentially have drawn some focus away from the visual elements.

3.7 The intervention

The intervention in the experimental group consisted of five lessons, each lasting for 60 minutes. The second, third and fourth lessons were largely based on a research project by Roswell, McLean and Hamilton (2012), which was designed to increase visual literacy in pupils. The adaptations made to their lessons for the current research project were made to include graphic novels instead of ordinary photographs. As can be seen in figure 3 (p. 13), expressive visual literacy skills may be harder to obtain than perceptive visual literacy skills. For this reason, the data collected during the intervention, which was mainly focused on expressive visual literacy, is part of this study as qualitative examples of correspondence between perceptive and expressive visual literacy, and has not been scored or examined as a whole.

As the researcher acted as the teacher during this research project, several unstructured observations in the form of field notes were made. Prior to the project starting, the researcher spent one classroom session observing an ordinary EFL lesson in the experimental class, to familiarize herself with how the pupils were used to lessons being conducted. The main observation from this lesson was that the pupils mainly asked questions in Norwegian, and that the pupils switched between speaking English and Norwegian a lot. The teacher would sometimes prompt the pupils to speak in English, but this was not consistent, and the pupils were mostly not asked to translate when they had already asked or answered a question in Norwegian. It was also clear that the class as a whole did not actively participate verbally.

The first lesson consisted of the pre-test (appendix 8.5, ‘Pre-test’), including the questionnaire, and a presentation of the project. The researcher introduced herself, and the pupils were made aware that the researcher would be their English teacher for the following three weeks. The pupils were allotted 40 minutes to complete the pre-test and the questionnaire. Due to the observations made during the pre-intervention

lesson, the pupils were informed about the pre-test in Norwegian. The pupils were also allowed to respond in Norwegian on the pre-test for this reason. The questions on the test and questionnaire were written in English. The decision to allow the pupils to answer in Norwegian was also made due to the fact that language proficiency was not the main focus of this research project. It was observed during the first lesson that some pupils finished their tests in 15 minutes, and some pupils did not finish in the allotted time frame. According to the pupil's English teacher, the amount of time the pupils in general spent on their tests was consistent with her/his previous observations of these pupils during tests. The pupils chose which graphic novel they were going to read after the test, and most of them ran to the table where the books were placed to choose. The notion of reading graphic novels seemed to elate some, while others expressed that they thought this seemed too easy. During the next four lessons, the pupils were allotted some time to read, but they were also encouraged to read at home.

The second lesson incorporated elements regarding vocabulary and conventions in graphic novels, and was an adaptation of a lesson from Roswell, McLean and Hamilton (2012, p. 445), which was called "Creating a Visual Context". Panels, perspectives, colours and speech bubbles/balloons were examined as important features of graphic novels. It was important to do so based on findings by Basol and Sarigul (2013, p. 1627). As previously stated, they found that pupils were apprehensive of the graphic novel format due to unfamiliarity with its structure. The pupils in the present study were asked to respond to panels from a few of the books they had had to choose from (Appendix 8.7, 'Panels: Graphic Stories'). It was clear that the previous observation of the pupils as not very verbally active was accurate. It seemed that they were more comfortable answering verbally when they had time to discuss with a partner first. The pupils were asked to write down the first word that came to mind when examining each panel, then the first emotion, and lastly what the panel represented to them. Each panel was also accompanied by a probing question, such as why a certain panel gives the viewer the inclination that the story takes place in Africa. At the end of the lesson, a mind map was created on the blackboard about one of the panels. This was done to show the pupils that one panel could evoke many different associations and emotions. Asking questions about the elements of each panel is suggested by Burmark (2008, p. 22) as a method for unpacking the image.

Unpacking is used to "discern the underlying, intended significance (witting or unwitting) of any image" (Burmark, 2008, p. 22). This lesson was 15 minutes shorter than initially planned, due to the English teacher in the class needing time to discuss a test the pupils had had before the intervention began. Due to this, there was not enough time to discuss all the panels that were planned. Many of the pupils did however express that it was interesting to hear the opinions of others when examining the same panel and several pupils stated that it was interesting to talk about how different elements in a panel can give certain impressions.

The third lesson was also somewhat based on a lesson by Roswell, McLean and Hamilton (2012, p. 445) called "Applying the Visual in Text". The lesson took place a week and a half after the second one, due to the autumn break. The pupils received a hand out of the panels that were discussed in lesson two (appendix 8.7, 'Panels: Graphic Stories'), and were asked to choose one. The pupils then wrote a short story based on the panel they chose. Based on this short text, they made a visual representation of their story, in the form of a comic. As stated by Dousay (2015, p. 36), comic books have a unique way of bringing visual culture into the classroom. To help the pupils fulfil their task, they received a hand out with some conventions/features to be aware of when one makes a graphic novel or comic book. These conventions were also discussed in the previous lesson. The pupils were allotted 40 minutes to finish the task of making their graphic story, and while some of the pupils almost finished, some were very concerned with aesthetics and only finished a panel or two of their graphic story. Due to this, the pupils were allotted 15 minutes to finish in the following lesson, and were also asked to work on their graphic story at home. As the researcher was not allowed to assign the pupils homework, this assignment was voluntary.

The fourth lesson, which I have dubbed "Reflecting on the Visual", incorporates elements that Roswell, McLean and Hamilton (2012, p. 445) utilised in "Applying the Visual in Text". The pupils received a hand out with questions, designed with the purpose of the pupils giving themselves feedback on their graphic story, or provide self-assessment. McMullen and Woo (2002, p. 17) stated that self-assessment is an element that can strengthen the pupils' reflection. When the pupils had finished this task, they worked on a summary of their graphic novel as far as they had read at this

point. This element was considered cut due to time restraints, but the pupils' teacher asked for this task to be completed, as the teacher needed the pupils to submit a written assignment during the time the research lasted. The researcher decided to continue with the task as the project had taken up valuable class time, in addition to the experimental group's teacher insisting on the completion of this element of the intervention. During this lesson, a few pupils expressed that they felt there had been too much writing during the project. Most of the pupils did not finish their summaries, and as this task was assigned by the English teacher of the class, as much as the researcher, the assignment was posted on ItsLearning so that the pupils could try to finish at home.

In the fifth lesson the post-test was completed (appendix 8.6, 'Post-test'). The pupils were allotted 45 minutes to complete the post-test, as the accompanying questionnaire was now longer. As with the pre-test, the pupils were allowed to respond in Norwegian. During this lesson the pupils were allowed to spend some time finishing their summary. The summaries were never completed to such an extent that they could be utilised as data for this master thesis. The books were handed in during this lesson, with the exception of a few who had forgotten their books at home and returned these to the researcher at a later date.

3.7.1 Variables

The independent variable in this master thesis is the exposure to the format of graphic novels. An independent variable is the variable that is manipulated by the conducted research (Mertens, 2010, p. 125; Befring, 2004, p. 142). Visual literacy, both perceptive and expressive, is seen as the dependent variable in this project. The dependent variable is "the variable that will be affected by, that "depends" on, the independent variable" (Mertens, 2010, p. 125). In chapter two it was mentioned that the perceptive part of the skill set of which visual literacy consists is seen as easier to obtain, and must be obtained prior to the expressive skills (see Figure 3, p. 13). For this reason, the main focus has been perceptive visual literacy, while the expressive visual literacy is only touched upon using examples of tasks performed by pupils with a brief analysis of these particular pupils' expressive visual literacy, and a further discussion of the relationship between the perceptive and expressive elements in sub-section 5.2.1.

As is the case in any sort of research conducted in the sector of education, there are numerous possible confounding variables. Classroom noise, the pupils' lack of attention, boredom and even how the pupils are seated in the classroom can be categorized as confounding variables. In addition to this, the pupils' former knowledge of graphic novels and the amount of reading that was done outside of school can be considered confounding variables here. Acknowledging this is essential with regard to the classification of this project as a quasi-experimental study.

3.8 Coding

The coding schemes for the pre- and post-test were based on previous research by Geltman and Mechlin (2014), and Brown and Lockyer (2007). Both of these previous pieces of research developed a three level list for visual literacy. For this master thesis these two lists were combined and adapted to examine visual literacy in connection with graphic novels.

The categorization forms developed based on the levels of visual literacy was used to score each pre- and post-test with regard to each pupil's, and furthermore each group's, level of perceptive visual literacy. As the elements on these categorization forms are what the pupils were graded against, we can as previously mentioned term the tests criterion-referenced. As psychological values, such as visual literacy, cannot be observed directly, they are theoretically defined (Befring, 2004, p. 151). The process of defining what the construct visual literacy consists of was already partially completed by the research this paper bases itself on. The categorization form then consists of what Befring (2004, p. 152) terms "behavioural indicators" and it was through these deduced which level of visual literacy each individual pupil currently scored as, on a scale from 0.0-3.0. Both categorization forms are included as appendices, specifically 8.2 for the pre-test, and 8.3 for the post-test.

The graphic stories created by the pupils in the experimental group were handled as qualitative data, and therefore examined in a different fashion than the pre- and post-tests. The analyses of these stories were based on whether the pupils could encode a graphic story in such a way that it could be decoded by a reader. It was also examined whether the pupils included the conventions of graphic novels and comic books that

were taught during the intervention. The examination also focused on whether the pupils with a higher level of perceptive visual literacy seemed to be more adept at encoding a story, in other words whether they appeared to have a higher degree of expressive visual literacy skills.

3.8.1 Validity and reliability

In a chapter discussing methods and design, it is essential to discuss to what extent the methods, design and tools have been examined with regard to validity and reliability. Brown and Rodgers (2002, p. 241) state that quantitative research, which the majority of this thesis would be characterized as, is judged based on its *validity*, *reliability* and *objectivity*. Other terms are utilised when examining these elements in qualitative research, namely *credibility*, *transferability*, *dependability* and *confirmability* (Brown & Rodgers, 2002, p. 242). Credibility and transferability can be seen as linked to validity, dependability to reliability, and confirmability to objectivity. This sub-section will utilise the terms validity, reliability and objectivity, as the main data pool is deemed quantitative.

The validity of the project will be discussed first. Validity is seen as "the degree to which the results can be accurately interpreted and effectively generalized" (Brown & Rodgers, 2002, p. 241). As the dependent variable, visual literacy, is not directly observable, it had to be operationalized. This means that the testing is an indirect process (Befring, 2004, p. 149). The internal validity of a project such as this one is essential to ensure that one is testing what one wishes to test. When changes occur in the dependent variable in a project that has internal validity, the changes are due to the effect of the independent variable and not due to other confounding variables (Mertens, 2010, p. 126). Several elements can threaten internal validity. Mertens mentions several relevant threats, where the most relevant for the present thesis is maturation, testing and instrumentation. The first point, maturation, refers to "biological or psychological changes in the participants during the course of the study" (Mertens, 2010, p. 126). As this project entailed a lot of writing and reading, there was a significant chance of the subjects tiring. The inclusion of a control group should have minimized this threat, because if the experimental group tired due to the writing on the tests this would also have affected the control group. In addition to this,

if the experimental group has a statistically significant increase where the control group has not, the tiring effect is not a threatening factor. One can never be completely certain that tiring is not a factor however, as the increase may have been larger if tiring was not a factor. The threat termed testing by Mertens (2010, p. 126), refers to the possibility of the subjects becoming "test-wise" when one utilises a pre- and post-test. This threat is minimized by a number of changes from the pre-test to the post-test. The changes are however not significant enough to initiate the third threat, instrumentation. Where instrumentation is an issue, the second test is easier than the first one (Mertens, 2010, p. 127). The changes made on the post-test involved a change in most of the images the pupils responded to. However, all the new images included the same elements with regards to visual literacy that were included on the pre-test, and the questions asked were identical, except for the word *image* being changed to the word *panel* in the experimental group's post-test. As previously stated, the pre-test and the questionnaire were piloted. This strengthens internal validity by giving the researcher a chance to check whether one is actually testing what one is wishing to test. The similarity of the tests further strengthens that they were testing the same construct, and that construct being visual literacy was ensured through basing the tests on previous research. The internal consistency of the tests, a concept that will be examined later in this chapter, was also examined through calculating Cronbach's alpha.

The notion of validity includes both internal and external validity. External validity refers to "the extent to which findings in one study can be applied to another situation" (Mertens, 2010, p. 129), also known as generalization (Brown & Rodgers, 2002, p. 241). The sample size used for this thesis might be considered slightly small with regards to generalization. Dörnyei and Csizèr (2012, p. 82) state that there are unclear rules with regard to how large a sample size should be. According to them, some researchers claim that one needs 1-10 % of the intended target population in the sample to be able to generalize, while others state that 30 is a minimum and some state that one needs 50-100 participants in the sample. In this thesis, the sample consists of two groups of 26, with a total of 52 participants. Due to the utilisation of convenience sampling, all notions of attempting to generalize are made difficult, as we cannot be certain that the sample represent the target population. For this reason, this chapter is quite detailed, to facilitate replication of the research. Replications can

strengthen the external validity, which is weak as long as the present project stands alone (Abbuhl, 2012, p. 297).

Reliability is defined as "the degree to which the results of a study are consistent" (Brown & Rodgers, 2002, p. 241). To ensure the internal reliability, or the degree to which we can expect consistent results if our data were re-analysed, the categorization forms (appendices 8.2 & 8.3) were designed to have as low inference as possible. To ensure this, each image in both tests were analysed with regard to the characterization of each level of visual literacy, prior to the tests being administered to the pupils. Each characterization that was relevant to each image was then further exemplified by using details from each image in the categorization forms. External reliability refers to whether "we can expect consistent results if the study were replicated" (Brown & Rodgers, 2002, p. 241). The author of this thesis has sought to be as detailed as possible, to ease any future replications, and intra-rater re-categorization, described in the next paragraph, can also be said to strengthen the assumption that we can expect consistent results if the study were replicated. Brown and Rodgers (2002, p. 241) state that statistical tests are normally employed to ensure reliability. *T*-tests, Cohen's *d* for effect size, Cronbach's alpha for internal test consistency and Pearson's *r* were all utilised during the course of data-analysis. All of these tests are explained more in-depth elsewhere in the present section and the next section, 3.9.

Intra-rater re-categorization was employed to further strengthen the internal and external reliability of the project. This is known as checking intra-rater reliability or agreement. Intra-rater reliability is a notion concerning whether ones results are consistent when the same person scores the same data a second time (Rèvèsz, 2012, p.216). Conversely, inter-rater reliability is concerned with whether the results are the same when a new person scores the data the second time around (Salkind, 2013, p.151). The re-categorization took place two months after the initial rating. The amount of time that had passed between the two ratings ensured that the researcher would not remember the original scores of individual pupils, and thereby would not be influenced by this when re-categorizing the tests. Pearson's product-moment correlation coefficient, hereafter known as Pearson's *r*, was utilised to show the degree of correlation between the two ratings. Pearson's *r* is an appropriate tool for this task when the two sets of numbers one is comparing consist of continuous scales,

which is the case for the current data set, consisting of test scores (Brown & Rodgers, 2014, p. 170). A viable alternative to utilising Pearson's *r* for this purpose would be to employ the Intraclass Correlation Coefficient (ICC). As Pearson's *r* only attests for linear association, the ICC would be more reliable in this instance as it combines information about "the correlation and the systematic differences between readings" (Szklo & Nieto, 2007, p. 340). After examining the results from scoring the data the second time around, employing Pearson's *r* on the data set and discussing the results with faculty at Bergen University College, it was deemed unnecessary to employ the ICC as a measure in this case. The whole data set was re-categorized, and a high degree of correlation was present. This will be further explored in chapter 4, 'Results'.

As previously stated, quantitative research is also judged on its objectivity. In other words, does the researcher see the object (visual literacy levels in each pupil) as it actually is, or is the object seen how the researcher has constructed it in her mind when scoring the data or observing the class (Brown & Rodgers, 2002, p. 242)? The issue of objectivity with regard to test-scores was partly rectified by re-categorizing the test scores two months after the initial scoring and performing a statistical test on these results to check for intra-rater agreement. The researcher also wrote a short summary of each lesson (unstructured field notes) right after the lessons, while observations of what occurred in class was fresh. Being objective as a researcher is something one must always strive for, but it can be challenging to determine to what extent one is actually being objective when one is both conducting and analysing the research.

3.9 Instruments for analysis

An important distinction to make with regard to the analysis of the data is that of descriptive and inferential statistics. Descriptive statistics, in this thesis exemplified by mean scores, range and standard deviations summarizes the data procured from the sample. These statistics are not generalizable. Inferential statistics, in this thesis presented through *t*-test results, Cohen's *d*, Cronbach's alpha and Pearson's *r*, normally tests whether the results observed in the sample that was tested here can be utilised to generalize to the target population (Dörnyei and Csizèr, 2012, p. 85).

Generalization is not possible for the current research project due to the convenience sampling and small sample size. Therefore, this thesis utilises the inferential statistics to statistically examine the differences and changes in the researched sample. Researchers wishing to replicate the present study can then utilise these results. It is only through replication, using a randomized sample, that this study can be utilised with regard to generalization to the target population. Statistical significance is calculated through the use of inferential statistics.

To answer the main research question of whether the exposition to the graphic novel format can affect visual literacy levels, several *t*-tests were calculated in order to assess differences between the groups separately, and between each group, before and after the project, based on the pre- and post-test scores. Correlated *t*-tests were used to compare each group's pre-test scores to the same group's post-test scores, while independent *t*-tests were used to compare the pre-test in both groups, and the post-test in both groups. The *t*-tests were used for the purposes of statistically assessing group-level differences in mean scores. According to Fink (1995), the *t*-test is "used to test hypotheses about means and thus requires numerical data" (p. 60). The numerical data in this project is the visual literacy scores calculated for each pupil and each group. The pupils' visual literacy score was found through calculating the mean score of each participant's pre-test and post-test and dividing their score by the number of questions. According to Brown and Rodgers (2002, p. 205), the *t*-test is the most frequently used measure in second language research when comparing mean scores for two groups, and it can also be utilised to compare scores in one group. As previously stated, the *t*-test has been used in both ways here. The *t*-tests were executed utilising Microsoft Excel.

Cohen's *d* was utilised to determine effect size. The effect size is a measure of the magnitude of the treatment, disregarding the number of people in the sample (Salkind, 2013, p. 243). This calculation is done by subtracting the smaller mean from the larger mean, and thereafter dividing this sum by the standard deviation. If the standard deviation in the two groups are not the same, then they are added together and divided by two, giving us the average standard deviation. A score of 0.2 is seen as a small effect size, 0.5 is viewed as a medium effect size, while a *d*-value above 0.8 would be categorized as a large effect size (Cohen, 1992, p. 157).

To check the internal consistency of the tests, Cronbach's alpha, also known as Coefficient alpha (DeVellis, 2012, p. 108) was employed. This measure is seen as a reliability coefficient and can take values from 0.00 to 1.00. These extreme values are however unlikely and a score below 0.6 is seen as undesirable, a score of 0.7 or above is seen as respectable and a score of 0.8 or above is seen as very good (Devellis, 2012, p. 109). The rationale for calculating Cronbach's alpha is to further ensure that the items on the tests are examining the same construct, in this case visual literacy. Cronbach's alpha correlates each item's score with the total score of each individual and the variance of all item scores (Salkind, 2013, p. 149). A high alpha value indicates that a participant with a high total score also has a higher score on each item on the test, as opposed to a person with a low score, who would have a lower score on each item. By calculating Cronbach's alpha, it was further ensured that the items on the tests were all measuring the same construct.

The graphic stories and tasks collected from the intervention, presented in section 3.7, were utilised to have a basis for discussing expressive visual literacy. The elements this discussion is based on are for the most part the conventions/features of the graphic novel that the pupils were exposed to during the intervention. These were *angles/perspective*, *balloons* (speech, whisper and scream), *captions*, *sounds*, *movement* and *closure.* Balloons can also be referred to as speech bubbles. Elements such as *panels* and *gutters* were also presented to the pupils, but are not a relevant part of this discussion as the pupils were provided with sheets of paper with panels and gutters already made. The pupils' graphic stories will be discussed based on their use of these elements, and also to what extent their story is coherent. In other words, can they encode their story so that other visually literate people can decode it? The products resulting from this task will be presented in section 4.5, and will focus on three pupils from the experimental group, and the examination of the graphic stories will be further discussed in sub-section 5.2.1 with regard to whether the pupils' expressive visual literacy appears to correlate with their perceptive visual literacy.

3.10 Limitations

This section will present the limitations of this piece of research. Presenting the limitations is essential both with regard to showing that one has insight into the

drawbacks of what one has done, but also with regard to any further research. A new research study with researchers that are already aware of certain limitations could potentially yield different results.

One threat to the internal validity of this experiment is that the post-test was not piloted. As the post-test employs similar images as the pre-test it was deemed unnecessary, but piloting the post-test could have further strengthened the internal validity of the project.

The interventionist quasi-experimental design in itself provides certain threats to any research project employing such a design. Loewen and Philp (2012, pp. 61-62) name both the artificiality that may be imposed by such a situation in the classroom, as well as the difficulty one may find with controlling all the confounding variables found in the classroom. The artificiality of the classroom situation, as well as control over any confounding variables, was helped by having the English teacher of the class present in all the lessons, and also by the researcher being present in the class prior to the project initiating. The English teacher helped to control certain confounding variables as she/he knew the pupils and could help the researcher with regard to controlling elements such as classroom noise. One confounding variable was the possibility of boredom and distraction, previously termed maturation. As the project was quite intensive, with a lot of writing (which the pupils mentioned as a tiring part of the project), distractions in the classroom situation itself can be seen as a limitation.

The researcher acting as the teacher brings up issues with regards to validity, reliability, objectivity and ethics. Researcher error is one major limitation that could have been an issue here, especially with regard to the validity and reliability of the results. When the person conducting the lessons is also the person who is looking for results, it is easy to change certain elements such as time to accommodate one's own goals. However, the tests were always performed in the experimental group first and therefore, the time and information given was always identical in the control group. In this way, the validity and reliability was strengthened. Ethically it is more difficult to justify the teacher whom the pupils are familiar with stepping aside for an unknown researcher with ulterior motives. To help this issue, the original English teacher was always in the room during the lessons, and the English teacher also helped with regard

to assigning the numbers the pupils were given when tests or assignments were to be completed. The most important limitation here is however perhaps that of objectivity. Can one really be fully objective to regarding the results in a class when the researcher and grader has also been the teacher? This possible limitation was aided by the researcher not knowing which number belonged to which student, and by the pre- and post-test being graded separately. This meant that the researcher had no idea regarding which pupils had had a high score on the pre-test when grading the post-test. This also supports the reliability of the results.

The short time the project lasted could also be a potential source for threats to both the external validity and the reliability of the project. As was discussed in the introduction, time was a concession that was made in order to find a school to conduct research at. A project with more time and resources might have yielded more convincing results. Pantaleo's (2011, p. 126) study, which lasted for a significantly larger period of time, 11 weeks, also notes this limitation. If even this time frame was seen as too limited, perhaps a full school year with an underlying focus on the graphic novel format throughout is needed.

The sample size can also be seen as a limitation. As previously stated, Dörnyei and Csizèr (2012, p. 82) stated that there are unclear "rules" as to how large a sample should be. 30 people are mentioned as a minimum, but 100 or more participants is seen as more adequate. The low number of participants, 52 in total, must however be seen as a limitation with regard to generalization, in addition to the utilisation of convenience sampling. Therefore, this thesis cannot determine whether these results would apply to the entire target population.

The current research project does not have the scope to delve into the ability to draw, which can be seen as a part of expressive visual literacy. This can be seen as a limitation of the study, with regard to examining the relationship between expressive and perceptive visual literacy. Certain artistic choices and conventions relevant to making a graphic story were however conveyed to the pupils in the experimental group during the intervention, and expressive visual literacy is presented in section 4.5 and discussed in sub-section 5.2.1 based on these conventions. Excluding the ability to draw as a criterion was seen as a way of levelling the playing field, as a

pupil who is skilled at drawing a realistic image, may not necessarily embody the ability to encode a story, i.e. expressive visual literacy.

3.11 Ethical concerns

When one is conducting research in the field of education, there are always ethical considerations that must be noted. An important step that was taken regarding the ethical legitimacy of this project, was contacting the *Norwegian Centre for Research Data* (NSD). NSD was contacted via phone, and after explaining the project in great detail, it was determined that the project was not subject to notification, as no data was ever collected with any type of personal information that could directly or indirectly reveal the identity of the participants.

Befring (2004) cites Norway's Personal Registry Act from 1978, which states; "*Informed consent* is made a requirement, as is *participants' right to inspection*, along with an *oath of confidentiality* for those participating in the research" (Befring, 2004, p. 37). The points made in this quote have been taken very seriously during the course of this research. All the teachers involved in the project were informed of all aspects that the project would entail before they committed to participating. The pupils in each group were also given the option of not participating if they wished not to do so. This was expressed to the pupils both by the researcher and the English teacher in their class. All data collected during the project was collected in such a way that the researcher would not be able to identify which pupil was which. The pupils were assigned a number at the beginning of the project, and this number was their "name" for the duration of the project. No names of pupils, teachers or schools are given in this thesis, so as to fulfil the need for confidentiality. The teachers were asked whether they felt the need to inspect the results of the tests. The teachers expressed a wish for seeing the final product, but did not feel a need to see the results of the tests before they were processed in the final thesis. One exception to this was the teacher in the experimental group, who received the summaries the pupils made of their graphic novel. The English teacher utilised the summaries as a reference point with regard to further writing in the subject of English. The pupils in the experimental group were informed about the additional use of the summaries by the English teacher.

4.0 Results

The current chapter presents the results retrieved during the research conducted for this master thesis. Firstly, the results derived from the analysis of the questionnaire, pre-test and post-test are presented separately. The pre- and post-tests were re-categorized two months after the initial coding. There were no statistically significant differences between the first and the second rating, as shown through the calculation of Pearson's *r* presented in sub-sections 4.2.1 and 4.3.1. The numbers presented from the pre- and post-tests are those of the second rating. Secondly, the scores from the pre- and post-test will be compared. Furthermore, general patterns that emerged from the data set will be presented. These patterns are presented to examine some characteristics that appeared typical of the pupils who had an increase/decrease in perceptive visual literacy scores. Lastly, graphic stories made by three pupils during the intervention in the experimental group will be presented, focusing on expressive visual literacy.

4.1 Questionnaire

The questionnaire was primarily designed as a tool to retrieve information about the sample that could potentially be used to explain the results found in the test. It was also hoped that the answers given on the questionnaire would show some characteristics of pupils with a certain score or increase/decrease in visual literacy. The questionnaire was given to the pupils as an attachment to the pre- and post-tests, and the questionnaire is, as previously stated, utilised to further inform the results from the tests.

The pupils were asked their gender at the end of the questionnaire. As we can see, the same number of pupils participated in both groups, but the girls are the majority group in the experimental group, while the boys are the majority in the control group.

Table 2: Sample

	Boys	**Girls**
Experimental group	9	17
Control group	14	12

Table 2 shows a total count of 26 pupils in both groups. Each class as a whole consisted of 28 pupils and 27 participated in each test. In both groups there was one pupil who did not participate in the pre-test and one pupil who did not participate in the post-test, meaning that the comparative scores in each group was calculated based on two groups of 26 pupils. Data presented from the questionnaire that is only relevant as descriptive data from that particular test includes all 27 pupils that participated in the test, while all data that is utilised in a comparative capacity includes the 26 pupils that participated in both tests. Figures where 27 pupils in each group are presented are marked with an asterisk (*).

It was thought to be of relevance to get insight into whether an expressed enjoyment for reading comics could potentially be linked to either an increased visual literacy score, or an appreciation for reading graphic novels. As the majority of the pupils in both groups (81.5 %) claimed to enjoy reading comics, as can be seen in figure 4, it was decided that comparing the pupils who enjoy comics to those who do not like comics would be misleading, due to the difference in size of the two groups. It is however relevant to note that the majority of the pupils in both groups enjoyed reading a visual format prior to the project.

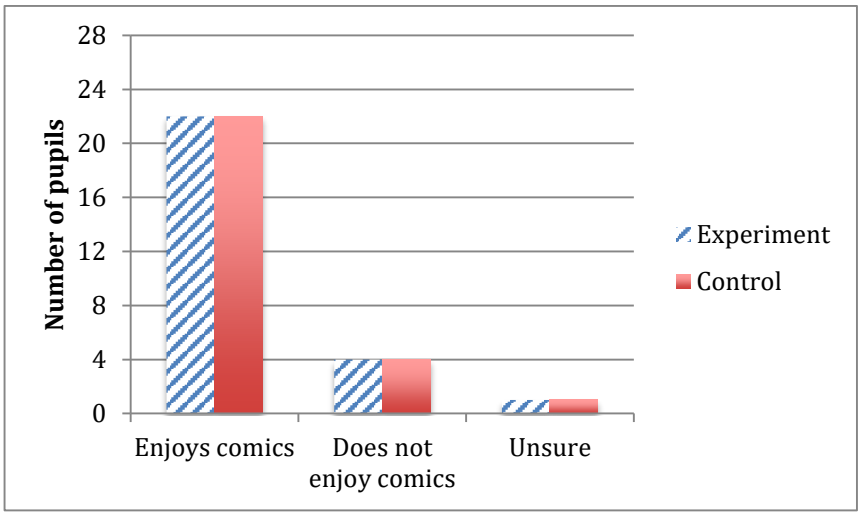

Figure 4: Comics*

Prior to the research for this thesis being conducted several teachers were asked to participate in the project. Most of these teachers expressed not knowing what graphic novels were. This proved to be true among the pupils as well, as only three pupils in the experimental group, and one pupil in the control group claimed to have previously

read a graphic novel. It must also be stated here that 83,3 % of the pupils stated that they did not know what a graphic novel was.

As graphic novels represent a format through which literature can be expressed, the notion of whether or not the pupils liked to read was an important variable regarding the amount of learning and enjoyment they would experience throughout the project. To what extent the pupils expressed to enjoy reading can be viewed below in Figure 5, 'Reading'.

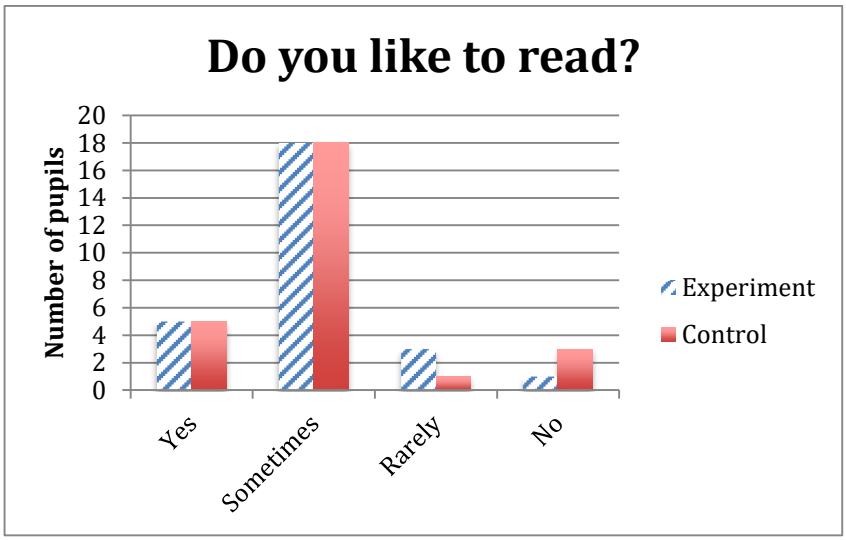

Figure 5: Reading*

Most of the pupils claimed that they like to read sometimes, by far the most popular answer. Why this is falls beyond the scope of this thesis, but of the pupils who stated that they sometimes, rarely or never like to read, 97.7 % stated that they enjoy reading comic books.

On the first questionnaire, completed in correspondence with the pre-test, the pupils were asked what their favourite format was. They were given several closed-ended items to choose from, and also an open-ended option if the other categories did not suit their preference.

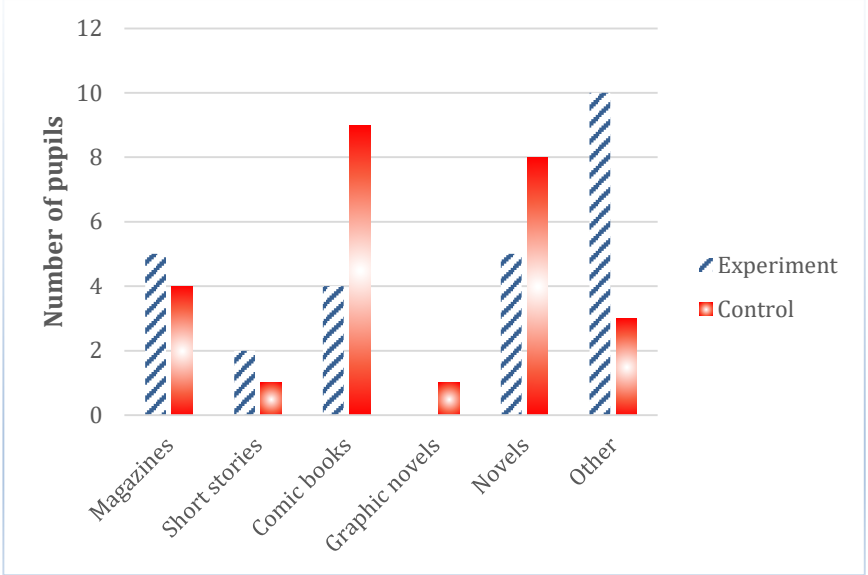

Figure 6: Formats

As can be seen in Figure 6, the majority of the pupils in the experimental group chose to answer *other*, while *comic books* and *novels* were by far the most popular choices in the control group. The pupils who chose to answer *other* did not understand the difference between a format and a genre for the most part. Answers such as fantasy, scary books and crime stories were prevalent answers here. When the same question was posed during the post-test, the answers had slightly changed, as can be seen in Figure 7. The pupils, especially in the experimental group, had grasped that a format is not the same as a genre. Also, a few of the pupils had changed their answer to "graphic novels" as their favourite format.

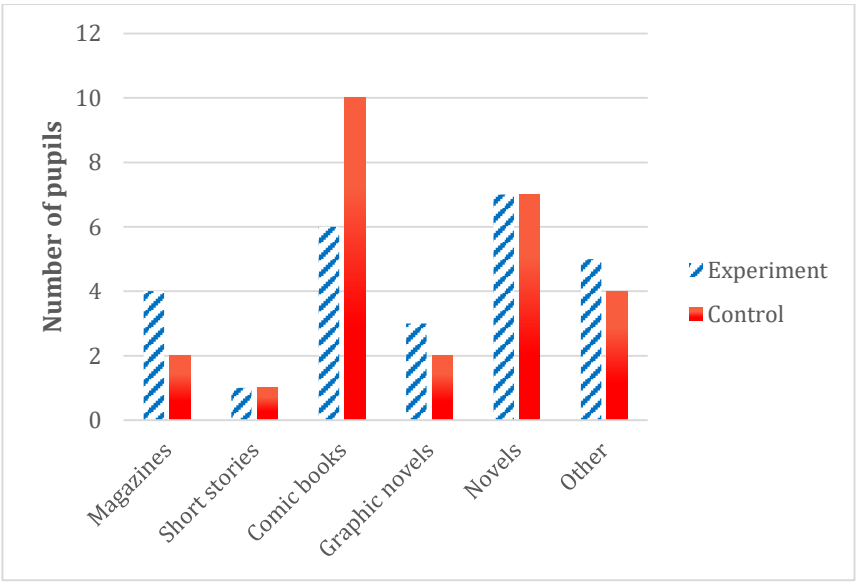

Figure 7: Formats 2

After the post-test, the experimental group were asked how likely it was that they would read a graphic novel again, on a 5-point Likert scale from *never* to *very likely*. Behind each of the degrees of likelihood, the pupils were also provided with a translation of each term to make sure there was no confusion. The pupils were also asked why they chose the degree of likelihood they did. This question was asked to ascertain any correlation between enjoyment with regard to the book the pupil read, and whether they would choose to read a graphic novel at a later date. This will be further examined in section 4.4.1, 'General patterns'. The degree of likelihood that the pupils in the experimental group would choose to read a graphic novel again can be seen in Figure 8.

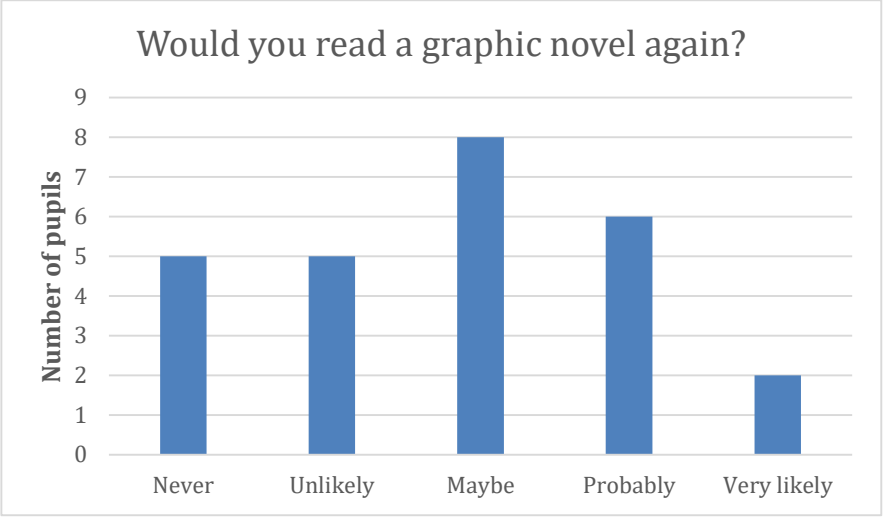

Figure 8: Graphic novels

When the pupils were asked why they chose the degree of likelihood they did, the responses within each category were quite similar. Pupils who stated that they would *never* read a graphic novel again, commonly stated that they had not liked the particular book they had read during the project. Some also stated things such as; "Because I don't like graphic novels, I like books without pictures". When pupils claimed it to be *unlikely* that they would read another graphic novel, the answers were commonly similar to those who claimed they would *never* read a graphic novel. Statements such as "because I don't enjoy reading graphic novels" were common here. No further rationale for why they did not enjoy reading graphic novels was given here. Answering *maybe* proved to be the most popular answer and several of the pupils who chose this response stated that they ordinarily did not like to read, but that

graphic novels were a nice change of pace. Responses such as; “Because I’m not a reading person, but a graphic novel wasn’t that bad”, “because it depends how I have it” and “because a graphic novel is *litt gøy* to read” sums up the respondents answers to this category. Furthermore, one pupil felt that the format was perhaps for younger readers, stating; “because when I get older I don’t read so much graphic novels”. Stating that the graphic novel was a fun format to read was typical of pupils who thought they would *probably* read a graphic novel again. These pupils would probably read a graphic novel again; “because it is funny to read them” “because it is a normal book type to find”, “because I think graphic novels is very fun to read” and “because I don’t like reading so very much, but when I read, I could read a graphic novel”. A few of the pupils thought it to be *very likely* that they would read a graphic novel again, stating; “because we read much in the school” and “because I had a good time”.

When the intervention was completed, the experimental group were asked whether they thought it was important to learn how to read images. 69 % of the pupils stated that it was important, or that it was sometimes important. These pupils stated that it is important to learn how to read images because you may misunderstand an image if you do not know how to interpret them, and further it is important because images are everywhere. The remaining pupils stated that it was rarely or never important to learn how to read images. These pupils either found text to be more interesting than images, or did not think it was important to learn how to read images because most of the books they read did not have images. One pupil stated that it is only rarely important to learn how to read images because “we don’t need to learn it. We just know it”. This statement can be linked to Brenner’s (2011, p. 258) assertion that teenagers instinctively can read graphic novels. It must also be stated here that all of the pupils, with the exception of two, who responded that learning how to read images is only rarely or never important also stated that they did not like the graphic novel they read.

The experimental group was also asked which element they enjoyed the most when reading the graphic novel; the text, the pictures, both or neither. No one responded that they preferred the text, while 54 % preferred the pictures. 27 % of the pupils preferred both, while 19 % preferred neither. The pupils who stated that they liked neither also stated that they did not like their book, claiming that the story they read

was boring. The pupils who preferred the pictures stated that they either liked the pictures because they did not like to read that much or because they felt that the images described more than the text. Pupils who liked both elements equally stated that they needed a little bit of text to understand the story, or simply that they found the pictures good and the text interesting.

4.2 Pre-test

The experimental group had a mean pre-test score of 1.48 (SD = 0.27), while the control group had a mean pre-test score of 1.37 (SD = 0.29). In other words, both groups can be categorized as untrained/selective with regard to their visual literacy level. Utilising an independent, or unpaired, *t*-test, these scores were checked for statistical significance. This was done to ensure that the groups were equivalent. The *t*-value was calculated to be 1.406, and the result was thereby not statistically significant ($p = 0.17$). As there is not a statistically significant difference between the groups they can, for the purposes of the dependent variable of this thesis, be seen as equivalent. This is essential information with regard to whether the experimental group and the control group chosen for this thesis can be compared. Having established that the two groups are comparable, sub-section 4.2.1 will examine the results from the pre-test in both groups, as well as present the re-categorization of the pre-tests. The reasons for utilising re-categorization were previously expressed in sub-section 3.8.1, regarding reliability, and the results from the re-categorization are presented to support the reliability of both the tests and the system of categorizing visual literacy scores.

4.2.1 Coding and figures

The pre-tests were coded and scored during the week after the pupils completed them and were scored using the categorization form made specifically for the pre-test (appendix 8.2). Each pupil received a score on the tests, which consisted of 10 questions, and the mean/average of this score divided by the number of question is their perceptive visual literacy score. The results from the pre-test are presented below in figure 9.

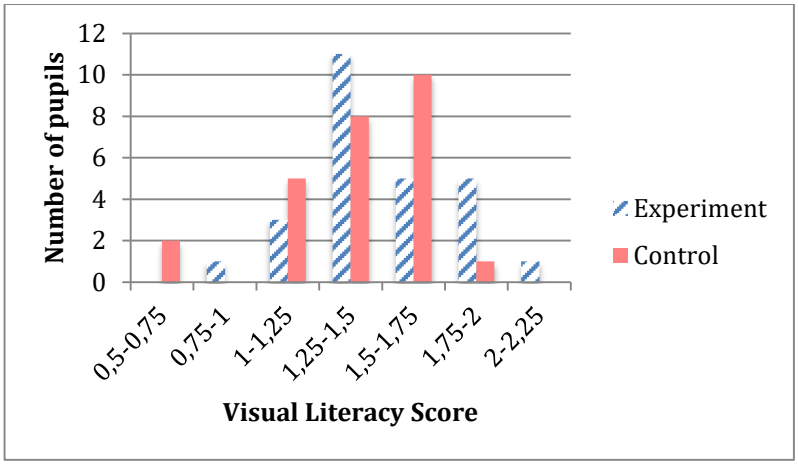

Figure 9: Pre-test

Based on Figure 9, one can clearly see that most of the pupils had a score between level 1, untrained, and level 2, selective, with a cluster forming around 1.25-1.75.

The entire data set was re-categorized two months after the initial rating. Pearson's *r* was then employed to assess the degree of correlation between the two ratings. In the experimental group, the correlation for the continuous data on the pre-test was calculated as 0.96, which is seen as a strong correlation. Figure 10 shows each pupil's score the first time their test was rated and the second time it was rated. As one will also see with the naked eye, there were no clear differences between the scores the pupils received the first and second time their test was rated. A statistical measure, in the form of Pearson's *r* was utilised to further support the results. As the re-categorization of both tests in both groups showed a similar degree of correlation between the first and the second rating, Figure 10 is presented here as an example and the scores from the remaining re-categorizations are only presented in plain text.

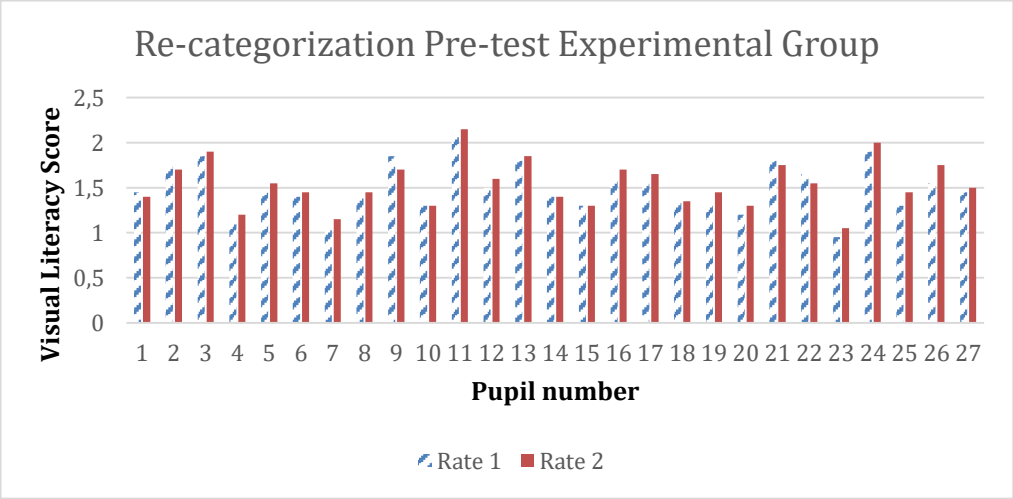

Figure 10: Re-categorization - Pre-test - Experimental group*

The results from the re-categorization was similar in the control group with a calculated correlation of 0.99, meaning that the correlation is almost perfect.

Cronbach's alpha was calculated to determine the internal consistency of the scale. For the experimental group, alpha was calculated to be 0.72, while in the control group alpha was calculated as 0.77. Cronbach's alpha was also calculated for the pre-test as a whole, providing an alpha score of 0.75. All of these scores can be seen as respectable (DeVellis, 2012, p. 109).

4.3 Post-test

As on the pre-test, an unpaired, or independent, t-test was utilised to check for statistically significant differences. The experimental group had a group mean of 1.63 (SD = 0.22) on the post-test, an increase from 1.48 on the pre-test. The standard deviation had also declined from 0.27 to 0.22, meaning that the dispersion had decreased. The control group had a group mean of 1.42 (SD = 0.37), which was an increase from the pre-test group mean of 1.37. In the control group, the dispersion had increased, with the standard deviation increasing from 0.29 on the pre-test to 0.37 on the post-test. With regard to visual literacy levels, both groups still fall between the levels of untrained and selective. The *t*-test that was conducted using the post-test results showed a *t*-value of 2.44, and a *p*-value of 0.02; hence, the difference between the groups is now statistically significant. As shown in sub-section 4.2.1, there was no such difference between the groups on the pre-test. The effect size, or *d*-value, was calculated as 0.7 on the post-test. This is interpreted to mean that the statistically significant difference is moderate.

4.3.1 Coding and figures

The post-test was scored based on the categorization form made specifically for the post-test (appendix 8.3). The post-tests were scored in the week following the pupils' completion of them, as it was seen as important to have as similar of conditions as possible, also with regard to timing, on the rating of the pre- and post-tests. The results from the post-tests are presented below in figure 11.

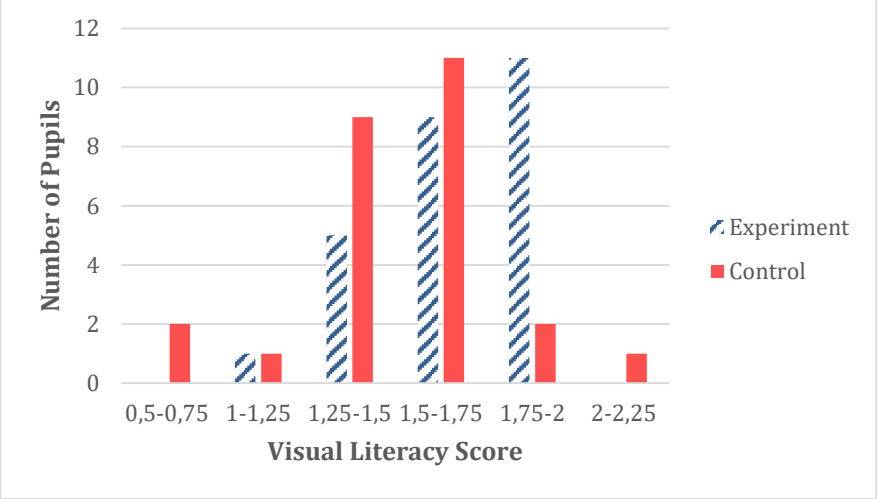

Figure 11: Post-test

There is still a cluster of scores, as there was one the pre-test, but the cluster is now between the scores of 1.25 and 2.0. The control group mainly scored between 1.25 and 1.75, while a large portion of the experimental group scored between 1.5 and 2.0.

The post-tests were also re-categorized and Pearson's *r* was again employed to calculate intra-rater reliability. In the control group the correlation was calculated as 0.98, while in the experimental group the correlation was calculated to be 0.97.

Again, Cronbach's alpha was calculated to check for internal consistency within the scale. In the experimental group alpha was calculated as 0.74, while in the control group alpha was calculated to be 0.85. When Cronbach's alpha was calculated for the test as a whole for both groups, in other words including all scores from both groups in the test, alpha was calculated as 0.83. The first score can be seen as respectable, while the two latter scores can be categorized as very good (DeVellis, 2012, p. 109).

4.4 Comparison

This section has the purpose of comparing the control and experimental groups' change in visual literacy score, as well as presenting patterns that emerged in the data that could potentially be useful with regard to attaching some general characteristics to pupils who had an increase or a decrease in perceptive visual literacy scores.

A correlated *t*-test, also known as a paired t-test, was utilised to check the statistical significance of the changes in visual literacy level from the pre-test to the post-test. The group mean in the experimental group increased from 1.48 to 1.63, leading to a calculated *t*-value of 3.38 with 25 degrees of freedom. The standard deviation was 0.27 on the pre-test, decreasing to 0.22 on the post-test. This would indicate that the dispersion has decreased. These results show a *p*-value of 0.002. This is seen as very statistically significant, and we can assume that graphic novel acquisition had an effect on visual literacy scores in this particular group of pupils. In the control group there was an increase from a mean group score of 1.37 (SD = 0.29) on the pre-test to 1.42 (SD = 0.37) on the post-test. The *t*-value is 0.92 with the same degrees of freedom as in the experimental group ($p = 0.36$). This is not seen as statistically significant in second language research, or in any other kind of research. There is clearly a difference between the groups both with regard to the increase in perceptive visual literacy, the dispersion and the statistical significance of the results, and the effect size is defined as moderate ($d = 0.7$) when computing the post-test scores of both groups. Cohen's *d* was also calculated using the pre- and post-test scores of the experimental group, yielding a *d*-value of 0.6. This is also considered a moderate effect size.

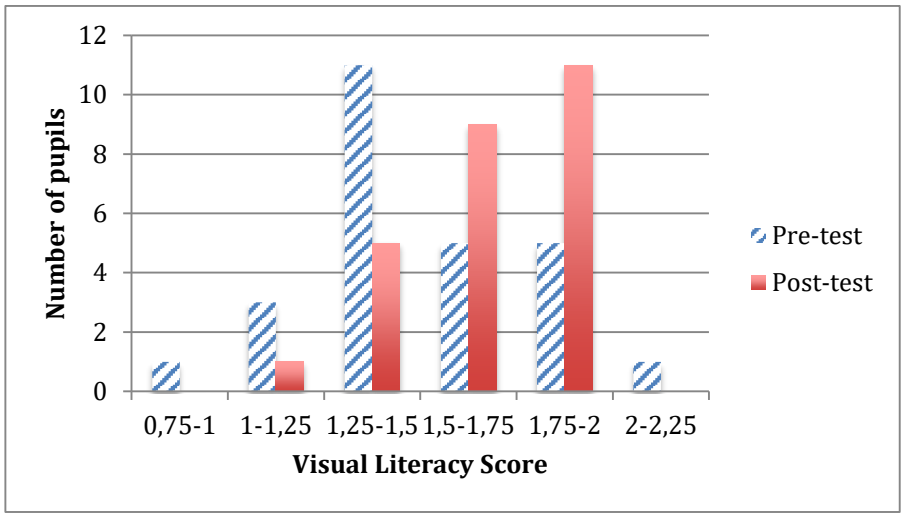

Figure 12: Pre and post: Experimental

As one can see in figure 12, there was an increase in the general score of the class in the experimental group, with a cluster forming between a score of 1.5 and 2. As the class as a whole initially scored around 1.25-1.5, the teacher/researcher had to work

towards level two, selective, during the intervention. This may have caused the pupils who were already closing in on level two to stagnate.

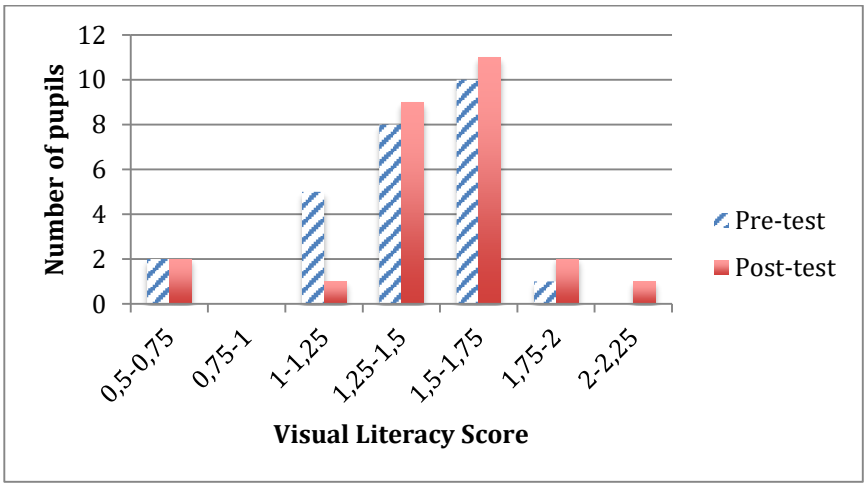

Figure 13: Pre and post: Control

In figure 13, one can see that the control group's scores clustered around 1.25-1.75 on the pre-test and the post-test. Certain pupils who were initially scoring around category 1 (untrained) had a slight increase and caught up to the rest of the class.

4.4.1 General patterns

This sub-section will serve the purpose of presenting some patterns that emerged from the results regarding gender, preferred formats and enjoyment of graphic novels. These patterns will be further discussed in sub-section 5.2.2, 'Gender and formats'.

Gender

Figure 14 displays how many pupils of the total sample had an increase or decrease in perceptive visual literacy scores based on their gender.

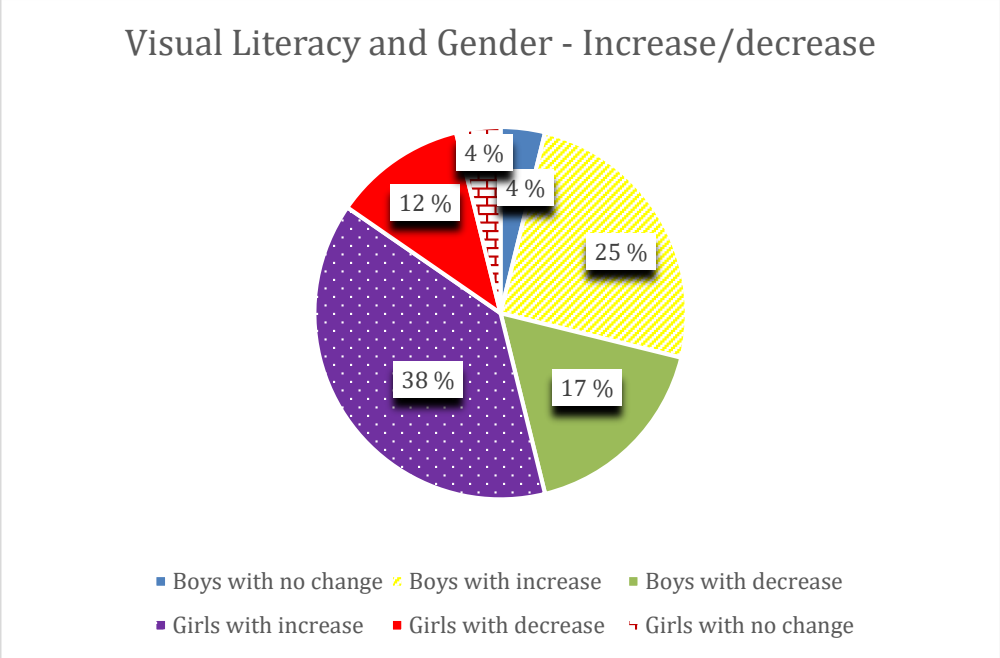

Figure 14: Visual literacy and gender

As figure 14 shows, a total of 63 % of the pupils had an increased score on the post-test compared to the pre-test, while a total of 29 % of the pupils had a decrease. A total of 23 boys and 29 girls participated in both tests, as presented in table 2 (p. 59). Nine of the boys were in the experimental group, while 14 were in the control group. The girls had 17 participants in the experimental group and 12 in the control group. The average change in score for the girls was an increase of 0.17, while the average change in score for the boys was an increase of 0.09. When comparing simply the pupils who had an increase, excluding the pupils who had a decrease in their visual literacy score, the boys slightly beat the girls, having a mean increase of 0.273, while the girls had a mean increase of 0.27. The differences here are slight, and it would appear that the girls have slightly higher scores than the boys in general. *T*-tests were also calculated to compare the girls and the boys. On the pre-test, the un-paired *t*-score was calculated as 0.25, while on the post-test it was calculated to be -0.78. Neither of these results are statistically significant ($p > .10$), meaning that there is no statistically significant difference between the boys and the girls on each test seen independently. However, when examining gender and utilising paired t-test, viewing the boys and the girls as separate groups, the results shift dramatically. When examining the boys from the experimental group and the control group as a single group, comparing their pre- and post-test results yields a *t*-value of 1.46 ($p > 0.10$), while when calculating the girls' score, the calculated *t*-value is 3.97 ($p < 0.01$). This

result indicates that though there is no statistically significant difference between the girls and the boys on each test, the girls as a group had a much more statistically significant result compared to the boys as a group. The effect size is calculated as small here, with a *d*-value of 0.22. This will be discussed further in sub-section 5.2.2.

Formats

The pupils who preferred novels to formats such as magazines or comic books had a lower mean increase in visual literacy scores. The dispersion of pupils with regard to their preferred format on the pre-test and post-test was presented in figure 6 and figure 7 on page 62. The pupils who expressed on the pre-test that they mainly preferred novels had a mean increase of 0.02, lower than the increase of the pupils who mainly preferred magazines (0.16) and comic books (0.15). This criterion was re-examined utilising the format the pupils expressed to prefer on the post-test. Here, the pupils who preferred novels had an average gain of 0.07, while the pupils who preferred comic books had an average gain of 0.11, and the pupils who preferred magazines had a mean increase of 0.16. On the post-test some pupils stated that graphic novels were their favourite format. These pupils had the largest average increase by far, having an mean gain score of 0.34. The pupils who expressed that they preferred novels also had a slightly lower average post-test score (1.54), as opposed to those who preferred comic books (1.56) and magazines (1.7). These results indicate that pupils who enjoy visual formats has what perhaps can be termed a visual literacy aptitude. This will be further explored in sub-section 5.2.2.

Comics and graphic novels

As previously presented, 81.5 % of the participants claimed to enjoy reading comics. Due to this high percentage, it is deemed misleading to present scores comparing changes in visual literacy score based on this characteristic, as the group with pupils who enjoy comics is exponentially larger than that of those who dislike comics. A different, slightly related notion is that of whether there were any similarities between the pupils in the experimental group who expressed that they enjoyed reading a graphic novel, as opposed to those who did not enjoy the experience.

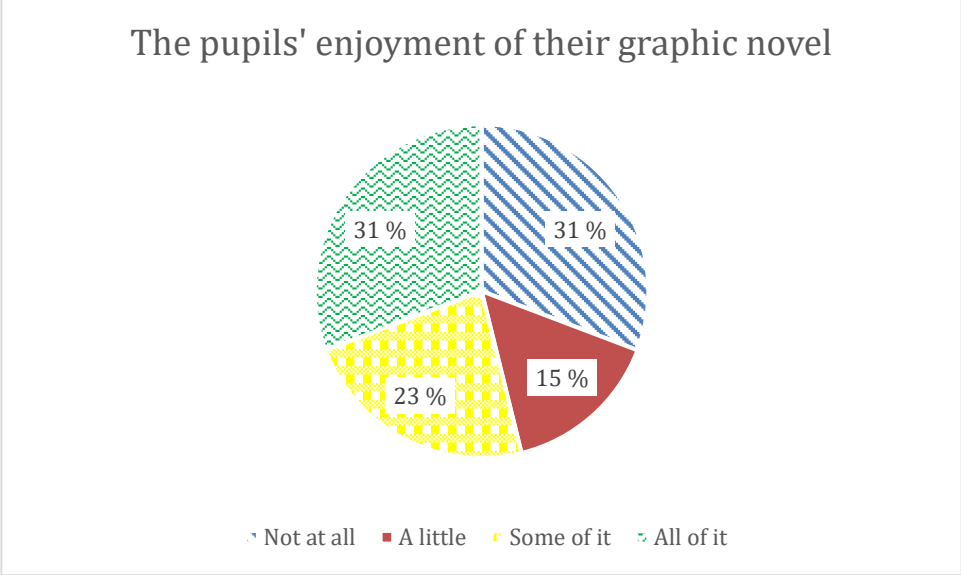

Figure 15: Enjoyment of graphic novels

As figure 15 clearly shows, the groups of pupils are almost equal in size with regard to enjoyment. The same percentage of pupils either enjoyed all of their book, or did not enjoy their book at all. 12 pupils did not like their book at all or only liked a little of it, while 14 pupils liked some or all of their book. All four groups had a positive average increase in visual literacy scores. In order of largest mean increase, the groups ranked as follows: *some of it* (0.19), *not at all* (0.16), *a little* (0.13) and *all of it* (0.1). As we can see, there is not a large difference between the groups. A notable characteristic is that seven out of the nine boys in the experimental group claimed to enjoy some or all of the graphic novel they read, while seven out of 17 girls in the experimental group shared the same statements. In other words, a much higher percentage of the boys claimed to enjoy the book they read.

An additional characteristic to examine is whether there were any patterns when considering whether the pupils would read a graphic novel again. One interesting, albeit not surprising pattern is that all of the five pupils who stated that they did not like their graphic novel at all, claimed they would *never* read a graphic novel again (100 %). The five pupils who claimed it to be *unlikely* that they would read a graphic novel again liked none (60 %) or some (40 %) of the book they read. The eight pupils who stated they would *maybe* read a graphic novel again liked a little (37,5 %), some (25 %) or all (37,5 %) of their graphic novel. Six pupils stated they would *probably* read a graphic novel again and they enjoyed a little (16,6 %), some (33,3 %) or all (50

%) of their book, while the two pupils who stated that it was *very likely* that they would read a graphic novel again liked all of their graphic novel (100%).

4.5 Intervention tasks

The graphic stories presented in the following section were made by pupils in the experimental group during the intervention. Certain pupils have been selected here, based on their scores on the pre- and post-test and the degree to which they completed their stories. A point was also made of the three pupils chosen being at differing levels of perceptive visual literacy, to give a further basis for comparison. These examples are presented here to exemplify expressive visual literacy in correlation with perceptive visual literacy scores collected from the pre- and post-tests. The pupils and their graphic stories are presented as qualitative examples to get an insight into expressive visual literacy, and cannot in any way be generalized. They are merely presented as an example of how one can utilise the graphic format in the classroom, and also to show the expressive visual literacy of certain pupils in correlation with their perceptive visual literacy score. Figure 3, as shown on page 13, will be used as a basis for the discussion of these results in section 5.2.1, 'Perceptive and expressive visual literacy'.

The pupils were given four panels to choose from, and based on their chosen panel they made a short text which they based their graphic story on. All the panels they had to choose between were from books that were available as reading material throughout the project. The panels were from *Aya of Yop City, Anya's Ghost, Dark Rain: A New Orleans Story* and *Parade (with fireworks)* (appendix 8.7). By far the two most popular panels to choose were the ones from *Anya's Ghost*, which 12 pupils chose to base their story on, and from *Dark Rain: A New Orleans Story*, which was chosen by 11 pupils. A few pupils chose to base their story on the panel from *Aya of Yop City*, while no one chose to make a story based on *Parade (with fireworks)*. The following will include products made by three of the pupils in the experimental group throughout the project. Each pupil has been given a fictitious name. Some of the lines in the pupils' drawings and writing have been traced using the pencil tool in Microsoft Paint. This was done so that all the lines would come across, as the

drawings were made using an ordinary pencil and not all of the lines came across when the panels were scanned into the computer.

Eva

Eva chose to write her graphic story based on the panel from *Aya of Yop City*. She had an initial perceptive visual literacy score of 1.75 and a post-test score of 1.7. This means that she was in the zone of selective visual literacy throughout the project, having only a slight decrease on the post-test, due to a lower score on one question. Eva explains that her story is about "a boy named Sam. Sam starts to think about the meaning with his life. He wants to change the world and travels down to Africa."

Eva states in her self-assessment that she found it easier to write the text, but that making the graphic story made it easier to explain how things looked. Eva did not completely finish her graphic story, and chose instead to write what she would have put in, had she had more time, below the part of the story she did finish (Figure 16).

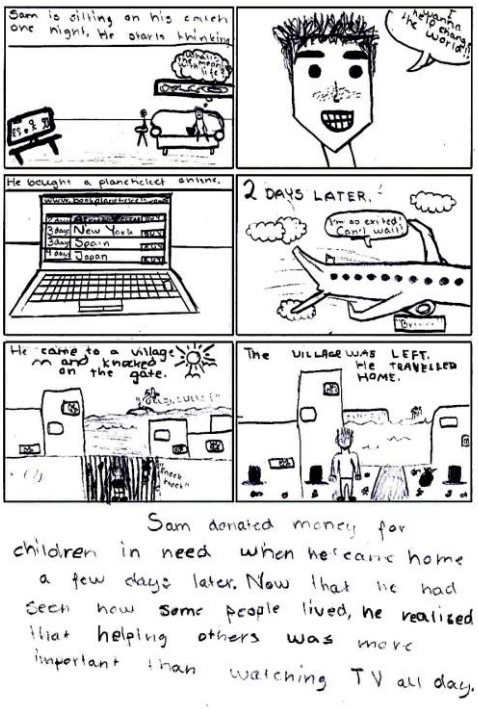

Figure 16: Eva – Graphic story

Eva displays an understanding of how captions, speech balloons and movement works in a graphic story. She also shows an ability to create depth in her panels. In addition to showing an understanding of what one sees, an individual who has expressive

visual literacy skills must be able to encode the message they wish to get across and also visually express it. Based on the written summary of the text and the graphic story, Eva displays an ability to tell the story, but also to leave blanks for the reader to fill in. In other words, she understands how to give the reader the opportunity to infer. In the third panel we see a computer, on which the character Sam has the intention of ordering tickets to Africa. In the fourth panel we see a plane, and someone on the plane stating that they "can't wait". Though it is not expressly stated we understand that this is Sam, and not a secondary character. This is partially because it is quite obvious in such a short story, but also because Eva has included some clever details. One of these are that next to the destination Africa on the computer, she has purposefully written that the plane departs in two days. In the next panel, the caption reads "2 days later". Eva also shows a certain level of inventiveness. Instead of making Africa the only setting in her story, which is what was shown on the panel her story was based on, she presents a traveller who is going to the foreign land of Africa. This is a clever move if one is not familiar with a particular setting. Had Eva had more time to explore and develop her story, she would have had the opportunity to view Africa from the outsider's perspective, a perspective that is most likely also her own. In general, it would seem that Eva has a high degree of expressive visual literacy, though this section is not meant to grade her in that sense. Eva has employed almost all of the elements that were discussed during the intervention, and has encoded her story in a way that is decodable by a reader. This is, as previously stated, the main mark of expressive visual literacy.

Tom

The second pupil who will be presented here, Tom, chose to write his story based on the panel from *Dark Rain: A New Orleans Story.* Tom had an initial visual literacy score of 1.3 and the post-test exhibited a score of 1.15. He did in other words have a slight decrease, but was always in the vicinity of the level unselective. Tom states that his story is about "a big wave coming to town". Furthermore, Tom states that he found that the graphic story was easier to make than the text, though he also states that he does not think he is good at drawing. He further claims that when he made the graphic story he did not have to make a story. This is likely a statement based on the order that the tasks were completed. Before the pupils made their graphic story, they

had to make a text to base their graphic portrayal on. This meant that when they made their graphic story, the events of the tale were already decided.

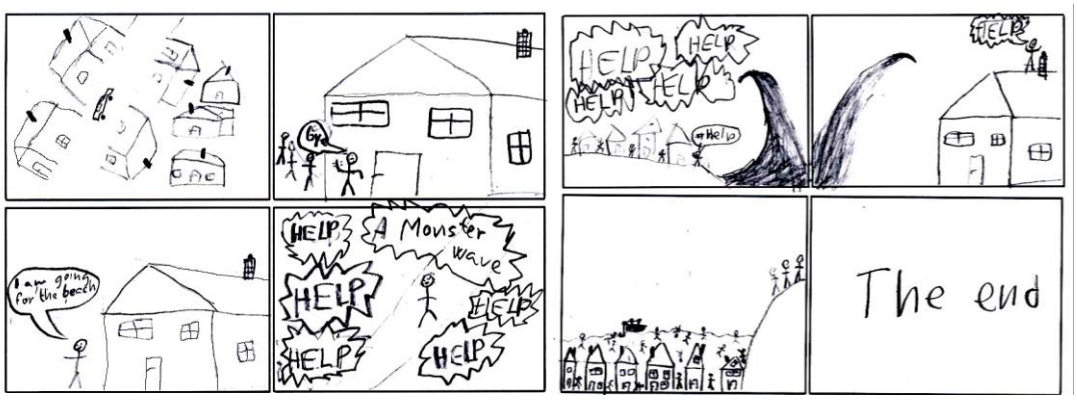

Figure 17: Tom – Graphic story

Tom has not utilised captions, but that does not hinder the general plot of the story. It is clear that a wave came out of nowhere, and killed most of the residents in the town in which the story takes place. Tom has also attempted to create depth in his panels and he has employed speech balloons in a way that lets the reader know that there is a difference in volume from utterance to utterance. In the third panel, where a character states; "I am going for the beach", there is clearly a different volume and tone to the character's voice than in the fourth panel, where everyone is screaming; "help". However, had Tom utilised captions, and perhaps introduced the reader to one or more main characters, it might have enhanced the plot of the story. Tom does not show the same level of inventiveness when it comes to plotline as the previous story by Eva displayed. Tom saw a panel showing a monster wave destroying a city, and that is exactly what he made a story about. This is not necessarily a negative component of the story, but the fact that he does not introduce us to any specific character makes it harder to engage in the narrative. Tom has incorporated some of the elements that were discussed during the intervention and was able to tell a story graphically. With regard to expressive visual literacy, I will say that he has been able to encode a story, and it is decodable by a reader, but it is not as easy to engage in as the story written by Eva. This is of course a subjective opinion, which may not be shared by the readers of this thesis.

Amanda

The third pupil whose story I will present belongs to Amanda. Her story was based on the panel from *Anya's Ghost*. Her initial perceptive visual literacy score was 1.9 and her post-test score was 1.85. She is, as Eva, in the vicinity of the level called selective, albeit with a slightly higher score than Eva. Amanda summarizes her story in the following way; "A girl walks to school one day and hears something moving in some bushes. She is scared and she feels that something or someone is behind her".

Amanda states that she felt that writing the graphic story was easier than writing the text. She supports this by stating that she enjoys drawing and that it is easier to draw the pictures in your head rather than explain them in writing.

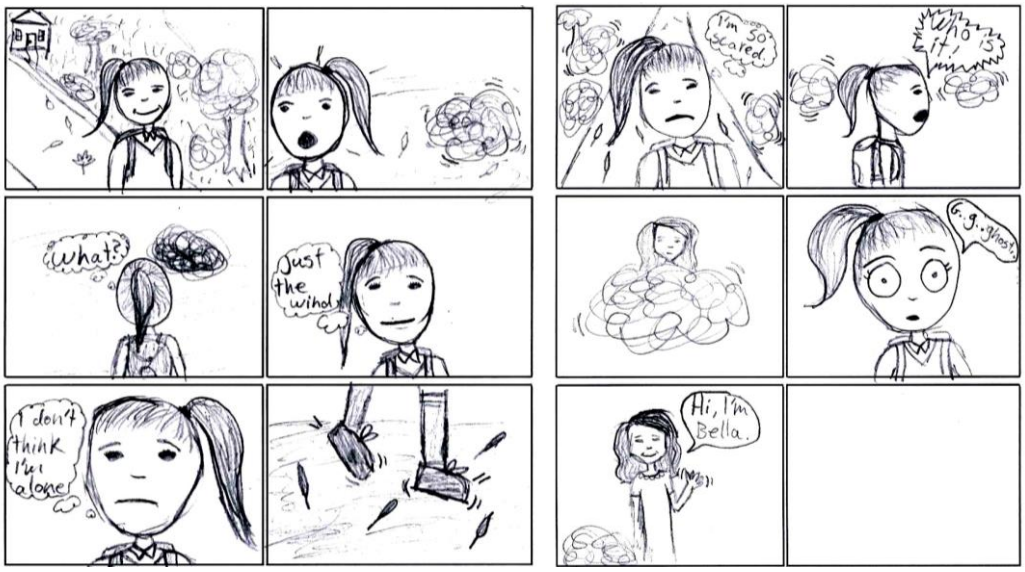

Figure 18: Amanda – Graphic story

Amanda, as Tom, has not utilised captions, but unlike Tom, she has introduced us to a main character with a unique look. As her main character wears her hair in a ponytail, the reader can decode that the character in panel 7 and 9 is a secondary character. Amanda has attempted to utilise both depth and movement, as well as balloons. The balloons are employed to portray thoughts, screams and ordinary speech. This variation makes the story come more to life. The facial expressions of the main character clearly shifts, from happy to worried, from scared to shocked. Amanda has also utilised different perspectives and angles, giving her the opportunity to slow the story down and not have too much happen in each panel. This story is clearly not complete, but it seems to be apparent that the next step in the story is a conversation

between the main character and the character named Bella. Amanda seems adept at portraying a story graphically, and it is in no way challenging to decode her story for a reader. In other words, she seems to have developed expressive visual literacy, in the sense that she is able to encode her material in a way that is decodable by the reader, while still allowing the reader to infer what is happening in the gutter.

The present chapter has presented the data procured from the current research project. The following chapter will discuss these results based on the theory presented in chapter two, as well as the aims and research question guiding the present thesis.

5.0 Discussion

In the current chapter, the results from this research project will be discussed based on previous research. The findings will also be discussed on the basis of the research question and the aims of the research. Possibilities for further research based on these findings will be elaborated on at the end of the chapter.

The main purpose of this thesis was to explore visual literacy and graphic novels, and specifically the graphic novel formats' possible effect on the skill set known as visual literacy. Through the utilisation of pre- and post-testing and an intervention, two groups were compared with the aim of observing a statistically significant increase in the experimental group. This aim was achieved through the conduction of this research project, presenting a statistically significant increase of the visual literacy score in the experimental group. The tests showed a respectable degree of internal consistency, as well as a high degree of intra-rater agreement when re-categorizing the results from the tests, strengthening internal reliability. The construct visual literacy was operationalized based on previous research, strengthening the tests' and the categorization forms' validity.

Furthermore, the present thesis sought to explore the relationship between perceptive and expressive visual literacy, mainly focusing on the notion that a person with a higher degree of perceptive visual literacy will have a higher degree of expressive visual literacy than a person with a lower degree of perceptive visual literacy. Based on the three examples of graphic stories that were presented in section 4.5, and the discussion of these which will follow in section 5.2.1, there are indications that perceptive visual literacy scores can indicate a person's expressive visual literacy.

5.1 Can explicit focus on graphic novels influence visual literacy?

Before starting the discussion, it is deemed relevant to re-iterate the research question guiding this thesis. The research question for this thesis is:

> To what extent, if any, can graphic novels be utilised to affect visual literacy scores in one 8th grade class in Norway?

The results from the pre- and post-tests conducted for this master thesis displays a statistically significant increase in the experimental group's perceptive visual literacy scores. This increase is not as prevalent in the control group, and additionally the two groups were statistically different after the post-test, indicating that graphic novels have the potential of influencing visual literacy scores. The two groups could be defined as equivalent when the pre-test was conducted, and when the post-test was conducted the groups did not only have a statistically significant difference between them, but only the experimental group had had a statistically significant increase in visual literacy scores. The tests themselves were checked for internal consistency, and as the Cronbach's alpha scores all fell above the 0.7 margin, meaning that they can be seen as respectable scores, the tests can be seen as internally consistent.

The difficulty and complexity of the text and the narrative are important factors with regard to how helpful graphic novels can be (Lamanno, 2007, p. 118). Therefore, with traditional novels, teachers must assist pupils with finding graphic novels appropriate for both their level of print literacy and their level of visual literacy. The fact that the pupils themselves chose which book they read for the current research project, and that this decision had to be made quite quickly, may be a limitation of this study. All the books available to the pupils had been approved as age appropriate both by a librarian at Bergen Public Library, by my supervisor at Bergen University College and by me. It was also seen as important to make sure that there was a range of difficulties with regard to vocabulary. The English teacher in the experimental group also gave the pupils advice with regard to which book they chose, as she/he had more insight than me, as the researcher, regarding the pupils' reading skills. Most of the pupils in the experimental group expressed that they sometimes or always like to read (Figure 5, p. 60), meaning that as long as the books were at an appropriate reading level and was about a topic of interest, the reading experience should have been interesting to the pupils and have aided their comprehension. This is also based on the fact that the majority of the pupils stated that they enjoy reading comics (Figure 4, p. 59) and that most of the pupils felt that the images made the story easier to understand.

A change in how we work as teachers is necessary to improve visual literacy, as exemplified by the interdisciplinary curriculum tested in McMullen and Woo's (2002)

pilot study. While an interdisciplinary approach was not tested during the research for the present study, the value of implementing such an approach can be seen through certain elements of the intervention conducted for the current research project. When the panel from *Aya of Yop City* was discussed in the experimental group, the pupils seemed eager to discuss how they think it is to live in Africa and how the panel made them feel. Books such as *Aya of Yop City* and *Dark Rain: A New Orleans Story* are readily available for use in an interdisciplinary collaboration between the English teacher, the Social Sciences teacher and the Art teacher. Visual literacy could, in the present study, be improved and taught in schools, as exhibited by the results in the experimental group. The present study also found that most of the pupils found it to be important to learn how to read images.

A spectrum of visual literacy mastery was exhibited in the present sample, supporting what was found by Geltman and Mechlin (2014) with regard to visual literacy skills. These researchers also found that one individual can possess varying levels of visual literacy skills with regard to different characteristics associated with visual literacy. Most of the pupils in the sample procured for the current research project exhibited responses from several different levels of visual literacy. This was true for both the experimental group and the control group. Most pupils had a score of 3, *highly visual*, when answering questions regarding sequencing of dialogue based on a comic strip (appendices 8.5 & 8.6, question 4). However, a larger dispersion was observed when pupils were asked to examine panels regarding events in a single panel, or when they were asked to use elements in a panel to explain what had happened from one panel to the next.

5.1.1 How can graphic novels be utilised to affect visual literacy?

The present study has utilised and adapted teaching methods employed by previous researchers. The adapted teaching methods were originally used either with the intent of increasing visual literacy skills (Roswell, McLean & Hamilton, 2012, pp. 445-446) or with the purpose of simply showing relevant usage of the format graphic novels (Rimmereide, 2013, pp. 138-158). It has been shown through the process of this study that the teaching methods relevant for teaching visual literacy can readily employ graphic novels as a tool to develop said visual literacy. A combination of the two

fields was successfully accomplished during the course of this study. As previously stated in this thesis, an extended amount of time would probably have made the results procured from the present research project clearer, and would also have provided time to go into more detail regarding the graphic novel during the intervention. Additionally, the field notes showed that one should always plan for things taking more or less time than one would assume. Certain elements of the intervention, namely the tests, the pupils spent varying amounts of time completing, from 15 minutes to the allotted time. Had the pupils been allowed to choose their books before the pre-test for example, they could have read during this time. However, allowing certain pupils to read would probably have made more pupils rush through their tests. For this reason, having the test as a separate portion of the lesson, with no other activities planned was the best option for this particular project.

Visual literacy must be thought of as an active, rather than a passive endeavour. As Howells (2003, p. 5) stated, we are passively examining images every day, but we do not actively stop and think about what we are actually seeing. The results from this thesis provides an indication towards that utilising graphic novels as a tool can be one way of making our pupils actively engage in examining what they are actually seeing. When reading a graphic novel the pupils are constantly inferring what goes on in the gutter, or utilising closure as McCloud (1993, p. 63) would call it, and when creating a graphic story themselves they can utilise the tools they have acquired when reading and examining graphic novels. Discussing panels as a whole and further deconstructing what they entail (Williams, 2008, p. 13) can make the pupils aware of the elements that together provide them with a certain impression of a panel. Including the teaching of conventions, as was done during the intervention for this research project, must also be seen as an important notion (Pantaleo, 2011, p. 127; Basol & Sarigul, 2013, p. 1627). Without an understanding of what different balloons mean with regard to speech, or what lines portraying movement entail, decoding the panel one is currently reading is a difficult task. The importance of learning how to read images was expressed by many of the pupils the experimental group in the current research project.

If one is to be able to include the graphic novel in our syllabuses, and subsequently utilise the format to affect visual literacy, the ideological preference towards print

literacy among teachers (Gillenwater, 2009, p. 33) must be tackled. One stepping stone on the road to levelling the playing field between print literacy and visual literacy, may be a stronger focus on the visual in the education of teachers, specifically English teachers for the purposes of this thesis, but also in general, as all subjects make use of the visual to some degree. This is, as previously stated, supported by both Robertson (2007) and Burwitz-Melzer (2013). However, adding an explicit focus on graphic novels and visual literacy in teacher education will only tackle one small part of the problem, as this will most likely not affect the teachers who are already teaching in our schools. One way to reach the teachers that are already active may be to make them aware of the benefits of utilising graphic novels, such as the opportunity to develop visual literacy and print literacy simultaneously (Gillenwater, 2009, p. 35). Further, the teachers should be made aware of the fact that the formats' close relative, comics, is already being utilised to some degree in schools (Sollien, 2010; Osloskolen, 2016; Rønning, 2016). Additionally, comics are a format that many pupils read several times each week (Roe, 2010, pp. 106-107), though the number of pupils who often read comics seemed to be declining in 2009. In the present study most of the pupils expressed that they enjoy reading comics, and several pupils also stated that it was their favourite format. When including formats that the pupils enjoy reading voluntarily, we may increase their motivation for and enjoyment of reading in school (Krashen, 2004, pp. 92-95). Furthermore, as previously presented in sub-section 2.2.3, graphic novels can be utilised to fulfil several competence aims, both for year 7 and year 10. (NDET, 2013a, p. 9; NDET, 2013b, p. 10). LK06 is open to interpretation to a large extent, and if teachers do not see the benefit of including graphic novels as a format, or of focusing on visual literacy as an active pursuit (Howells, 2003, p. 5), the inclusion of them will, in this authors mind, be an uphill battle. Further research similar to the current thesis, attempting to prove that graphic novels can be utilised to affect a certain skill set, may also help in giving the graphic novel a place in both the school libraries and the curriculum.

Discussing the concept of synergy, previously defined in section 2.2.1, with pupils can help them understand how one can decode the graphic novel. The understanding of the concept of synergy is in return supported by reading graphic novels (Burwitz-Melzer, 2013, p. 63). One of the pupils in the experimental group made it clear that the combination of print and image is essential for understanding the story when

stating, “I need a bit of text to understand what is going on”. This is a basis for discussing synergy (Sipe, 2011, p. 242). As the text ordinarily will inform the panels, and the panel will inform the text, be that to strengthen or contradict one another, the understanding of this concept is essential in order to be able to decode the visual information. Through guided decoding the pupils may increase their perceptive visual literacy, and furthermore increase their expressive visual literacy skills regarding encoding.

5.1.2 To what extent can graphic novels be utilised to affect visual literacy?

The results from the current research project supports what was found by Palmer and Matthews (2015) in their one-group study. They found that formal visual literacy instruction could increase 1st year students’ visual literacy scores, and this has proved to be true also with the particular group of pupils that was tested for the present research study. Palmer and Matthews’ results must however be examined with caution due to the lack of a control group, as the present study’s results must with regard to the limited number of participants. The fact that visual literacy has been indicated as both a teachable and measurable skill in the present and previous studies supports one of the aims of this thesis, attempting to affect visual literacy skills. The effect on the visual literacy skills in the experimental group in the present study is in all likelihood due to the independent variable, graphic novel acquisition, as a statistically significant increase in visual literacy scores did not appear in the control group. This would appear to give a partial answer to the main research question of this thesis. The fact that there has been a statistically significant increase in the present study, but only in the group that had formal instruction with regard to reading graphic novels and who also read graphic novels, shows that graphic novel acquisition, in this particular group, could affect visual literacy scores.

The extent to which graphic novels can be utilised to affect visual literacy scores, was in this study shown to be to a moderate extent. The effect size calculated when examining the experimental groups’ pre- and post-test means ($d = 0.6$) and the post-test means of the control and experimental groups ($d = 0.7$) support this. The statistical tools utilised to compare the mean scores of the groups showed a statistically significant increase, to an extent that the author of this thesis feels

comfortable stating that with this particular group of pupils, the format of graphic novels could be used to affect visual literacy scores to a moderate extent.

It was clear throughout the intervention that the aspect of a limited time frame made it difficult to show an effect on expressive visual literacy. As shown in figure 3 (p. 13), expressive visual literacy skills are more difficult to obtain than perceptive skills, as the expressive skills rely on the perceptive skills. The fact that a pupil must be visually literate in a perceptive manner to effectively be able to express themselves visually, does not mean that they must obtain the highest level of perceptive visual literacy to do so. It does however signify that the pupils need to be aware of certain elements or conventions perceptively before they can express themselves in a visual manner. With regard to graphic novels and visual literacy, such elements can be panels, gutters, style and balloons. The relationship between perceptive and expressive visual literacy will be further discussed in section 5.2.1.

5.2 Correlated findings

This section will explore patterns that emerged during the course of analysing the data. These patterns were previously presented in chapter 4 and will be discussed based on the aims for this thesis and previous research. The notion of a relationship between perceptive and expressive visual literacy skills will be examined first, followed by a discussion of patterns that emerged from the data regarding certain characteristics of the pupils based on their perceptive visual literacy score.

5.2.1 Perceptive and expressive visual literacy

In addition to examining the perceptive visual literacy scores of two groups, one experimental and one control, this thesis also briefly explored the notion of expressive visual literacy. This was done by providing qualitative examples and in-depth information about three pupils, focusing on their expressive and perceptive visual literacy. Each of these three pupils were presented in chapter 4 and the following will discuss the perceived relationship between the pupils' expressive and perceptive visual literacy.

Teaching pupils how to perceive and express themselves in a visual manner is more important than ever in the current society (Messiars & Moriarty, 2004, p. 480; Burmark, 2008, p. 23). Furthermore, through letting our pupils experience visual imagery, for example in the form of graphic novels, they can be inspired to create their own visual expressions (Rimmereide, 2013, p. 139). An adapted Bloom's taxonomy was presented in chapter two (Figure 3, p. 13). Here it was stated that expressive visual literacy is obtained after perceptive visual literacy, or in the very least that the expressive skill set is harder to obtain than the perceptive skill set. There are several ways to interpret this. One way to view the figure is that one cannot obtain expressive visual literacy before one has reached the highest level of perceptive visual literacy, or *highly visual* as this thesis has termed it. Another way to regard the figure is that one starts off gaining perceptive visual literacy skills and along the way the expressive skills will improve as one gains a higher degree of perceptive visual literacy skills. A model such as the one currently being referred to will not fit every individual, but regarding the qualitative results collected for this thesis, previously presented in section 4.5, the second manner of viewing figure 3 seems the most fitting. There are several reasons for this, exemplified by the following. None of the pupils, neither the ones I have chosen to present in section 4.5 or the excluded participants, had a complete lack of expressive visual literacy skills. They were all able to express themselves visually in some way. There did however seem to be a certain degree of correlation between the level of perceptive visual literacy, and the pupils' ability to express themselves visually. The reason for stating this is that the pupils with a higher degree of perceptive visual literacy (Eva and Amanda) included more visual elements in their graphic story, for example captions, to further tell their story and movement to make the story come more to life. They also presented a main character in their story, easing the reading experience of their narrative.

When examining a graphic story made by hand, the pupil's ability to draw may sway the impression of that pupil's expressive visual literacy. However, the inclusion of elements such as captions and speech bubbles are not related to the pupil's ability to draw, but rather to their encoding skills and their ability to relay the story they wish to tell. It was explained in the chapters on results and methods that drawing ability was not looked at as an element of significance with regard to expressive visual literacy for this project. There are several reasons for this. Most importantly, what the pupils

handed in must be seen as a first draft due to the time constraints of the project. The pupils who spent a lot of time focusing on making each panel perfect did not have time to create more than one or two panels of their story. The researcher was conscious of the limited amount of time and made the pupils aware that the most important part of the assignment was to make a sketch where the story they were trying to tell was clear. Another important reason for excluding drawing ability as a criterion for examining expressive visual literacy is that being able to understand how to tell a story visually (encoding) has more to do with understanding which elements to include in order to tell a story or convey a message, rather than an ability to make each panel aesthetically pleasing. Expressive visual literacy can also be displayed through making a graphic story in a computer program, eliminating the element of drawing ability, while still including the pupils' understanding of what to include in each panel.

The present thesis cannot aim to give any conclusive answers regarding the order of which perceptive and expressive visual literacy skills are obtained. Furthermore, the current research project did not collect sufficient data from the participants to generalize what was found in the examples that have been presented to the sample as a whole, or to the population for that matter. However, the graphic stories that were presented in chapter 4, seen through the light of figure 3 (p. 13) and the data collected from the participants who made those graphic stories, suggests that a higher perceptive visual literacy score indicates a higher degree of expressive visual literacy. Further research on this topic, focusing specifically on the measurement of expressive visual literacy, may give clearer answers to this query.

5.2.2 Gender and formats

The following sub-section will mainly discuss the patterns that emerged from the data, presented in sub-section 4.4.1. The patterns that are presented here are linked to characteristics that in the data collected for this thesis appeared to be an indicator of either an increase/decrease in visual literacy scores or appreciation for graphic novels. When the data that was collected for this thesis was analysed, certain themes emerged. Though they do not answer the research question, to what extent graphic novels can affect visual literacy, they are presented as an attempt at understanding

whether certain sub-groups in the sample had common characteristics that led to the statistical results presented in chapter 4.

Gender

Graphic novels has by previous researchers been seen as a format that can help reluctant or struggling readers (Lamanno, 2007, p. 117), particularly boys (Thompson, 2007, p. 29; Brænden, 2015, pp. 48-49; Rønning, 2016). When examining the data from the current research project with the naked eye, there did not appear to be any particular differences between the boys and the girls, and the initial statistical testing of the data did not indicate any notable differences here either. After categorizing the girls and the boys as two distinct groups, and comparing their pre- and post-test scores, there were clear results showing that the girls had had a much more statistically significant increase in visual literacy than the boys. If we are to believe that particularly boys can benefit from the graphic novel format, these results would seem to debunk that theory. However, almost all of the boys in the experimental group (7/9) claimed to enjoy the book they were reading to a large degree. This supports Kreft and Viebrock's (2014, p. 83) findings regarding that particularly the boys in their study would like to have access to a wider array of graphic novels. Furthermore, the majority of the boys belonged to the control group (14/23), while the majority of the girls (17/29) belonged to the experimental group. This puts the results more into perspective, and also makes it clear that though the girls as a group had a more significant increase than the boys, this does not mean that they would have, had the number of boys and girls in the experimental and control groups been equal. The effect size calculated using the mean in the boys' group and the mean in the girls' group was also only categorized as a small effect size (d = 0.2), meaning that the results are perhaps not that meaningful. Based on the results from these tests, nothing conclusive can be said, other than that in this group of pupils, the boys, to a larger degree than the girls, enjoyed reading a graphic format. However, many of the girls also enjoyed the format, supporting Kreft and Viebrock's (2014, p. 86) finding that graphic novels could increase the willingness to read for both genders. Regarding the question of whether gender is an indicator of whether a pupil will enjoy reading a graphic novel or have an increase in visual literacy scores, these results indicate that gender is not necessarily a relevant notion to examine. Whether the subject matter and

narrative is interesting to the pupil reading the graphic novel is much more important, something that will be discussed later in this section.

Another finding in the present study, based on the results from comparing the genders, is that being a part of the experimental group had an effect on the visual literacy scores of the pupils. This is supported by the fact that the group with the highest percentage of participants from the experimental group (the girls) had the most significant change, which is consistent with the experimental group as a whole having a statistically significant increase in visual literacy scores, while the control group did not.

Preferred formats

Through the course of data analysis, it was clear that the pupils who stated that they preferred to read visual formats, such as comic books and magazines, had a higher visual literacy score than the pupils who stated that they preferred novels. One reason for this might be that pupils who seek out, and prefer, visual formats, have a higher degree of exposure to visual stimuli and thereby more training in decoding this type of information. A different way of interpreting this information may be that pupils who prefer novels do not like reading visual images, based on statements such as "I don't like graphic novels, I like books without pictures". This utterance came from one pupil who stated that she/he would never read a graphic novel again. However, this would probably be the wrong way to examine the data regarding formats, as 81.5% of the sample liked to read comic books. In the experimental group, a pattern did emerge where it was clear that a preference for formats with a large degree of visual elements could be an indicator of a higher degree of visual literacy. No previous research has been done on the correlation between preferred formats and visual literacy, but the current research found that this is needed to further understand this potential link.

Graphic Novels

In section 4.4.1, a pattern was presented with regard to appreciation of the graphic novel each individual pupil read during this project and the likelihood that they would choose to read the format again. Five pupils responded that they would never read a graphic novel again, and the same pupils also responded that they did not like the

book they had read during this research project. Though this is perhaps not surprising, it does in my opinion have certain important repercussions. We can assume that this project constituted most of the pupils' first impression of a graphic novel, as 88,4 % of the pupils in the experimental group stated that they did not know what a graphic novel was prior to the research project initiating. Due to this, the present results indicate that a person's first meeting with a new format (or object in general) has a large impact on that person's choice to seek out that format again. This implies, in my opinion, that any project where the intent is to peak the pupils' interest in graphic novels must be well planned, so that there are books available that the pupils will enjoy, as well as activities that will spike appreciation for the books. We must give our pupils the option of escaping into the books they are reading, hopefully increasing their motivation to read more voluntarily (Versaci, 2007; Krashen, 2004; Jennings, Rule & Zanden, 2014). It was clear that in the group that was surveyed for the current research project, the degree of enjoyment the pupils felt towards the book they read had a clear correlation to the likelihood that the pupils would read a new graphic novel at a later date. Whether the pupils in a particular class enjoys reading graphic novels is an important element to consider when further implementing the format of graphic novels in the EFL classroom.

5.3 Is there a place for graphic novels in the EFL classroom?

Based on the results provided in the previous chapter, and the discussion in the present chapter, graphic novels most definitely have a place in the EFL classroom. Not only did the books, and the explicit focus on the format, increase the perceptive visual literacy scores for many of the pupils in the experimental group, but the books were also a welcome change for several pupils who professed that they did not like to read. The graphic novel has been said to support understanding and comprehension of the narrative (Basol & Sarigul, 2013; Rimmereide, 2013; Lamanno, 2007). The pupils in the experimental group supported this notion when 69 % of them stated that they thought it was important to learn how to read images. Some of the pupils stated that it was important to learn how to read images because it is easy to misunderstand what you are looking at if you do not know how to read an image, and because images are everywhere, it is important to learn how to read them. The present study is a support to the anecdotal evidence (Clark, 2013, p. 40) that has been prevalent for research

supporting the use of graphic novels in schools. The fact that almost three quarters of the pupils in the experimental group found it to be important to learn how to read images supports the inclusion of a visual component, such as the graphic novel, in the EFL classroom.

5.4 Further research

The current research project focused on whether graphic novels could be utilised to affect visual literacy, and utilised elements from the graphic novel format to test this set of skills. An interesting further project could consist of checking whether the visual literacy skills the pupils exhibited when working with graphic novels are transferable to other visual media, such as historical photographs and advertisements. A longitudinal study, examining visual literacy skills with regard to different visual media, can be one way to accomplish this. Another approach could be to conduct a replication of the present study, employing the addition of a delayed post-test, utilising for example historical photographs as the images the pupils were to examine. The scores from the delayed post-test could then be compared to the post-test where graphic novels were utilised, and these scores could be scored with regard to correlation.

The role of the teacher has been discussed previously in this chapter, with regard to the inclusion of the graphic novel and a focus on visual literacy. Why teachers choose to include or exclude an explicit focus on graphic novels and visual literacy in their teaching practices is important for understanding how one can proceed. A study incorporating surveys, interviews and observations with a focus on what relationship teachers have towards graphic novels and visual literacy may go a long way in aiding the problem highlighted in this thesis, the lack of national research on these two topics and the apparent absence of them in the EFL classroom. Previous studies from other countries such as Egypt (Mostafa, 2010) and the United States of America (Clark, 2013; Robertson 2007) can be used as inspiration for such a study.

The research conducted for the present thesis found indications that the pupils' preferred reading format could be an indication of their visual literacy score. No research that could be discovered through conventional search methods was found

examining this relationship. Whether there is in fact a correlation between these two elements cannot be concluded based on the present study, but a future study could further evaluate this notion. If there is in fact a relationship between these elements, then a simple survey of what format the pupils prefer to read could be a good indicator of the level of difficulty one should apply when working with visual literacy in a given classroom.

5.4.1 What was not in the scope of this project?

The present research project examined several elements regarding visual literacy, for example the notion of whether there is a relationship between the degree of perceptive visual literacy a pupil possesses and that same pupil's expressive visual literacy. Furthermore, the thesis examined certain characteristics of the pupils, namely their preferred reading formats and their gender, in relation to their visual literacy score. Generalizing to the larger population, in this case 8th grade pupils, was not possible for this research project. There are two main reasons for this.

Firstly, the small sample size. When the present research was planned, it was difficult to find schools that had the time to participate. The three schools that participated in the final project (pilot, control and experimental group) agreed to partake in the present study after months of contacting schools. Furthermore, the amount of time the present research project would have taken with a larger sample, given that the researcher would have had to partake in all of the lessons to ensure as identical an experience as possible, would have been too immense for one researcher to accomplish alone. As the researcher conducted all of the teaching in the experimental group, and there was no assistant available to the researcher, it stands to reason that the researcher would have had to conduct all of the lessons in any additional experimental groups as well. According to Dörnyei and Csizèr (2012, p. 82), about 100 participants would have been needed to make any sort of generalizing claims. In a project such as this one, that would mean at least two additional classes. Including this amount of participants would not have been possible in the allotted time frame. A third experimental group would have added an interesting dimension to the project, and is something I believe should be added if this project was ever to be replicated on a larger scale.

Secondly, and perhaps most importantly, the convenience sampling utilised in this thesis, and many other studies conducted in the field of education, makes generalization almost impossible. This is because one cannot be certain that one is actually testing the target population when one does not have a randomized sample.

In section 3.10 regarding limitations, it was stated that the ability to draw, was not used as a characterization of expressive visual literacy. There were several reasons for this, most of which were discussed in the aforementioned section. The main reason for not including this element was however that of time and scope. If the project had a longer time frame the pupils would have had more time to create their graphic story. Furthermore, if the current research project had lasted for a longer period of time, the pupils would perhaps have been able to make a short graphic novel. They would also have had more time to fine-tune their graphic story and the researcher would have had a solid basis for discussing their expressive visual literacy, also based on drawing ability. As the graphic stories that the pupils handed in must be seen as first draft, it does not seem fair or prudent to include their ability to draw as a criterion for expressive visual literacy for the purposes of this thesis. A larger study, preferably an interdisciplinary study where the Art teacher is also involved would perhaps be able to make clearer judgements with regard to expressive visual literacy.

5.4.2 What could have been done differently?

A second experimental group could have been utilised in this research project. This group could either have worked with one graphic novel and had literary conversations about that one book, or they could have been scored based on visual literacy scores first, and then been assigned a book based on their visual literacy score. In the first instance, one could see whether class discussions and collaborative reading of a graphic novel could improve visual literacy scores and comprehension. In the second instance, one could check whether an assigned book at an appropriate level would give a pupil a larger increase in visual literacy score than a book they chose themselves, but that may not be at an appropriate reading level. Furthermore, a larger focus on simply reading, rather than additional tasks could also have yielded a different result in the present research study. Whether this would have increased,

decreased or not have changed the scores is however impossible to say with any degree of certainty.

The pupils spent varying amounts of time completing their pre- and post-tests. An interesting element that could have been examined is whether there was any relationship between pupils with an increased or decreased score on the post-test and the amount of time the pupils spent completing their tests. This element of time could also have been examined with regard to the level of visual literacy exhibited through the pre-test scores and the change in their score in general. The only feasible ways to check this would have been to either provide each pupils with a stopwatch that they could use to time their own completion, or to have the pupils hand in their test the second they felt they had finished and have the researcher write down the time they spent. The first option might have distracted the pupils from doing their best, and might have made them feel as if completing in the shortest amount of time was the goal. The second option could have yielded the same result. Furthermore, the second option would have taken the possibility of continuing to write throughout the allotted time away from the pupils. Perhaps the only way of accomplishing the task of timing each pupil's completion of the test would be with several research assistants at the researcher's disposal.

6.0 Conclusion

This chapter will serve as a summary of the previous chapter and as a conclusion to the thesis. The main findings and limitations will be noted, as well as final remarks from the author regarding further work needed on the topic of the present research project.

6.1 Summary

The present study presented an interventionist quasi-experimental study, utilising a *pretest-posttest* design, where two groups were tested with regard to their visual literacy scores. The experimental group participated in an intervention where they read graphic novels and were exposed to formal instruction with regard to reading images/panels (visual literacy). After the completion of the intervention the experimental group had had a statistically significant increase in their visual literacy score ($t(df = 25) = 3.38$, $p = 0.002$), and a statistically significant difference was calculated between the control group and the experimental group on the post-test that was not present on the pre-test ($t(df = 50) = 2.44$, $p = 0.02$). The present study has shown that, with this particular group of pupils, visual literacy can be affected through the utilisation of graphic novels to a moderate degree. Furthermore, the extent to which visual literacy can be affected is moderate, due to the effect size being categorized as moderate when computing the pre- and post-test scores of the experimental group ($d = 0.6$), and when computing the post-test scores of the experimental and control groups ($d = 0.7$). Through the course of this study, a variety of graphic novels were utilised to attempt to affect the pupils' visual literacy scores. Based on the results, in this particular group of pupils, graphic novels can be utilised to affect visual literacy scores.

This thesis also distinguished between expressive and perceptive visual literacy, mainly examining perceptive visual literacy through the pre- and post-tests. Expressive visual literacy was examined through graphic stories made by the pupils in the experimental group throughout the intervention, to gain insight into whether pupils with a high degree of perceptive visual literacy displayed more sophisticated expressive visual literacy skills. Based on the three examples presented in this thesis there appears to be a relationship between the two skill sets, supporting the choice to

state that graphic novels can be utilised to affect visual literacy scores, and not simply perceptive visual literacy scores.

6.2 Main findings and limitations

The main finding of the present thesis is that, for the particular sample that was examined, graphic novels can, to a moderate degree, be utilised to affect visual literacy scores. There is also data to support that for the pupils that were examined with regard to expressive visual literacy, there is a relationship between the degree of perceptive visual literacy and the degree of expressive visual literacy. The pupils with a higher perceptive visual literacy score exhibited an ability to more adeptly encode a graphic story. There were no strong indications in the data signifying that boys benefitted more from the project than the girls. However, there are indications in the data supporting that pupils who prefer reading formats categorized as more visual, such as magazines and comic books, are likely to have a larger increase in visual literacy scores than those who prefer novels, in a research project such as the one conducted in the current thesis. In the sample that was examined it was also clear that pupils who did not enjoy the graphic novel they read, claimed that they would never again read a graphic novel. This emphasises the importance of making sure that the pupils' first encounter with the graphic novel, or any new format, is a good one.

The project was mainly limited by the quasi-experimental design, the researcher acting as the teacher, the limited sample size, the convenience sampling and the limited time frame of the intervention. All of the limitations of the project were examined in section 3.10, and as it was stated there, the researcher has been constantly aware of the limitations of the research and has minimized them as much as possible. It is also important to note that no research project is without limitations, and being aware of these and presenting them in an honest manner is also a part of any substantial research project. When honestly presenting the limitations of the thesis, the researcher hopes that replications of the study can eliminate the current limitations to a larger degree from the on-set of the future project, thereby strengthening the current results.

6.3 Final remarks

Through the process of collecting and analysing data for this thesis, as well as writing it up, it has become clear to me that one of the most important aspects of research is planning and having a sufficient amount of time to test what one is wishing to test. This thesis was my first attempt at a mixed methods study, and the first time I have dealt with quantitative data as a researcher. Through trial and error, guidance from researchers that are more experienced and a lot of reading, the thesis was completed. The completed study has accomplished its main goal. It shows that in the sample that was examined, graphic novels can be utilised to affect visual literacy in 8th grade pupils, supporting the claims that have been made by previous researchers about this feature of the graphic novel. My hope is that this study might be replicated on a larger scale, mainly to examine whether these results can be generalized to the wider population. Finally, I would like to state that graphic novels are a format that should be incorporated in the EFL classroom and school libraries, if, for nothing else, to excite our pupils and help them navigate the visual society they meet when they exit their school each afternoon. This thesis has shown that examining visual literacy as an active, rather than a passive pursuit (Howells, 2003, p. 5), yields results, hopefully leading to a further focus on both visual literacy and graphic novels in the future.

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8.0 Appendices

8.1 Lesson plan

Lesson 1 – An introduction to graphic novels

- Introduction of the researcher and of the project.
- Pre-test (40 minutes)
- Choosing books
    - The pupils were allowed to look through the books that were brought and chose one. They had to "sign out" the books so that the researcher (or the teacher) had an overview over who had each book.

Lesson 2 – Creating a visual context (adapted from Roswell, Mclean & Hamilton, 2012, p. 445)

- Vocabulary lesson with power point (+hand out) (20 min)
    - Panel
    - Balloons/Speech bubbles (speech/thought/whisper)
    - Icons
    - Sound effects
    - Motion
- A second power point presentation on the smart board, with a panel on each slide (4 in total) from different graphic novels, was used to answer questions about how the pupils felt about different images. First they answered question 1 for all the panels, then question 2 and so on. The pupils answered question 1-4 silently in their books.
    1. The pupils wrote down a word or phrase that they thought of when they first saw the image.
    2. The pupils wrote down an emotion/mood that they connected with the image.
    3. The pupils described what the image represented to them.
    4. The pupils were asked to answer some questions about the image (What is the message? Why did the author choose this style, genre, colour etc.?)
    5. Mind map.

a. We went back to the first panel and made a mind map of what our answers to questions 1 and 2 were. This was done so that the pupils could create an understanding of the multiple meanings, feelings and descriptions one image could evoke.

Lesson 3 – Applying the visual in text (adapted from Roswell, Mclean & Hamilton, 2012, p. 445)

- The pupils received a hand out of the panels we worked on before the autumn break.
- They were asked to choose one panel and write a story (1-2 paragraphs) in their books/on paper where the panel was a part of the story.
- The pupils then created a short graphic story based on their written story.
    - The students received 3 pages with panels already made.
    - The students made a graphic representation of their story, using words and images. I went through some key points, such as using sound, movement and thought/speech bubbles before they started, in addition to providing them with a hand-out of these key points.
- We read for the remainder of the lesson.

Lesson 4 – Reflecting on the visual

- The pupils were asked to find the graphic story they made the previous lesson
- The pupils gave themselves feedback based on a form they received as a hand out;
    - What is the story about?
    - What is the message?
    - Does the graphic text utilise movement or sound?
- The texts were handed in to the researcher/teacher
- The pupils worked on a summary of their graphic novel and read their graphic novel for the remainder of the lesson.

Lesson 5

- Post-test (45 min)
- Read/finished the graphic novels and the summary for the remainder of the lesson

8.2 Categorization form: Pre-test

Question nr.	Untrained	Selective	Highly Visual
1	- The pupil points out the most obvious (a few) elements of the panel (cars, people, houses) - Does not describe what s/he sees - Identifies no/few details - Does not connect the text to the image	- The pupil points out some elements of the panel - Identifies some details - Describes the image, but statically - Connects the text with the image, but only in that the presence of the text is mentioned	- Describes the panel as a whole - Identifies many details - Narrates the image, rather than just pointing out what is there - Uses the text in the description of the panel
2	- The pupil is able to identify one or two major changes (one is a close-up, the character is angry in one panel etc.) -The pupil does not identify that the character has a different feel in each image	- The pupil identifies a few changes between the panels - The pupil mentions that the character looks stronger (or some version of this) in one panel	- The pupil identifies many changes between the panels - The pupil elaborates on why the character has a different feel in one of the panels
3	- The pupil is only able to notice one major detail (e.g. he	- The pupil points out the most important changes (his eyes, colour and the bandage)	- The pupil points out all the changes in the panel (perspective, eyes,

	is looking in another direction) -Does not describe what has happened	- Describes briefly what has happened focusing on only one element (e.g. the bandage)	bandage, colour etc.) - Elaborates on what has happened/Tells a story
4	- The pupil is not able to identify the correct placement of more than one of the sentences	- The pupil correctly places most of the sentences	- The pupil correctly places all of the sentences
5	- The pupil points out a few elements of the panels, but does not do so chronologically - The pupil is not able to create a story using the panels	- The pupil points out an element or two from each panel in the correct order - The pupil manages to create a story, but does not include all the details in the panels	- The pupil describes each panel chronologically and with detail - The pupil includes most/all of the details in the panels to create a detailed description/ story
6	- Points out that his back is hurting, but does not elaborate on why this might be - Does not point out any details of the panel	- Points out that his back is hurting, but believes the only reason can be that the garbage can is heavy - Points out some details (garbage can, speech bubble etc.)	- Points out that his back is hurting and is able to elaborate as to why regardless of the garbage can. The pupil elaborates on

			one or more other reason/s - Sees many details (garbage can, speech bubble, stars, house etc.)
7	- Is able to write one brief description of each element (a hand, wheelchair, crying, face)	- Elaborates on what the icons might mean, but only provides one possible meaning (a fist meaning anger, man in a wheelchair meaning disabled, crying face meaning sadness etc.)	- Describes the icons using multiple explanations of what they could mean (the fist could mean fight, anger, victory etc.)
8	- Is able to identify one element (either that the images are all faces, or that they are all smiling)	- Is able to identify that they are all smiling and that all the images are of faces.	-Identifies all elements that are common to the images and also includes details (the all have eyes, mouths etc.)
9	Identifies a favourite, but can not give a reason as to why	Identifies a favourite, and can give a brief explanation as to why (colours are more exiting e.g.)	Identifies a favourite, and can elaborate as to why their favourite is "better". Gives more than one reason as to why they chose the one they chose.

10	- Is able to identify no or one feeling that they feel when looking at the image - Can only use the most obvious details of the image to reason for their feeling about the image (the rain, the people running etc.)	- Is able to identify a feeling that they get from the image - Uses several elements from the image to explain why they feel the way they feel - Does not include information from the text in their explanation	- Identifies more than one feeling they get from the image - Uses elements from the text and the art to explain why they feel the way they feel. - Identifies details in their explanation

8.3 Cateogorzation form: Post-test

Question nr.	Untrained	Selective	Highly Visual
1	- The pupil points out the most obvious (a few) elements of the panel (Man/men, chair, phone) - Does not describe what s/he sees - Identifies no/few details - Does not connect the text to the image	- The pupil points out some elements of the panel - Identifies some details (is able to identify that it is one man, and not three) - Describes the image, but statically - Connects the text with the image, but only in that the presence of the text is mentioned	- Describes the panel as a whole - Identifies many details - Narrates the image, rather than just pointing out what is there - Uses the text in the description of the panel
2	- The pupil is able to identify one or two major changes (the characters switch places, is angry in one panel etc.) -The pupil does not identify that the characters have a different feel in each panel	- The pupil identifies a few changes between the panels - The pupil mentions that one of the characters looks stronger (or some version of this) in each panel	- The pupil identifies many changes between the panels - The pupil elaborates on why the characters have a different feel in one of the panels
3	- The pupil is only able to notice one	- The pupil points out the most important	- The pupil points out all the changes

	major detail (e.g. he is looking in another direction) -Does not describe what has happened	changes (his eyes, colour and the bandage) - Describes briefly what has happened focusing on only one element (e.g. the bandage)	in the panel (perspective, eyes, bandage, colour etc.) - Elaborates on what has happened/Tells a story
4	- The pupil is not able to identify the correct placement of more than one of the sentences	- The pupil correctly places most of the sentences	- The pupil correctly places all of the sentences
5	- The pupil points out a few elements of the panels, but does not do so chronologically - The pupil is not able to create a story using the panels	- The pupil points out an element or two from each panel in the correct order - The pupil manages to create a story, but does not include all the details in the panels	- The pupil describes each panel chronologically and with detail - The pupil includes most/all of the details in the panels to create a detailed description/ story
6	- Points out that one person grabs another person but does not elaborate on why this might be	- Points out that one person grabs another person, but believes there can only be one explanation for this	- Points out that one person grabs another person and is able to elaborate as to why. The pupil elaborates on

	- Does not point out any details of the panel	- Points out some details (little girl, speech bubble etc.)	one or more other reason/s - Sees many details (little girl, speech bubble, man in the background, movement, etc.)
7	- Is able to write one brief description of each element (a skull, note, money, star)	- Elaborates on what the icons might mean, but only provides one possible meaning (a skull meaning death, note meaning music, money meaning rich, star meaning fame etc.)	- Describes the icons using multiple explanations of what they could mean (the skull could mean death, poison, danger etc.)
8	- Is able to identify one element (either that the images are all of food, or that they are all unhealthy)	- Is able to identify that they are all of food and that they are unhealthy and/or good.	-Identifies all elements that are common to the images and also includes details (they are all drawn like in a cartoon e.g.)
9	Identifies a favourite, but can not give a reason as to why	Identifies a favourite, and can give a brief explanation as to why (colours are more exiting e.g.)	Identifies a favourite, and can elaborate as to why their favourite is "better". Gives more than one

			reason as to why they chose the one they chose.
10	- Is able to identify no or one feeling that they feel when looking at the image - Can only use the most obvious details of the image to reason for their feeling about the image (the river, the boat etc.)	- Is able to identify a feeling that they get from the image - Uses several elements from the image to explain why they feel the way they feel	- Is able to identify a feeling that they get from the image - Uses several elements from the image to explain why they feel the way they - Identifies details in their explanation

8.4 Booklist

Abouet, M. & Oubrerie, C. (2007). *Aya.* Montreal: Drawn & Quarterly.

Abouet, M. & Oubrerie, C. (2008). *Aya of Yop City.* Montreal: Drawn & Quarterly.

* Abouet, M. & Oubrerie, C. (2013). *Aya – Love in Yop City.* Montreal: Drawn & Quarterly.

Abouet, M. & Oubrerie, C. (2009). *Aya – The Secrets Come Out.* Montreal: Drawn & Quarterly.

Allie, S. & Asrar, M. (2012). *Star Wars Jedi – Volume 1: The Dark Side.* Milwaukie: Dark Horse Books.

Allison, R. H. (2012). *I`m not a plastic bag.* Los Angeles: Archaia.

Barlow, J. & Lacy, R. (2009). *Star Wars Adventures: Han Solo and the Hollow Moon of Khorva.* Milwaukie: Dark Horse Books.

Barlow, J. & Sorlano, C. (2009). *Star Wars Adventures: Princess Leia and the Royal Ransom.* Milwaukie: Dark Horse Books.

Baum, L. F., Shanower, E. & Young, S. (2012). *Dorothy and the Wizard in OZ.* New York: Marvel.

Baum, L. F., Shanower, E. & Young, S. (2011). *Ozma of OZ.* Salem: Marvel.

Baum, L. F., Shanower, E. & Young, S. (2013). *Road to OZ.* Salem: Marvel.

Baum, L. F., Shanower, E. & Young, S. (2010). *The Marvelous Land of OZ.* New York: Marvel.

Bendis, B. M. & Lafuente, D. (2013). *Spider-Man.* New York: Marvel Worldwide Inc.

Bendis, B. M. & Romita, J. (2011). *The Avengers.* New York: Marvel Worldwide Inc.

Briggs, R. (2012). *Fungus the Bogeyman.* London: Penguin Books.

Brosgol, V. (2011). *Anya's Ghost.* New York: First Second.

Bunn, C. & Edwards, N. (2012). *Spider-Man Season 1.* New York: Marvel Worldwide Inc.

Carey, M., Liew, S. & Hempel, M. (2007). *Re-Gifters.* New York: DC Comics.

Cavallaro, M. (2008). *Parade (with fireworks).* Berkeley: Image Comics Inc.

Christie, A. (2007). *Death on the Nile.* London: HarperCollinsPublishers.

Cooper, J. F., Thomas, R. & Kurth, S. (2007). *The Last of the Mohicans.* Salem: Marvel.

Dixon, C., Miller, M. & Tolibao, H. (2010). *New Spring – The Grapic Novel.* Runnemede: Dynamic Entertainment.

*Dumas, A., Thomas, R. & Petrus, H. (2008). *The Man in the Iron Mask.* New York: Marvel.

Evensen, E. (2007). *Gods of Asgard.* Columbus: Studio E3.

Grine, C. (2006). *Chickenhare – The House of Klaus.* Milwaukie: Dark Horse Books.

Hernandez, G. (2013). *Marble Season.* New York: Drawn & Quarterly.

Horowitz, A. (2007). *Point Blanc – The Graphic Novel.* London: Walker Books.

Johnson, M. & Gane, S. (2010). *Dark Rain: A New Orleans Story.* New York: DC Comics.

Kibuishi, K. (2010). *Amulet - The Cloud Searchers.* New York: Scholastic.

Kibuishi, K. (2008). *Amulet – The Stonekeeper.* New York: Scholastic.

Kibuishi, K. (2009). *Amulet – The stonekeeper`s curse.* New York: Scholastic.

Kibuishi, K. (2013). *Explorer – The Lost Islands.* New York: Abrams.

Kim, D. K. (2005). *Same Difference and Other Stories.* Marietta: Top Shelf Productions.

Kim, D. K. & Hamm, J. (2007). *Good as Lily.* New York: DC Comics.

Lee, L. (2006). *Still Angry Little Girls.* New York: Abrams Image.

Martin, G. R. R. (2008). *The Hedge Knight – Sworn Sword.* New York: Marvel.

Obomsawin, D. (2009) *Kaspar.* Montreal: Drawn & Quarterly.

O`Malley, B. L. (2010). *Scott Pilgrim – Us. The world.* London: Forth Estate.

Sfar, J. & Guibert, E. (1997). *The Professor`s Daughter.* New York: First Second.

*Shakespeare, W. & Blum, A. (1997). *A Midsummer Night`s Dream.* New York: Twin Circle Publishing Co.

Shakespeare, W. & Leong, S. (2009). *Romeo and Juliet.* London: SelfMadeHero.

Smith, J. (2005). *Bone – Out from Boneville.* New York: Scholastic Inc.

Stern, S. L., Steininger, C. & Studabaker, C. (2007). *Beowulf: The Graphic Novel.* Stevenage: Markosia Enterprises Ltd.

*Stroud, J. & Donkin, A. (2011). *The Amulet of Samarkand.* London: Random House Children`s Books.

Tolkien, J. R. R., Wenzel, D. & Dixon, C. (2006). *The Hobbit – Revised Edition.* London: HarperCollinsPublishers.

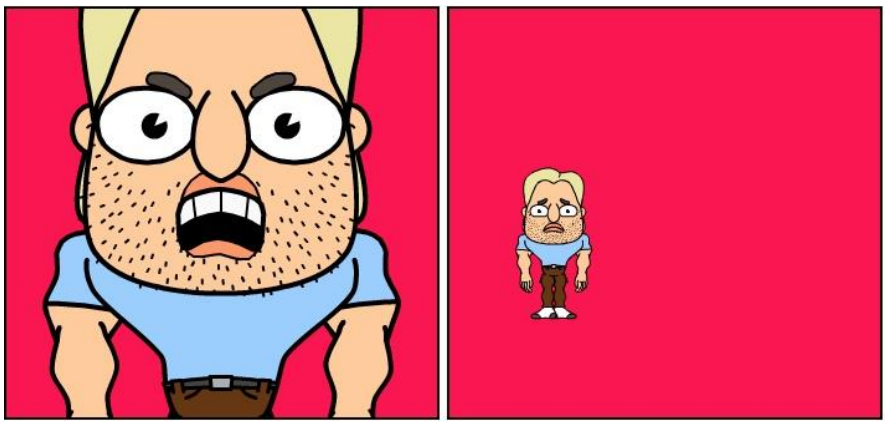
* = two or more of this book was available to the pupils.

8.5 Pre-test

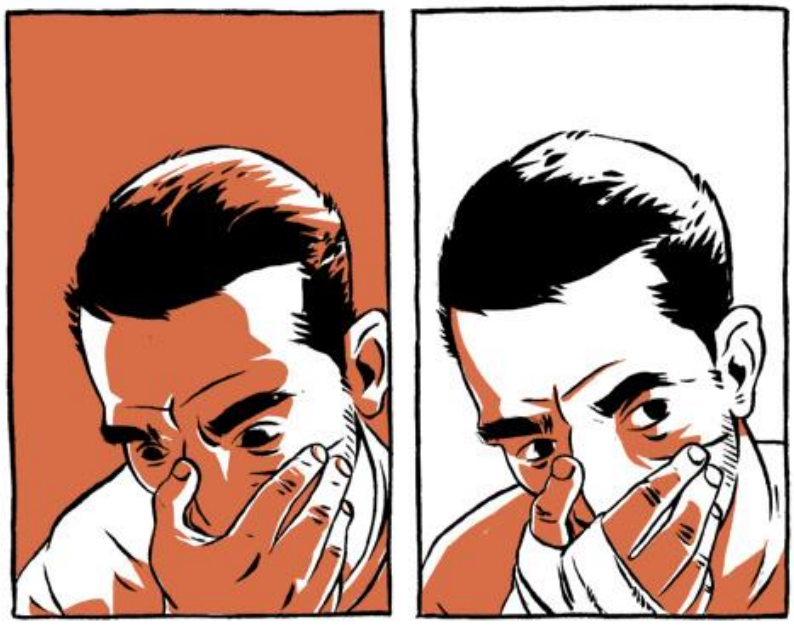
READING IMAGES

My number:_____

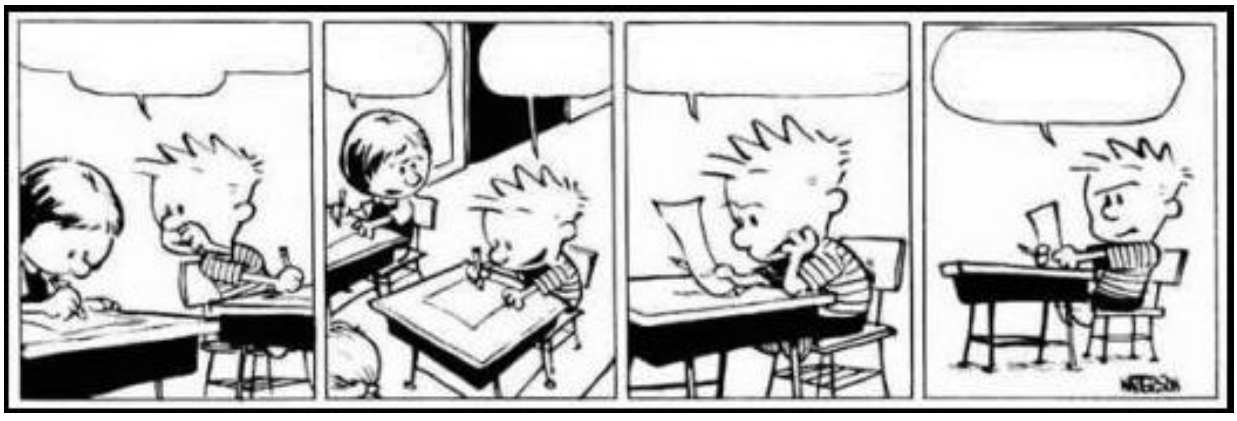
1) What do you see in the frame above?



2) What are the differences between the first and the second image?



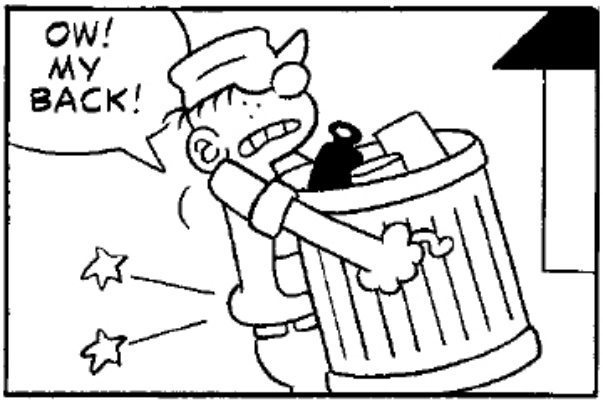
3) What has happened <u>between</u> the first and second image above?



4) Write each sentence below in the correct speech bubble in the image above. They are not in the correct order.

1) Thanks!
2) That´s what she said 3+4 was.
3) A billion.
4) Psst… Susie! What´s 12+7?
5) Wait a minute. That can´t be right…

5) What happens in the images above?



6) What has happened in this image?

7) - Describe the images below.
- What do you think each image means?

a) b) c) d)




a) _____
_____
_____

b) _____
_____
_____

c) _____
_____
_____

d) _____
_____
_____

8) What do the four images below have in common?




_____
_____
_____

_____

9) The two images below are completely alike. The only difference is that one is in black and white, while the other one has colours. Decide which image you like better and explain why below.

_____
_____
_____
_____
_____
_____
_____

10) Look at the image below.

a) What do you feel when you look at the image (for example sad, happy or scared)?

b) Explain why you feel the way you feel about the image.

_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
_____
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What is your favourite thing to read?

- Novels
- Comic books
- Magazines
- Graphic novels
- Short stories
- Other:_____

Have you ever read a graphic novel?

- Yes
- No
- I do not know what a graphic novel is

What do you think a graphic novel is? Explain below.

_____
_____
_____
_____

Do you like comic books?

- Yes
- No
- I do not know what comic books are

Do you like to read?

- Yes
- Sometimes
- Rarely
- No

Do you want to read a graphic novel?

- Yes
- Maybe
- No

Are you a boy or a girl?

- Boy
- Girl

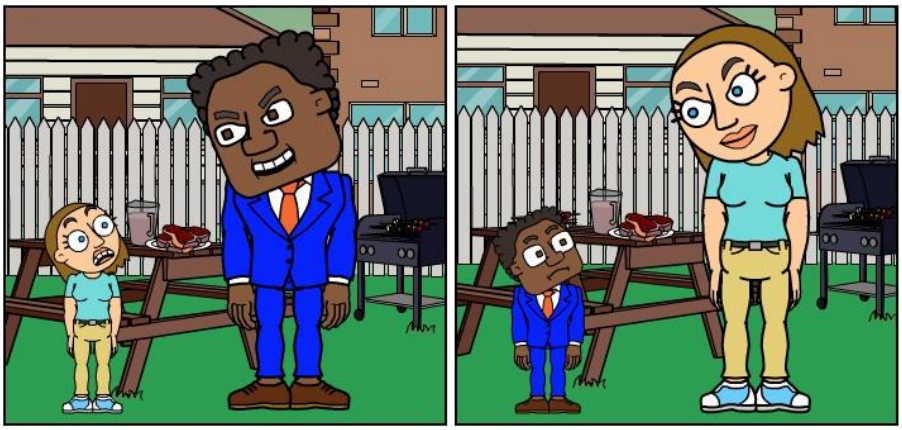
8.6 Post-test

*The post-test presented here is the one handed out to the experimental group.

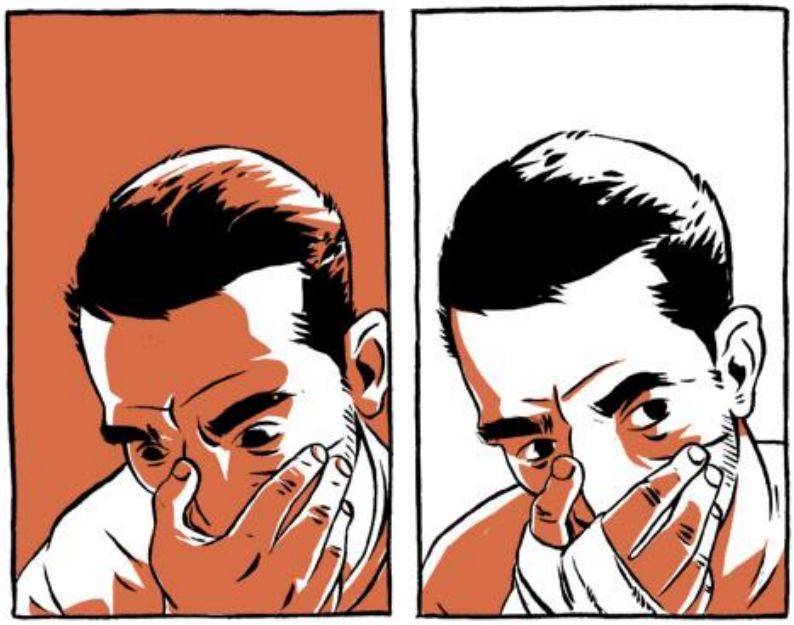
READING IMAGES

My number:_____

1) What do you see in the panel above?



2) What are the differences between the first and the second panel?



3) What has happened **<u>between</u>** the first and second panel?

4) Write each sentence below in the correct speech bubble in the panels above. They are not in the correct order.

6) Wow! Twenty-three? Can you do it again right now?
7) Well, let´s see… One time I got a rock to skip twenty-three times.
8) How many times can you make a rock skip across the water, grampa?
9) No. I can only skip it that many times when the water´s frozen over.

5) What happens in the panels above?

6) What has happened in this panel?

7) Describe the images below. What do they look like, and what do you think they mean?

a) b) c) d)




e) _____
_____
_____

f) _____
_____
_____

g) _____
_____
_____

h) _____
_____
_____

8) What do the four images below have in common?

_____
_____
_____

9) The two panels below are completely alike. The only difference is that one is in black and white, while the other one has colours. Decide which panel you like better and explain why below.

_____
_____
_____
_____
_____
_____
_____

10) Look at the image below.

a) What do you feel when you look at the panel (for example sad, happy or scared)?

b) Explain why you feel the way you feel about the panel.

_____
_____
_____
_____

What is your favourite thing to read?

- Novels
- Comic books
- Magazines
- Graphic novels
- Short stories
- Other:_____

Did you like reading a graphic novel?

- Yes
- Some of it
- A little of it
- No

Do you like comic books?

- Yes
- No
- I do not know what comic books are

Do you like to read?

- Yes
- Sometimes
- Rarely
- No

How likely is it that you will read a graphic novel again?

- Very likely (Veldig sannynlig)
- Probably (Sannsynligvis)
- Maybe (Kanskje)
- Unlikely (Lite sannsynlig)
- Never (Helt usannsynlig/Aldri)

Why did you tick the box you ticked in the previous question?

_____
_____
_____
_____

Do you have any comments about the project?

_____
_____
_____
_____
_____

The graphic novel I read and the project.

1) A) Which part of the book did you like the most, the pictures or the text?
   - The text
   - The pictures
   - Both
   - Neither

   B) Why/why not?

   _____
   _____
   _____
   _____

2) A) Would you have enjoyed the book more if it had not had pictures?
   - Yes
   - Maybe
   - No
   - I don`t know

   B) Why/Why not?

   _____
   _____
   _____
   _____

3) Did the pictures in the book help you understand what the story was about?
   - Yes
   - A little
   - No
   - I don`t know

4) A) Do you think it is important to learn how to read images?
   - Yes
   - Sometimes
   - Rarely
   - No

   B) Why/Why not?

   _____
   _____
   _____
   _____

5) What was the name of the graphic novel you read?

   _____

6) How much time did you spend reading in your book at home?

   _____
   _____

7) A) Have you learned anything new during this project?
   - Yes, a lot.
   - A little
   - Not really
   - Nothing

   B) What have you learned?

   _____
   _____
   _____
   _____

   C) What did you think of the following parts of the project? What did you learn from each part?
   - The test in the first lesson.

     _____
     _____
     _____
   - The lesson where we looked at different parts of comics.

     _____
     _____
     _____
   - Making a text based on a panel.

     _____
     _____
     _____
   - Making a cartoon/graphic story.

     _____
     _____
     _____
   - The test you are taking now.

     _____
     _____
     _____

8) Did you finish your book?
   - Yes
   - Almost
   - No

9) Do you think graphic novels should be used in schools more often?

   _____
   _____
   _____

10) Finally, what is a graphic novel?

   _____
   _____
   _____

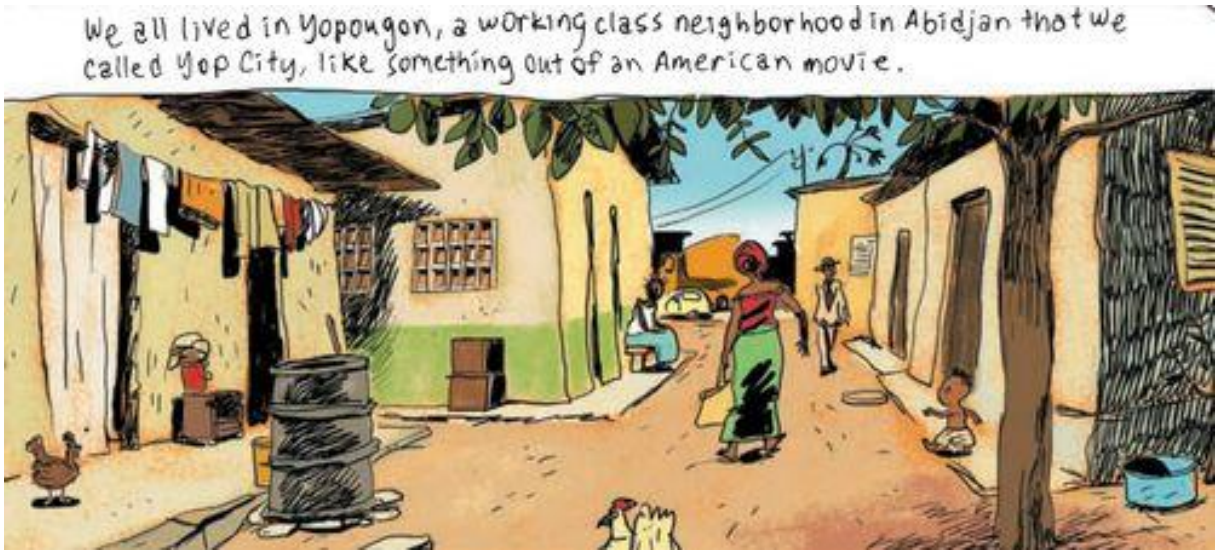
8.7 Panels: Graphic Stories

PANELS FROM GRAPHIC NOVELS

Task:

1) Choose one of the panels below.
2) Write a short story (2 paragraphs max) where the panel you chose is part of the story.

Panel 1



Panel 2

Panel 3

Panel 4