

**Athens Institute for Education and Research
ATINER**



**ATINER's Conference Paper Series
EDU2019-2715**

**Effectiveness of Multimodality in Teaching Literature in High
School**

**Katerina Papasotiriou
PhD Student
University of Nicosia
Cyprus**

An Introduction to
ATINER's Conference Paper Series

Conference papers are research/policy papers written and presented by academics at one of ATINER's academic events. ATINER's association started to publish this conference paper series in 2012. All published conference papers go through an initial peer review aiming at disseminating and improving the ideas expressed in each work. Authors welcome comments

Dr. Gregory T. Papanikos
President
Athens Institute for Education and Research

This paper should be cited as follows:

Papasotiriou, K. (2018). "Effectiveness of Multimodality in Teaching Literature in High School", Athens: ATINER'S Conference Paper Series, No: EDU2019-2715.

Athens Institute for Education and Research
8 Valaoritou Street, Kolonaki, 10671 Athens, Greece
Tel: + 30 210 3634210 Fax: + 30 210 3634209 Email: info@atiner.gr URL:
www.atiner.gr

URL Conference Papers Series: www.atiner.gr/papers.htm

Printed in Athens, Greece by the Athens Institute for Education and Research. All rights reserved. Reproduction is allowed for non-commercial purposes if the source is fully acknowledged.

ISSN: 2241-2891

14/10/2020

Effectiveness of Multimodality in Teaching Literature in High School

Katerina Papisotiriou

Abstract

This study was designed to investigate the effect of a multimodal teaching approach to Literature in terms of reading comprehension. More specifically, it aimed to evaluate the use of multimodal teaching to 16-year-old Greek students, based on their views about the contribution of Multimodality to reading comprehension and to attracting their attention. The research questions of this study were: a) Is there a significant difference in reading comprehension when comparing a multimodal approach and a traditional-method teaching of the same literary text? b) What are the students' views on the contribution of a multimodal approach to their reading comprehension skills? c) What are the students' views on the contribution of the multimodal approach to attracting their attention in class? The experimental research study was carried out with 50 16-year-old students in a Literature class of a Greek Lyceum (25 students in the experimental group, 25 students in the control group). A multimodal teaching approach was used in the experimental group and a traditional teaching method was used in the control group. The data for this study were collected through the use of three instruments: two achievement tests in reading comprehension were used as pre-test and post-test, as well as a questionnaire in order to investigate the students' views on the use of Multimodality. The findings indicate that multimodal approach and the use of a broader range of text types and modes expand students' understanding and reading comprehension ability and develop their positive attitude towards Multimodality.

Keywords: Multimodality, Literature, reading comprehension, attracting attention

Introduction

The choice of the appropriate teaching methods, strategies and approaches is a crucial factor for the achievement of the educational aims and objectives. This study focuses on the multimodal teaching approach to literature in terms of reading comprehension. More specifically, it aims to investigate the effect of a multimodal approach to the reading comprehension ability of the 16-year-old students of a Greek class, as well as their views about the contribution of Multimodality to their literature reading comprehension ability and to attracting their attention. The research questions of this study are: a) Is there a significant difference in reading comprehension when comparing a multimodal approach and a traditional-method teaching of the same literary text? b) What are the students' views on the contribution of a multimodal approach to their reading comprehension skills? c) What are the students' views on the contribution of the multimodal approach to attracting their attention in class?

Nowadays, students are faced with an environment governed by interactive digital technology. In this digital age they access new kind of texts, such as picture books, slide shows, blogs, websites and videos. These text types, called multimodal texts, combine language with image and sound resources in complex ways. The frequent use of a broad range of multimodal texts and the increasing interest in them makes it imperative to incorporate them to the literacy practices of the contemporary classrooms.

Although, internationally, there is an increasing interest in the study of Multimodality on education, the vast body of research examines Multimodality in Mathematics (O'Halloran, 2000; Street & Baker 2006), Science (Lemke 1998; Jewitt at al 2001) and English education (Goodwyn 2005; Stein & Newfield 2006), while there is limited research on the effectiveness of multimodal approach to Literature teaching. Additionally, there is a small body of research investigating the views of the protagonists of the educational process, that is the students, on the Multimodality. Given the lack of empirical research about Multimodality in Literature and students' attitude towards it, this study focuses on these issues.

In what follows, there is a brief reference to the context of this study and a synoptic review of the most relevant to this studies among the vast body of research concerning Multimodality. Specifically, there are presented the results of researches on the effectiveness of Multimodality on students' reading comprehension ability and on students' views on multimodal approach. Then the methodology of this study is presented and at the end follow the conclusions.

Literature Review

In order to avoid any misunderstandings, since different terminology is being used to indicate the changes of literacy posed by technology - e.g. digital literacy, media literacy, multiliteracies etc. -(Walsh, 2010) in this study the term "Multimodality" is used to indicate the complex combination of different

modes and semiotic resources to create meaning (Jewitt, 2009). According to Jewitt (2008), Multimodality is "*concerned with signs and starts from the position that like speech and writing all modes consist of sets of semiotic resources - resources that people draw on and configure in specific moments and places to represent events and relations*" (p.1). Thus, Multimodality is the constitution of multiple different modes in order to make meaning (Mills & Unsworth, 2017) and, subsequently, a multimodal teaching approach is the one which uses multimodal texts as a methodological tool to achieve the educational objectives.

Multimodality is related to the Multiliteracies approach, as proposed by The New London Group (1996). The theorists and researchers, known as The New London Group (1996), argue that "*the multiplicity of communication channels and increasing cultural and linguistic diversity in the world today call for a much broader view of literacy than portrayed by traditional language-based approaches*"(p.60). In that context, they argue for the need to "account for the burgeoning variety of text forms associated with information and multimedia technologies" (The New London Group, 1996: 61) and they propose a new literacy pedagogy, which focuses to the use of a broad range of text types and several different semiotic modes to create meaning. Rowsell & Walsch (2011) clarify the relationship between Multimodality and Multiliteracies observing that "*Multimodality comes first in that it informs how we make meaning, and multiliteracies as a possible pedagogy, gives us tools for doing so... Multiliteracies as a pedagogy simultaneously accounts for linguistic diversity and the use of multimodalities in communication*" (p.56).

Review of Research on the Effectiveness of Multimodality on Students' Reading Comprehension Ability

There is a growing body of research exploring the effectiveness of multimodal approach. A relatively recent experimental research study conducted by Baharani (2015) provides evidence that the use of Multimodality in classroom has a significant impact on students' reading comprehension achievement. 80 Iranian students ranging from 16 to 18 years old, were divided into four groups and a different approach was used to each of these, that is linear texts for the first group, which was the control group, multimodal printed texts and pictures for the second group, non-printed multimodal texts for the third and multimodal printed and non-printed texts for the fourth group. A comparison of pre-test and post-test scores of the four groups demonstrated the lower performance of the control group when compared to the other three and indicated the effectiveness of multimodal texts - both, printed and non-printed- to students' reading comprehension ability. Additionally, the researcher pointed out the fact that multimodal approach created joy to students.

Many other research studies, though do not necessarily examine the effectiveness of Multimodality on students' reading comprehension, mention it as a plausible impact. One of these is Roberts & Robyn's (2006) study. Using a variety of data collection methods, like questionnaires, interviews, self-

reflection exercises and talk aloud protocols, and having Multimodality and functional systemic grammar of Kress & Mc Leeuwen (1996) as methodological tools, the researchers tried to teach to undergraduate distance students visual literacy and develop their critical thinking skills. The analysis of the collected data indicated, among others, that the different resources used in the multimodal approach fostered students' visual literacy skills and helped them to understand better, satisfying all learning styles. These findings are confirmed by the research conducted by Tulk (2005), who investigated the way 11-12-year-olds interpret pictures and their ability to understand metaphor and structure in picture books. Analyzing data collected by children's interviews, their drawings and their written review, she concluded that the use of picture books "provokes the reader to make connections, to read both backwards and forwards, and to read the gaps" (p.94), namely it develops a deep understanding of the content of the text. This issue is also referred by Baddeley & Eddershaw (1994), who note that the brevity of the picture books "allows the swift comprehension and overview that they seldom achieve when they read novels" (p.45).

Walsh's (2003) study, that also focuses in picture books, examined the oral responses of 5 to 6-year-olds to these books. Two of these multimodal texts had been read to children in class and individually and then their oral responses were recorded, categorized and analyzed. Children's responses showed that pictorial texts evoked their reading comprehension "regardless of whether they could 'decode' the words of the text" (p.129). Similar to those results are the findings of Lee's (2013) empirical study. Even though it had as main aim to examine the students' multimodal responses to an English classic book, from the students' answers it also arose that the multimodal approach contributed to the better comprehension of the plots, the settings and, generally, to the content of the book.

Despite the wide body of research supporting the effectiveness of Multimodality, there are also studies showing conflicting results. One such study was conducted by Brante et al (2013) exploring the impact of contrasting multimodal learning materials to reading comprehension of young adults with different learning abilities. The 46 participants -19 of which had been diagnosed with dyslexia- were divided to groups using only text or text and picture learning material. The data analysis indicated that the text plus picture approach was not helpful for all students' reading comprehension. Specifically, merely the inclusion of pictures in a text does not contribute to the understanding of the content, since the students who approached only linear, monomodal texts were able to catch the general meaning, while most of those who were taught through text-picture method were not. Additionally, dyslexic students had difficulty in decoding the picture.

Review of Research on Students' Views on Multimodal Approach

Lee's (2013) empirical study examined University students' multimodal reading responses in a Taiwanese English as a second language class and students' perception on this approach. 59 students were asked to work collaboratively and

create multimodal aesthetic responses to an English piece of classic literature. The data collected by group presentations, students' reflections in open-ended questions and peer evaluation results indicated that students found this approach pleasant and helpful to their understanding of the book. Specifically, students' reflection in the surveys indicated that 29% of the participants declared that this approach helped them to comprehend the book better and expanded their understanding of the text. Additionally, all but three students welcomed the approach and expressed their appreciation for the multimodal way to respond to literature. Some of them characterized it as interesting and funny.

These findings are analogous with the results of a recent experimental research study conducted by Freyn (2017). Applying a multimodal approach to teaching poetry at 29 university students in Ecuador, the researcher investigated the effects on their attitudes towards poetry. The analysis of the questionnaires and the answers to the open-ended questions interviews provided evidence that the multimodal approach contributed to developing appreciation of the subject students were taught and to raising interest in poetry.

From the literature review it arises that many research studies support the effectiveness of multimodal approach. However, the existence of studies with conflicting results, raises doubts about that. The present study aspires to contribute to answering the questions arising from this discordance.

Methodology

Design of the Study

To investigate the aim of this study, an experimental research model was applied, consisting of a pre-test, a post-test and a questionnaire investigating the students' views on the use of Multimodality in class. A multimodal teaching approach was used in the experimental group, while a traditional teaching method through lecturing, linear texts and question-response was used in the control group.

Data Collection-Instruments

The data for this study were collected through the use of three instruments: two achievement tests in reading comprehension were used as pre-test and post-test, as well as a questionnaire in order to investigate the students' views on the use of Multimodality.

A comprehension test borrowed from the Programme for International Student Assessment (PISA) and translated in Greek by the Greek Institute of Educational Policy (OECD, 2006) was used as pre-test, in order to measure the level of students' reading comprehension ability at the beginning of the experiment. It was administered five days before the start of the experiment and it contained an excerpt of Jean Anouilh's play, *Léocadia*, followed by 5

open-ended and multiple-choice questions. The reliability of pre-test was calculated using Cronbach's Alpha and it was 0,931.

After two weeks that the experimental group received the designated treatment, both groups took the same post-test, in order to reveal whether the different teaching approach had a significant difference in reading comprehension of the two groups. The post-test referring to an excerpt of the narrative poem of the Cretan Renaissance *Erotokritos* of Vitsentzos Kornaros (Kornaros, 2001), which experimental group and control group was taught, consisted of 6 multiple-choice and open-ended questions. The same score system was used for both tests (pre-test and post-test), that is one score was given for every correct answer and zero score for every incorrect answer. The alpha coefficient for the pre-test was 0,755.

A questionnaire was also used in order to investigate the students' views on the use of Multimodality. It was constructed by the researcher and was divided into three parts. The first part dealt with questions on students' gender and their performance in Literature. The second and the third part contained 17 items relevant to the second and third research question, respectively and rated on a 5-point Likert scale (1= not at all to 5=completely). In particular, the second part included 8 questions about the students' opinions towards the contribution of a multi-modal approach to their reading comprehension skills and the third part contained 9 questions investigating their views on the contribution of Multimodality to attracting their attention in class. The questionnaire was first piloted with 24 students within the same age group and subject and achieved an alpha coefficient of 0,915, while for each of the two parts the alpha coefficient was 0,835 and 0,871, respectively.

Participants

This experimental research study was carried out with 50 16-year-old students in a Literature class of a Greek Lyceum. In particular, two groups of the school containing 25 students each one were selected and one of these was considered as the experimental group and the other one as the control group. The subjects were selected using convenience sampling since these students were easily accessible to the researcher.

Procedure

The two groups of students took the pre-test one week prior to the experiment. This test measured the level of students' reading comprehension ability at the beginning of the experiment. For the following two weeks each group was taught the same literature text with different teaching methods. Specifically, for the control group a traditional teaching method through a linear text, lecturing, and question-response, was used. For the experimental group a multimodal teaching approach was used, combining linear and multimodal texts, such as a painting of Theofilos representing the main characters of the literary text, a graphic novel and a video related to the text they were taught. After two

weeks that the experimental group received the designated treatment, both groups took the same post-test, in order to reveal whether the different teaching approach had a significant difference in reading comprehension of the two groups.

Data were analyzed with the use of descriptive and inferential statistics, in SPSS 25. Specifically, the mean scores of the two groups in the pre-test and the post-test were computed and a One-Way Analysis of variances (ANOVA) was used to compare these means and to indicate if there is a significant difference between them, in order to understand the efficiency of multimodal approach. Means and standard deviation were also used for the analysis of the data collected from the questionnaire, in order to explore the students' views on the use of Multimodality.

Results

Reading Comprehension Achievement Level in Pre-test

The first analysis that was performed wanted to examine the level of students' of each group reading comprehension ability at the beginning of the experiment.

Based on the results of the analysis, the mean scores for the two groups are almost the same ($M_{control\ group}=4,44$, $M_{experimental\ group} = 4,480$) (Table 1.) and the fact that there is no significant difference between these means ($F=0,011$, $p=0,917$.) indicates that the control group and the experimental group were at the same level of achievement before doing the experiment.

Table 1. Mean scores of experimental group's and control group's reading comprehension achievement level in pre-test

Score Student's Group	Mean	Std. Deviation	N
Control Group	4,440	1,416	25
Experimental Group	4,480	1,294	25
Total	4,460	1,343	50

Reading Comprehension Achievement Level in Post-test

In order to answer the first research question, after the experiment, a post-test was given to the control group and to the experimental group. As presented in Table 2, the mean score for the reading comprehension achievement post-test of the control group is 4.2, while the mean score of the group that received the treatment is 5.48. These scores indicate that the multimodal approach had a higher effect on student's reading comprehension when compared with the effects of the traditional-method teaching. These results were statistically significant ($F=9,615$, $p=0,003$) indicating that there is a significant difference between the mean scores of the two groups.

Table 2. Mean scores of experimental group's and control group's reading comprehension achievement level in post-test

Score Student's Group	Mean	Std. Deviation	N
Control Group	4,200	1,957	25
Experimental Group	5,480	,653	25
Total	4,840	1,582	50

The Students' Views on the Use of Multimodality According to the Questionnaire

After the period of training, the students that received the treatment were asked to respond to a questionnaire that measured their attitudes towards the contribution of Multimodality to their literature reading comprehension skills and to attracting their attention. As seen in Table 3. students answered rather positively to the questions regarding the effectiveness of the multimodal approach to their reading comprehension skills, since the mean score of their answers- ranged from 3,52 to 4,33 (in a scale that ranged from 1-5) - is 3,9.

Table 3. Descriptive Statistics (mean and standard deviation) for students' views on the contribution of Multimodality to their literature reading comprehension skills

	The M.A. helped me to comprehend the context better	This M.A. helped me to overcome difficulties from the idiomatic language	Multimodal responses contributed to the better comprehension of the content	Making connections among the three different kinds of texts helped me to comprehend the content better	The M.A. contributed to the better comprehension of the plot	The M.A. contributed to the better comprehension of the settings	Do you think that the M.A. of a literature text contributes to the better comprehension of the content?
Mean	3,958	3,680	3,520	4,000	3,720	4,120	4,330
s d.	0,954	0,945	1,045	0,834	1,173	0,881	0,868

As far as their views about the contribution of Multimodality to attracting their attention in class is concerned, the mean score of their answers to the relevant questions is 4.2 which indicates their strongly positive views (Table 4).

Table 4. *Descriptive Statistics (mean and standard deviation) for students' views on the contribution of Multimodality to attracting their attention in class*

	The use of graphic novel and painting aroused my interest in the literature text	The use of graphic novel aroused my interest in the literature text	The use of Theofilos' painting aroused my interest in the literature text	M.A. was interesting	M.A. arose my desire to read the whole book	M.A. contributed to attracting my attention in class	Making connections among the three different kinds of texts was interesting	Do you think that M.A. of a literature text contributes to attracting the attention in class?
Mean	4,240	4,200	4,000	3,880	3,960	4,360	4,440	4,520
s.d.	0,663	0,957	0,912	1,092	1,398	0,700	0,506	0,509

Conclusions

The main purpose of this research was to evaluate the effectiveness of a multimodal approach and investigate students' attitudes towards the use of Multimodality. The key findings show that the use of a multimodal teaching approach has significant implications for the learning process. In relation to the study's first aim, the findings are in accordance with the results of other research studies (Baddeley & Eddershaw, 1994; Tulk, 2005; Roberts & Robyn's, 2006; Lee, 2013; Baharani, 2015) and reveal that this approach significantly expands students' understanding and reading comprehension ability, contributing to the better comprehension of the plots, the settings and, generally, to the content of the text. It also, helps students with a variety of learning styles to conceive the text's meaning.

Additionally, the results of the questionnaire, in line with previous studies (Lee, 2013; Freyn, 2017), demonstrate students' positive attitude towards a multimodal approach, as they consider that it significantly contributes to their reading comprehension skills and to attracting their attention in class. In that sense, it could be supported that Multimodality promotes reading motivation.

Classroom evidence demonstrates that multimodal approach and the use of a broader range of text types and modes create a positive learning environment and develops students' receptive attitude on learning. In that context, these practices should be generalized in contemporary classrooms. Thus, educators need to raise competencies and new interpretive skills in order students to make sense of these texts and to critically analyze them.

A limitation of this study is the small sample size, which raises doubts over the generalization of research findings. Thus, further research with a larger sample size is needed to corroborate these findings and to determine whether these results can be generalized to students from different age groups. Additionally, it would be useful in the future to be able to obtain additional

data about students' attitudes and views on Multimodality through interviews, in order to be able to explore this issue further

References

- Baddeley, P., Eddershaw, C. (1994). *Not so simple picture books*. Stoke-on-Trent: Trentham Books.
- Baharani, B. (2015). The impact of multimodal texts on reading achievement: a study of Iranian secondary school learners. *International Journal of applied Linguistics and English Literature*, 4(4), 161-170.
- Brante, E.W., Olander, M. H., Nyström, M., (2013). Exploring the impact of contrasting cases in text and picture processing. *Journal of Visual Literacy*, 32(2), 15-38.
- Frey, A. (2017). Effects of a Multimodal Approach on ESL/EFL University Students' Attitudes towards Poetry. *Journal of Education and Practice*, 8(8), 80-83.
- Goodwyn, A. (2005). A Framework for English? Or a Vehicle for Literacy? English Teaching in England in the age of the Strategy. *English Teaching, Practice and Critique*, 3(3), 16-18.
- Jewitt, C., Kress, G., Ogborn, J., Tsatsarelis, Ch. (2001). Exploring Learning through Visual, Actional and Linguistic Communication: the multimodal environment of a science classroom. *Educational Review*, 53(1), 5-18.
- Jewitt, C., (2008). *Multimodal Recourses Across the Curriculum*. https://www.researchgate.net/publication/226232200_Multimodal_Discourses_Across_the_Curriculum (Accessed 04 March 2019).
- Jewitt, C., (2009). An introduction to multimodality. In C. Jewitt (Ed.), *The Routledge handbook of multimodal analysis*. Abingdon: Routledge.
- Kornaros, B. (2001). *Ερωτόκριτος* [Erotokritos]. Edited by Στυλιανός Αλεξίου. Athens: Estia.
- Kress, G., Van Leeuwen, T. (1996). *Reading Images: The Grammar of Visual Design*. London: Routledge.
- Lee, H.C. (2013). An examination of ESL Taiwanese university students' multimodal reading responses. *Literacy Research and Instruction*, 52, 192-203.
- Lemke, J.L. (1998). Multiplying Meaning: Visual and Verbal Semiotics in Scientific Text. In Martin, J.R. & Veel, R. (Eds.), *Reading Science*. London: Routledge.
- New London Group (1996). A Pedagogy of Multiliteracies: Designing Social Futures. *Harvard Educational Review*, 66, (1), 60-92.
- Mills, K, Unsworth, L.(2017). Multimodal Literacy. *Oxford Research Encyclopedia of Education*. https://www.researchgate.net/publication/322950599_Multimodal_literacy ((Accessed 04 March 2019).
- OECD, (2006). *PISA Released Items - Reading*. Available from: <http://iep.edu.gr/pisa/files/topics/reading/m11.pdf> (Accessed 20 February 2019).
- O'Halloran, K.L. (2000). Classroom Discourse in Mathematics: a Multisemiotic Analysis. *Linguistics and Education*, 10, 359-388.
- Roberts, S., Robyn, P. (2006). The grammar of visual design. *Australasian Journal of Educational Technology*, 22(2), 209-228.
- Rowell, J., Walsh, M. (2011). Rethinking literacy education in new times: multimodality, multiliteracies, and new literacies. *Brock Education Journal*, 21(1), 53–62.
- Stein, P., Newfield, D. (2009), Multiliteracies and Multimodality in English in Education in Africa: Mapping the terrain. *English Studies in Africa*, 49(1), 1-21.

- Street, B., Baker, D. (2006). So what about multimodal numeracies? In *Travel Notes from the New Literacy Studies: Instances of practise*. Pahl, K., Rowsell, J.(Eds.). Clevedon, UK: Multilingual Matters.
- Tulk, S. (2005). Reading picture books is serious fun. *English Teaching: Practice and Critique*, 4(2), 89-95.
- Walsh, M. (2010). Multimodal literacy: What does it mean for classroom practice? *Australian Journal of Language and Literacy*, 33(3), 211-239.