

Seeking Remedy for Improving International College Students' Reading Comprehension: A Qualitative Case Study on Using Multimodality for English Language Learning

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ABSTRACT

This report reflects on the findings of one of the projects within a series of research studies in the field of multimodality conducted by the author of the current paper with different samples of participants in the US university settings. The principal investigator (PI) designed this qualitative case study and had it approved by the IRB committee. Vygotsky's socio-cultural constructivism theory has been found most appropriate to lay the ground for this research as the sample was purposefully assembled of 14 International English language learning (ELL) students newly arrived in the United States from their significantly diverging social and academic backgrounds. The PI's practical teaching experiences and the results of her previously conducted studies with the other groups of participants urged this researcher to further search for some efficient strategies and means of learning, which might help these specific student populations with their deeper reading comprehension of complicated academic texts they were otherwise struggling to comprehend. As claimed by this investigator, usage of multimodality might have a strong potential to assist the International ELL college students with their reading comprehension. Within this current project, data were collected via participant and site observations, surveys, artifacts in the form of the comprehension tests, and individual interviews with participants. All the data were coded, analyzed, and triangulated aiming to find recurring themes. This research found that participants recognized the visual mode of multimodality most helpful to them, followed by the auditory, and print-based ones. In the surveys and interviews, the participating students outlined a range of multimodal reading comprehension strategies, which they perceived as most efficient while their working on this project tasks. The comprehension test results served as the evidence in support of the interview- and survey-based data. High significance of the findings of this research is in their applicability to the wide populations of the International ELL college students in the US colleges and world-wide.

Keywords: conventional unimodal print-based text, English as a Second or Foreign language, international college students, reading comprehension, multimodal instruction

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1. Introduction

1.1. Problem Statement

Educational practices of today have changed beyond recognition compared to the ones of the previous century. Ever-evolving technological means of education have been altering classroom instruction in a plethora of tremendously diverging ways. In highly technologically developed countries, educators have no choice but adjust their teaching to the needs of the students who possess new types of technology-shaped literacy (Gould, 2017; Gould-Yakovleva, 2023; Miller & McVee, 2012). These days, teaching and learning with the help of

computerized and internet-assisted means of education promptly advance in the public and private school classrooms in the avant-garde countries on all grade levels. Nevertheless, the academic texts written in a sophisticated academic English language often present a challenge to the English language learning readers. The author of this article claims that in the modern days' instruction, multimodality can be effectively used by educators for enhancing students' reading comprehension when non-print-based texts are added to supplement the conventional, unimodal ones.

In support of the above claim, it is important to recognize the contributions of the American and International researchers, educators, and authors powering the field of multimodality in service of teaching and learning. Many research studies found numerous positive effects of multimodal reading on different aspects of learning outcomes, including but not limited to reading comprehension (e.g., Gould, 2017; Huang, 2023; Miller, 2013; Querol-Julian & Fortanet-Gomez, 2019; Varaporon & Sithittikul, 2022). For example, the study by Querol-Julian and Fortanet-Gomez found that without multimodal representations, it might be difficult even for the higher education students in their doctoral programs to meaningfully engage with the presented content, while addition of multimodality improved their results (2019). Supporting the above findings, Huang (2023) came to the conclusion that, "applying a multimodal learning mode based on knowledge base technology positively affects students' learning achievement and learning ability" (p. 49). The study by Gould-Yakovleva (2023) also pinned down the research-identified powerful effect from addition of multimodality on the participating ELL college students' meaning making.

Nevertheless, the international college students who study English as a new to them second or foreign language often struggle with reading comprehension of both: academic and non-academic texts. In response to the above problem, wide communities of educators and researchers attempt to come out with some new research-based solutions. This current research report is concerned with the effects from different modes of multimodality in combination with the traditional print-based text on International college-level English language learners' (ELLs) reading comprehension.

1.2. Significance

It is highly important to find new and more efficient ways to assist ELLs with their English language studies and acquisition. In order to help these student populations succeed academically in the American educational institutions on all grade levels, it is of high significance to study the effects from multimodality on all student populations, including college students. English language learners arrive to study in America having their immensely diverging educational backgrounds. Nevertheless, most of them are united by one need: in order to succeed in practically any field, practically all of them need to excel in their English language skills. Multiple researchers and educators of today strongly believe that one of the most helpful means in the process of a new or an additional language acquisition is multimodality in all of its rich and diverse aspects (e.g., Gould-Yakovleva, 2023).

1.3. Motive for the Study

The author's professional and personal interest in this research was rooted in her previous experiences with teaching high-school students. The perspective of obtaining a High-School Diploma in that particular chronotope (Bakhtin, 1981) depended on the juniors' and seniors' success on their final state-mandated reading comprehension test administered by the end of every trimester within each academic year. Many students inevitably failed that test due to the instructional deficiency in their prior academic histories. Belonging to the low-socio-economic

status families, where English was not necessarily a Native tongue, played a significant role in these struggling learners' underachievement versus higher success rates among their peers coming from the main-stream American middle-class backgrounds. After each of the cases of failure, the so-called *retakers* had to attempt the reading comprehension test again; many failed it more than once. As the result, some students had to leave the school "empty-handed" after 12 or more years of public schooling.

The above situation with only 35% - 50% of the students who were able to pass their graduation test motivated the author of this paper in starting a series of research projects the purpose of which was to find some working means of education that might bring a greater number of students to their coveted outcome: successful graduation and obtaining a high-school diploma. Being closely tied together in the teacher-students relationship due to the daily extended class meetings often results for instructors in development of the feeling of deep compassion and sympathy with their struggling and repeatedly failing readers. This *solicitudinal* stance lead the author of this article to realization of the acute necessity of conducting research aiming to identify more helpful reading comprehension strategies, techniques, methods, and new approaches to teaching reading comprehension in some innovative and more efficient ways.

This current research report details one case study in a succession of qualitative and mixed-method studies conducted by the author of this article with different groups of subjects and individual participants in the United States colleges and universities.

2. Theory and Literature

2.1. Tying Multimodality with Socio-Cultural Constructivism Theory

At the threshold of the 21st century, Guba and Lincoln wrote, "Knowledge consists of a series of structural...insights that will be transformed as time passes" (1994, p. 113). Echoing the above statement, the New London Group (2000) who grounded their research in Vygotsky's (1978; 1987) socio-cultural constructivism theory, attracted attention of the wide academic and researchers audiences to the phenomena of multiliteracy practices, which, during the most recent decades, have multiplied and diversified the field of education. The New London Group (NLG) built their theory using the bricks of knowledge notion shaped by their predecessors who embraced the idea of coexistence of multiple knowledges, the word, which they started using in its plural form. Guba and Lincoln furthered their idea stating that, "Knowledge consists of... constructions... (and) multiple "knowledges" can coexist... These constructions are subject to continuous revision, with changes most likely to occur when relatively different constructions are brought into juxtaposition in a dialectical context" (1994, p. 113). The postulates of the above theorists found unbeatable support and evidence in the modern days' ever-evolving technology-assisted classroom instruction.

Importantly, the aspects discussed above, initially offered by Vygotsky (1978; 1987) and later supported by many of his followers, (e.g., Bakhtin, 1981; Kalantzis & Cope, 2008; NLG, 2000) have been continuously considered by many researchers (e.g., Gould, 2017; Kress, 2003; Miller, 2013; Miller and McVee et al.¹, 2012; Shanahan et al., 2014). These researchers attracted attention of the wide academic audiences to the importance of sociocultural theory. Social and cultural constructs powerfully influence the meaning-making processes be that a print-based or a technology-assisted reading. Shanahan et al. (2014) drawing on Wertsch (1991) revealed that "...it is... not merely the use of a technology... that is important... it is important to consider semiotic signs – language and other tools used in meaning making – in relation to the cultural, social, historical contexts in which they are used" (p. 37).

This current research was grounded in the belief by Vygotsky and his followers in the importance of the impact from the socio-cultural environment on a person's ability to comprehend the traditional print-based or multimodal texts and construct a new meaning and knowledge.

2.2. Research Gap

While preparing to conduct this study, the author dived into the depths of the available literature on the topic. Regardless of an impressive number of studies in the field of multimodality with the K-12 student populations, (e.g., Ajayi, 2009; Baildon & Damico, 2009; Callow & Zammit, 2012; Cloonan, 2011; Exley & Cottrell, 2012; Gellevij et al., 2002; Gould-Yakovleva et al., 2020; Kitson, 2011; Leander & Boldt, 2012; Levy & Kimber, 2009; Mills, 2011; Molyneux & Godinho, 2012; Pantaleo, 2012¹; 2012²; Vincent, 2006; Walsh, 2008; Xiaoyan & Hicks, 2022), there was identified a significant gap in the area of multimodal teaching tailored specifically for the International college-level English as a Second or Foreign Language learners in the American universities and colleges. The number of the studies with precisely college students appeared to be insufficient (e.g., Gould, 2017; Gould-Yakovleva, 2023; Jacobs, 2012; McVee et al.², 2008; Wang, 2011).

It needs to be recognized that the American and International researchers developing the field of multimodality through their studies with the college students found multiple benefits from the technology-provided modes of multimodality on their research participants. For example, Xiaoyan and Hicks' research with 62 college students found that the most helpful means for assisting the English learning student populations with their reading comprehension appeared to be the technology-based multimodality (2022). This study participants shared that, "multimodal teaching resources not only improves our ability to extract and understand information, but also helps us overcome the limitation of thinking so as to think outside the box" (p. 219). Xiaoyan and Hicks' study also found a higher student-participants' satisfaction with the teacher-directed instruction when multimodality was added (2022).

Wang's (2022) research-based findings echoed the ones by the above authors. This researcher stated that, "the multimodal teaching approach adds a variety of semiotic modes – linguistic, visual, and aural meaning to the conventional single modal interactivity of the texts or verbal languages by teachers" (p. 106) which resulted in a richer learning experience for students. In accordance with Wang (2022), Varaporn and Sitthitikul (2022) summed up their research findings stating that addition of the multimodal tasks had multiple positive effects on the participating in their project students, including their "reading ability and learning behaviours in several aspects" (p. 98).

Nevertheless, regardless of the endeavors by the American and International researchers to further advance the field of multimodality in service of the educational needs, it is highly important to continue the research work with the purpose to identify the multimodal reading comprehension strategies that have the potential to assist ELL students with their deeper comprehension of the complicated texts of the college textbooks, the language of which may be hard to comprehend. This notion applies specifically to the students for whom English is a new, second or foreign language depending on each learner's academic history and life situation. With the above need raised, this current project was developed and conducted aiming to find some technology-based multimodal strategies, which might serve the International ELL college students as tools for better reading comprehension.

3. Methodology

3.1. Site and Participants

This Institutional Review Board (IRB)-approved qualitative case study was designed in accordance with the Ely et al. (1991) qualitative research principles.¹⁴ International college students in one of the public universities in the Northeastern United States were targeted for recruitment. The participants were recruited via the recruitment flyers and an informal conversation with the Principal Investigator (PI) in this study. Purposeful sampling method targeted the International ELL college students with a sufficient English language proficiency. An entire class at the Intensive English Language program at the English Language Institute within the public university showed interest to participate in this research. Additionally, several more participants were selected and offered to take part in this research. In order to protect the subjects' identities, pseudonyms will serve in the lieu of the names of the people, places, and educational establishments discussed or mentioned in this publication.

3.2. Design and Research Questions

The whole sample of participants was divided into two groups, Group 1 and Group 2, seven members each. Both groups were offered to read the same Shakespearian text. Nevertheless, in contrast to Group 1, the members of Group 2 were offered assistance in the form of a video with an audio of the same text in addition to the print-based one. Both groups were then offered to answer some comprehension test questions to this text. Upon completion of this phase of the project, all students answered the survey questions about their experiences working with this project's text, and comprehension test questions to this reading, and the strategies they implemented. Consequently, Group 2 participants gave individual interviews reflecting on their experiences with reading the print-based text versus reading the same text and watching the video with the audio. More detailed information on the research processes will be provided further on in this article.

The data collected in this research helped the investigator answer the following research questions:

In what ways, if any, did the inclusion of multimodal features in combination with traditional print-based text assist international college students with their reading comprehension? What were these students' perceptions of the effects of multimodality on their reading? Which modes of multimodality, if at all, did the research participants find most helpful in the process of working with the print-based text supported by multimodality? Which reading comprehension strategies did these college students implement while working with the text?

3.3. Data Collection and Analysis

Data collection occurred through the site and participant observations (Spradley, 1980) in both groups in the process of their reading the print-based text and during their working with the same text supported by the video with an audio, and answering comprehension questions to the text. The PI also closely observed and documented via the notes and memos the behaviors by the subjects in both group during their work on the reading comprehension test questions to this text. These field notes, and observational notes, including the analytical memos, and conclusive thoughts helped the researcher to better track the research processes for the further triangulation of all the collected data. The survey questions served the purpose to gain a deeper understanding about the research participants' educational backgrounds, their perceptions of themselves as readers, evaluating the depth of their struggles with the English language reading

comprehension, and understanding their perceptions of their working processes with the text within this project. Some of the survey questions focused specifically on the reading comprehension strategies utilized by every participant individually in the process of reading and making the meaning of the unimodal and multimodality-supported text within this project.

Another source of data were the semi-structured interviews questions for which were developed following Glesne's (2010) guidelines. The researcher conducted the interviews individually with Group 2 participants. The interviews targeted the group of students who did not only read the unimodal, print-based text, but also watched the video, which was made available to them. The surveys and interviews were the major instruments in this study. All the interviews were audio-recorded and transcribed. Recurring themes formed patterns, so thematic coding (Saldaña, 2012) helped the researcher identify the most frequently used topics in the speeches by the participants, which demonstrated the level of importance of the most frequently used and emphasized themes to every individual subject. Yet, the fact of the certain themes emerging in practically every interview and survey allowed the PI to recognize the strong and steadily identifiable thematic patterns, which underpinned and formed this research findings.

In the process of the analysis, the data from the observations, surveys, and interviews, and the artifacts (the reading comprehension tests) were triangulated. As the result of this triangulation, the researcher gained a significantly deeper understanding of each research participant as a reader and as an EL learner. Comparing the test results by the members of each of the two groups helped the researcher to visualize and evaluate the outcomes of the student work with the unimodal and multimodal texts. The struggles and achievements by the participating students in the process of their working with the unimodal and multimodality-supported text within this study enabled the researcher to draw the final conclusions, as the data from the artifacts, the results of the comprehension tests, vigorously served as evidence in support of the data from the surveys, participant observations, and their interviews.

4. Research Processes

4.1. Purposeful Recruitment

The PI targeted the international ELL college students who represent the population which is highly interested to succeed in learning the English language in order to be able to achieve higher academically in diverse fields of study and, further on, in their future careers. The PI's major concern though was about finding the international college students with sufficient knowledge of the English language, so that they were able to read the text, answer the test questions, and understand the language in the video where the actors visibly and verbally reenacted a scene from *Romeo and Juliet* by Shakespeare.

By coincidence, at the time when this research project was approved by the IRB committee, the author of this paper needed to observe a lesson given by her colleague Ms Nancy Meyers at the University of Northern States (UNS) (pseudonym). During that observed by the author class, the students were apparently actively engaged in discussing their educational experiences in their home countries.

During that discussion, these students shared their experiences with the classical British and American literature translated into their native tongues. Some of the international ELLs mentioned some sonnets by Shakespeare. This discussion exposed its participants as highly motivated and interested readers with their rich memories about their previous educational endeavors, failures, successes, hard times, and high achievements. This was the reason for the

author of this paper to attempt to recruit the observed class students to participate in her newly-approved research project.

4.2. Sampling and Sample Size Justification

The small size of the sample of students (14) selected to participate in this study may be explained by the major focus of the qualitative research on each individual participant, rather than on the bulk numeric data collected from a large number of subjects as it is done for the quantitative studies. Comparing and contrasting these two methods, Baker and Edwards (2018) clarify, “Qualitative researchers generally study many fewer people, but delve more deeply into those individuals, settings, subcultures, and scenes, hoping to generate a subjective understanding of *how* and *why* people perceive, reflect, role-take, interpret, and interact” (p. 8).

The renowned theorist in the field of the qualitative research, Creswell offers his suggestion on the purposeful sampling saying, “For case study research, I would not include more than 4 or 5 case studies in a single study” (2007, p. 128). This author emphasizes importance of reaching a maximum variation within a smaller sample of subjects in contrast with the studies where “quantitative researchers capture a shallow band of information from a wide swath of people and seek to objectively use their correlations to understand, predict, or influence *what* people do” (Baker & Edwards, 2018, p. 8) often knowing or hypothesizing in advance the outcomes of their research. Nevertheless, as the above researchers clarify, “Qualitative researchers, working in the context of discovery, are more open-ended, and often follow emergent empirical and conceptual findings in unexpected ways” (Baker & Edwards, 2018, p. 8). According to Creswell (2007), it is oftentimes irrelevant to the study objectives to recruit and sample numerous participants while aiming to reach saturation. Purposeful sampling may be considered complete ones the diversity of subjects in the sample has been achieved, thus, may result in the maximum variation. With regards to the above postulates, the sample of participants in this study promised to be dramatically diverse based on the difference in the cultural, social, and educational backgrounds of the recruited students.

Following recruitment, the whole class of students-participants arrived to participate in this project. They were supposed to be divided into two groups. In order to make the number of participants equal in each of the groups, two more students were recruited from outside of this class. Finally, all 14 subjects were randomly divided into two groups of seven participants each.

Subjects in Group 1 were supposed to read the traditional print-based text and answer six comprehension questions. Group 2 students were supposed to read the same print-based text, then watch the video with an audio of this very text. Only after that, Group 2 participants were supposed to answer the same six comprehension questions to this text. Both groups were offered to complete a demographic survey, which also included some questions about the participants’ reading proficiency, preferences, reading comprehension strategies used when in this project, and overall, interest in reading.

4.2.1. Group 1 Participant Observation

Group 1 got to work with the text and the test questions as soon as they got the materials and were directed to start working. These research participants delved into the reading and ignored the loud noise made by some students in the next-door classroom. The noisy crowd of youngsters shortly left the area adjacent to this research site, so the participants could work without any external distractions practically the entire time of their participation in this project, except for its first minute.

Though the Shakespearean text was written in the language of the XV-XVI centuries, Group 1 readers would not admit giving up as an option. The intention to cope with the task was

observably readable in the students' postures and facial expressions. They did not move while reading; *not at all*. – The students demonstrated their complete immersion into the reading process. One of the typical traits noticed while observing Group 1 during their working with the text and the test questions was close attention to detail. All Group 1 participants finished the task in a timely manner: the students were given 20 minutes to complete this task. None of them asked for some extra minutes. The text was read, the comprehension questions were answered.

4.2.2. Group 2 Participant Observations

Meanwhile, Group 2 members were nestling themselves in the next-door small classroom with no windows. This room would suit watching the video better as the bright sunlight would not break in through the huge glass panels unlike the first classroom. Group 2 students started reading the text while the technology was being set for demonstrating the video with an audio of the same Shakespearian text.

During reading the Shakespearean text, some of Group 2 participants exchanged their feeling overwhelmed by the complexity level and low-comprehensibility of this reading.

Some of them shared with each other in whisper the following phrases,

“What is that?” or “I do not understand anything!” or “Not a single word!” or “What does that mean at all?”

The above exchange of impressions and perceptions indicated to the researcher the lack of comprehension of the read print-based text in the participants. Yet, in a certain way, this was an expected reaction, which might be viewed as a positive indicator of the offered in this research text. The purpose of this research study was to find the ways to assist students' reading comprehension in the process of working with exactly dense in their content, overly sophisticated, and challenging texts. The problems of the ELL college students struggling with their reading comprehension increase during their individual and independent reading outside of the classroom. In contrast to their working in class where, in accordance with Vygotskian postulates of Zone of Proximate Development (ZPD), students can get help from their teachers or higher achieving peers, working at home leaves a student struggle and rely solely on him- or herself. The usage of the dictionaries though was found helpful, was also viewed as extremely time-consuming. So, utilization of the translating programs may not be efficient, especially for the type of readings where, practically, every word or phrase needs to be interpreted by itself and within a given context the meaning of which as a whole is not clear to the ELL college readers. Thus, this research print-based text served the project purpose: it presented a high challenge to the participants.

So, regardless of the Group 2 students' apprehension of their perceived inability to cope with the reading comprehension task within this project, they were encouraged to continue their efforts and try to understand the print-based text, which was further supported with its multimodal form in a video with an audio.

4.3. Interruption in the Research Process

Unexpectedly, at the time in this project when Group 2 participants were supposed to follow their reading the print-based text with watching the matching video with the sound of the same excerpt from Shakespeare's *Romeo and Juliet* Act I Scene V, the internet connection failed in the entire building at the NSU campus. So, Group 2 participants had to stop their work and return the hard copies of the text and comprehension test back to the researcher. The video-based portion of this project had to be delayed till the next day when the NSU campus

Technology Support services expected to have fixed the problem with the Internet connection in the building.

Yet, the Group 2 participants responded to the interruption in the research process highly positively. For example, Saide concluded in a cheerful and supportive tone,

“Do not worry, Professor... We will watch this video at home, and we will come back again tomorrow. Just e-mail to us the link to the video on YouTube. If something prevents us from viewing it at home, we will come back tomorrow. Hopefully, tomorrow, there will be the Internet in the Franklin Hall.”

Unpredictably, another unforeseen occurrence almost ruined the plan for the completion of this project: by the end of that day, the video of Act I, Scene V from *Romeo and Juliet* was deleted off the YouTube.com. Yet, availability of a digital video disk (DVD) with Zeffirelli's (1968) production of *Romeo and Juliet* appeared to be very handy. So, the following day, Group 2 had an opportunity to watch the scene in question in support of the same content print-based text. Upon watching, the participants answered the comprehension questions to this print-based text supported by this video with an audio, completed their surveys, and proceeded with scheduling and giving their interviews.

Though the above interruption had no to minimal effect on the research participants' ability to complete this research tasks, the very fact of this obtrusion cannot be concealed from the reading audiences, nor may it be omitted off this report for the reasons of trustworthiness and fair disclosure of the veracious state of things with this project's progress.

5. Findings

5.1. Findings from the Surveys

Both Group 1 and Group 2 participants answered the survey questions. The results from the survey data analysis helped the researcher to identify the age of each participant, the country of origin, and the highest degree earned in the home country from which they arrived, the participants' previous and current exposure to educational means of multimodality, their experiences with reading, their habitual usage of the reading comprehension strategies acquired in their home-countries and in the U.S. educational institutions. The survey data also helped to identify the reading strategies used by the participants during their working with the Shakespearean text and the comprehension questions to the text.

One of the most important findings was the data on the participants' individual and group perceptions of the complexity level of the text used for this research. Figure 1 below graphically represents the levels of difficulty of the Shakespearian text as perceived by Group 1 versus Group 2 students and by the whole sample collectively.

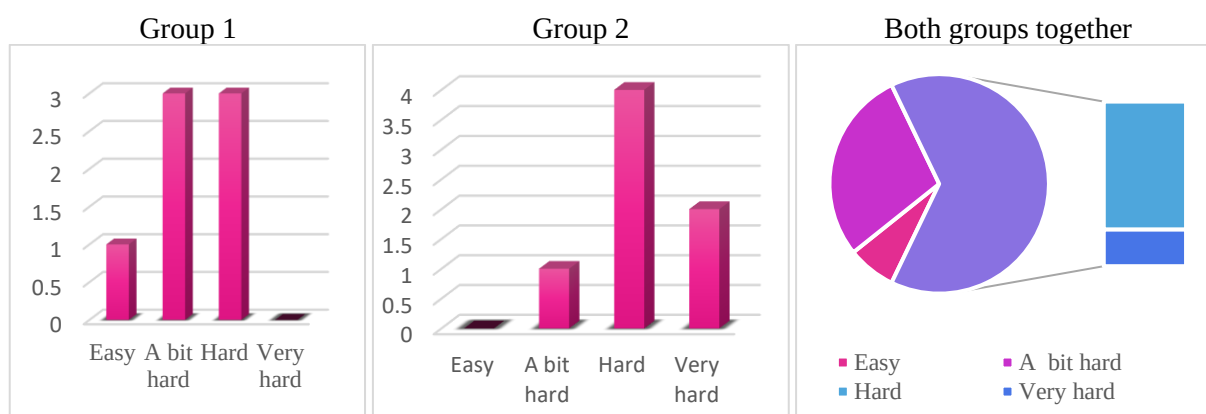


Figure 1. Participants' perceptions of the complexity of the text used in this project

The importance of the conclusion drawn from the above data analysis is that most of the students in the whole sample perceived the text used in this research project as *hard* or *very hard*. There were some variations by group, i.e., by the age of the subjects, where the younger generation of learners in the randomly sampled Group 1 did not perceive the text as *very hard* to read and understand; yet, these students found it either *hard* or *a bit hard*. The slightly older participants in the randomly sampled Group 2, though, perceived this text as *hard* and *very hard* to comprehend. The above findings were extremely important for interpretation of the comprehension test results, which will be further discussed in this report. Meanwhile, it is important for the readers to get familiarized with the rest of the survey data. Table 1 shows more detailed information obtained through the answers to the survey questions.

Table 1.

Research participants' demographic and reader characteristics organized by group

N ^o	Name	Highest degree	Degree country	Struggling reader	Likes reading	Reads much	Found text	Strategies used	EL proficiency
Gr. I									
1	Ran	High school	Asia	no	yes	yes	a bit hard	3	yes
2	Di	Bachelor's	Asia	yes	yes	yes	easy	5	yes
3	Daisy	Bachelor's	S/L Amer	no	yes	no	hard	6	yes
4	MingLi	High school	Asia	yes	yes	no	hard	3	yes
5	Liana	High school	Asia	no	yes	no	a bit hard	3	yes
6	Jabar	Bachelor's	ME / Med	yes	no	no	hard	6	yes
7	Sage	Bachelor's	S/L Amer	no	yes	no	a bit hard	7	yes
Gr. II									
1	Saide	Master's	ME / Med	yes	no	no	very hard	10	yes
2	Aziz	Bachelor's	ME / Med	no	no	no	hard	12	yes
3	Jason	Bachelor's	S/L Amer	no	yes	no	a bit hard	9	yes
4	Layla	Bachelor's	ME / Med	no	yes	yes	very hard	14	yes
5	Marina	Bachelor's	S/L Amer	yes	yes	no	hard	12	yes
6	Nema	Bachelor's	Asia	yes	yes	no	hard	12	yes
7	Salma	Bachelor's	ME / Med	Yes	no	yes	hard	5	yes

Table 1 conveniences: S/L Amer - South or Latin American countries; ME / Med - Middle Eastern or Mediterranean countries

As follows from Table 1 above, in Group 1, three participants out of seven (43%) perceived themselves as struggling readers versus Group 2 where four out of seven (57%) confessed they struggled with reading. In Group 1, six out of seven members (86%) liked to read, versus Group 2 where four out of seven (57%) loved reading. In each of the groups, only two out of seven people (29%) read much. These data allowed to conclude that the participants in Group 1 had better reading skills in comparison to Group 2 members.

Analysis of the survey data collected from Group 2 also resulted in the conclusion that this randomly sampled group included the participants with their completed Bachelor's degree, while one of them also had her Master's. Thus, the average age of the participants of Group 2 appeared to be slightly older rather than that of the participants in Group 1, where all seven students had their High School Diplomas, and only four of them had earned their Bachelor's degrees. The above findings were very important for this research as some variations by age and reading proficiency were found, which will be further discussed in this paper.

Culture-wise, the data from the surveys showed that Group 1 appeared to be formed by four participants from Asia, two participants from Latin and South American countries, and one person from Middle East; three males and four females. None of the Group 1 students had Master's degree; four had their Bachelor's degrees earned abroad; three graduated from High School in their home countries. As it followed from the surveys, three of Group 1 participants identified themselves as struggling readers. Six of them recognized they loved reading. Only two of them read much, though. One person stated he did not like to read. Three of Group 1 participants found the text used in this project *hard*, another three found it a little bit hard, one person perceived this text as *pretty easy*.

Group 2 included four participants from the Middle Eastern and Mediterranean countries, one person from Asia, and two students from South or Latin American countries. There were five females and two males in this group. One of this group had her Master's degree, while six had their Bachelor's earned in the universities outside of the United States. According to the survey data, four of these people identified themselves as struggling readers. Four of the participants loved reading regardless of their reading proficiency levels. Yet, only two people in Group 2 read much, while three other students confessed, they did not like reading. The significant number of struggling readers in this group (57%) might explain the fact that none of the group members found the text used in the project *easy*. Only one of the students found the text *a bit hard*; while four others perceived it as *hard*; two participants: Saide and Layla confessed they struggled a lot with this *very hard* in their opinion text.

5.2. Findings from the Interviews

Structured interviews completed the data collection process for this project. The interview data was highly important for this research purposes and goals. As viewed by the author of this paper, it is highly important for researchers and educators to hear each student's individual voice (Gould-Yakovleva, 2023). It might happen that the English language learners' laments do not receive the attention in the form of the academic support they may need. Though the college instructors endeavor to accommodate the needs of all learners in their classrooms, the major issue with selecting the appropriate sets of the individualized strategies, techniques, and methods of education roots in the extreme diversity of the social, cultural, and educational backgrounds of each individual learner. Thus, the revelations from the interview with every single participant should be viewed as containing an extremely important information on social and cultural aspects of learning styles by these diverse ELL studying college students.

From the research participants' interviews, it became obvious that watching the video, which supported the print-based text allowed Group 2 participants to better understand the meaning

of the text, which they initially marked in their surveys as *hard* and *very hard* to read and comprehend.

The major finding of this study is that all of the research participants who were exposed to the multimodality within this project stated that the inclusion of multimodal features in addition to the traditional print-based text strongly assisted them with their reading comprehension in the process of reading, listening, and viewing the text, which the majority of them initially identified as *hard to understand*. To provide just some examples, the following excerpts from the interviews with Group 2 research participants are cited below. The words in bold print in the participants' speeches symbolize the emphasis these students put on their statements.

Researcher's question (RQ): *How did you feel about the text I offered you to read?*

*Saide: Oooohhhhhh, (like moaning) it was **hard**. (She says it very fast, leaning backwards). It's really short, but I could not understand the language.*

Practically the same type of perception was expressed by Nema:

RQ: *Was it possible to understand that text without watching the video, just having the text?*

*Nema (sighs and then, confesses with a very sincere intonation): I don't think I can answer **any** of those questions just reading the text. Because, on the first day, you gave to us the text, I just read through it. I had **no** idea.*

RQ: *Thank you! Thank you for putting it as is. And after you watched the movie (the video)?*

Nema: I could understand, I cannot say maybe 100%, but 90% I can understand now.

Marina shared in her interview that at first, watching the video distracted her from staying focused on the text during her first attempt to multitask. Yet, during the second attempt to watch the video and follow the text, it was helpful to her to better understand the content of the text thanks to the presence of the multimodal features.

Marina answered the researcher's question about getting distracted in a dual way: first she said *no*, then, she clarified,

*"**No**. No, well, I can say the video distracts you, because when I **first time** tried to read and watch the video at the same time [it did not work right away]. **Then**, I watched the video and followed the paper at the same time."*

It is important that in her interview, Marina suggested an effective way to work with the visual support to the print-based texts. She confidently advised,

"I think, you have to read the text before and then watch the video. Because then you can have an idea what it is going to be about. And you know what part is difficult for you. And you can watch the [facial] expressions of the actors or in this way you can get the meaning. You get what the meaning is from their [facial] expressions."

Aziz expressed the same idea clarifying that,

*"It is helpful... to do it in this way: 1. Just read the text, 2 **THEN**, then give them the video or something like that... Because they will use it, they will listen to it; so, it will keep them thinking about this."*

Saide also recognized the positive effects of the supporting features of multimodality on the reading comprehension. She explained,

*"**Of course**, it helped me a lot, because of the [facial] expressions (points to her face, circles her face with her hand) helped me... First, I could not understand where they are, what they are doing."*

Aaaaand, after I watched the video, I GOT the idea of where they are, and how they develop the situation. I mean, in the beginning [when exposed to the text only], I asked myself, why the, you know, medical nurse came? Why? Where are they? Why are they going to dance? What is the relationship between the [medical] nurse and the dance? And after watching the video, I understood they were having a big party, I understand the idea.”

One can hear similar ideas in the interview with Jason:

RQ: Can you say that watching the video helped you to better understand the text or not?

Jason: **YES**, yes, yes, yes! (4 times)

RQ: What exactly?

Jason: *The movements and the facial expressions of the characters (helps himself with his hand gestures and facial expressions and body movements to deliver his ideas to the interviewer - a lot of rich gesticulation). Movements and the scenery, and the characters... And... It is better because you do not need to figure it out. You just watch, so, you know what the situation is because you are ... you see it personally, the character's actions. So, it's better to understand that, rather than just read.*

It is important to clarify that all Group 2 participants stressed the importance of combination of the modes they could employ in the process of meaning-making through the features of multimodality which is congruent with the postulates on this topic published by Guba and Lincoln (1994) and the NLG (2000). Group 2 participants clearly stated the idea of benefits from using both: videos plus the print-based text in the form of subtitles to the video. This finding is congruent with the ideas of the NLG (2000).

Similar suggestion was uttered by Saide who said,

“I think, we need to get information from different sources.”

One can clearly hear this very idea in the interview with Layla:

Layla: *I think listening, and visuals, and reading the text will be really helpful.*

RQ: So, you believe in combination of the three?

Layla: *Yeah. The combination.*

Salma expressed the ideas similar to the ones delivered by the other Group 2 members and discussed the three major modes she considered most helpful for meaning-making:

RQ: How have you figured out your way to answer the questions?

Salma: *Before watching the video, I could not. I could not make connections in the communication between the characters. For example, the nurse, and Juliet, and Romeo... I could not understand the communication, nor make connections between them. But after watching the video, I understood. From the body language and the behavior, I understand what the relationship is between them.*

RQ: Can you say that what you saw helped you more than what you heard in the video?

Salma: *Yeah.*

RQ: So, as for yourself, are the visuals more important than the auditory means?

Salma: *Yes. The first mode is visual, second is auditory, the last one is the text [print-based text] (Salma supported that statement with the gestures of her hands).*

It can be concluded from the interviews with the participants that all Group 2 participants strongly and prevalently relied on the information received through the visual mode of multimodality and considered it most helpful for their comprehension. This finding is congruent with the findings by Miller and McVee (2012), Gould (2017), and Gould-Yakovleva (2023).

Layla also confirmed the importance of the visual mode:

Layla: I am a visual person. I need to see what I am told. And then, I can imagine what they are doing with this all.

RQ: *From what you know about the people around, are some of those people also visual learners?*

Layla: Nowadays, everybody is becoming visual, because everybody is on their iPhones, iPads. People are more involved in technology.

RQ: *Do you believe the multimodal features in addition to the printed text really help people to better understand what is going on in the text?*

Layla: I think so.

When asked about any potential disadvantages or benefits of implementation of multimodal features in addition to the conventional print-based text, all Group 2 members recognized the prevalence of the benefits. All Group 2 students strongly emphasized the importance of including diverse features of multimodality in addition to the traditional print-based text for the purpose to assist International ELL college students with their reading comprehension. These findings support the ones in the previous research reports by this researcher (e.g., Gould 2017; Gould-Yakovleva et al., 2020; Gould-Yakovleva, 2023).

6. Miller's Big Research Picture: Coded Data Display

Upon completion of the data collection process, all the collected data were deidentified, coded manually, and displayed on the wall of the researcher's office. The full-wall display allowed for attending to the fine details while having a larger and wholesome picture of the data collected from the multiple sources, e.g., observations, surveys, artifacts, and interviews.

S. Miller (personal communication, April 15, 2015) stressed the significance for a researcher to be able to visualize the *Big Research Picture*. The hands-on multimodal display of the data allowed the PI to easily make the necessary alterations to the data whenever the new chunks of information emerged and had to be added. The visual representations of the codes and ideas appealed to the researcher's human senses, thus, made the multimodal representation of the codes easy to recognize, process, and memorize. Some examples with explanations of the coding process and the meaning of the codes will be provided in this section of the paper below.

The coded research data display ensured identity protection for all the participants and their individual, personal, and academic information in such way that the infrequent visitors to the researcher's office were prevented from reading and understanding the displayed data even if their visit occurred in the absence of the researcher or the protective sheet, which covered and hid the entire display from non-planned viewing.

The researcher placed onto the display some specific symbols to identify the particular participants who found multimodal features very helpful for their understanding of the print-based text. Some specific sign marked the student who felt that the video distracted her from staying focused on the content of the print-based text during her initial exposure to it. Yet, this student reported her being able to promptly adapt to the multimodal reading, so she benefited

from it in terms of her reading comprehension. This occurrence was marked with a corresponding sign as well.

The test results organized by group and by each individual participant were also shown within the data display. Additionally, small index cards contained the information on the print-based reading comprehension strategies implemented by each of the students in both groups in the process of their working with this project's text and comprehension questions. There were also color-coded cards standing for the specific multimodal strategies implemented by Group 2 participants in the process of their working with the conventional print-based text supported by the diverse features of multimodality present in the video with an audio. For example, the red cards represented the strategies, which involved the visual mode, the lime-colored ones indicated the usage of the auditory mode, the orange ones stood for the spatial and gestural modes, the blue ones showed the cases where sensory mode was implemented and found helpful. Some certain color-codes were utilized for the instances where the strategies used by the participants involved the visual, spatial, sensory, and gestural modes in a range of their combinations.

Besides displaying the data about the whole Group 1 and entire Group 2, more details on each individual student were placed onto the display. For example, the large index cards contained the information on the country where each participant got their education, the highest degree, and the major. Participants' genders were color-coded as well. There were some specific semiotic sign codes used to indicate each participant's lack of enjoyment in reading or strong desire to read much. Struggling readers could be easily distinguished from the higher achieving ones via the assigned visual codes. Reading proficiency levels of the individual students were marked with the designated symbols. The display also contained the easily accessible data on each participant's age group and the highest degree earned in their home countries. The information on each individual participant's reading preferences, habits, and reading traits was also made visually available.

As the author of this project came out with the above coding individually and independently, the codes and their meaning appeared to be comprehensible to the author of this project, literally, at one glance. So, reading, processing, and analyzing all the data occurred naturally and made visualization of the fine details about every participant, each group, or the whole *Big Research Picture* significantly more efficient, rather than reading the same data collected from the multiple sources and jotted down in the form of the print-based notes. This data display powerfully assisted the researcher with the data analysis and resulted in the thematic findings, which will be further discussed in this paper.

7. Thematic Findings

7.1. Usage of Modes of Multimodality

As the result of the data analysis, this research found that 100% of all the research participants who were exposed to the multimodal features in addition to the traditional print-based text found that the inclusion of the multimodal features in addition to the print-based text assisted them with their reading comprehension in the process of working on this project task.

All participants answered positively the researcher's question, "Did multimodality assist you with reading comprehension?" Six participants (85.7%) out of seven total in Group 2 stated they did not believe the addition of the visual features destructing them or prevented them from staying focused on this project's readings. Only one of the students shared that during her first attempt to multitask, she was not very confident, but during the second attempt, the video

appeared to be very helpful. Another participant stated that the video did not distract him in person, yet, as he assumed, it might distract some other people. Yet, this statement appeared to be only an assumption, which did not find support in this project.

Importantly, all participants responded positively to the researcher's question about helpfulness of the added multimodal support to their endeavors with answering the comprehension test questions to the text. Unanimously, all students confirmed they would choose the multimodal visual and auditory support to the print-based text were they offered another text to read. These findings echo the ones made by this PI in her previous studies (e.g., Gould 2017, Gould-Yakovleva, 2023) and the other researchers (e.g., Miller & McVee, 2012; Shanahan et al., 2014).

7.2. Socio-Cultural Tendencies

Upon having triangulated the data collected through artifacts (reading comprehension test questions to the text), participant and site observations, surveys, and interviews, there were identified some different approaches to making the meaning in the participants as carriers of the knowledge previously obtained in their home countries. This finding is congruent with Vygotsky's (1978) socio-cultural constructivism theory. The students from Asia shared via their surveys and interviews that they were more detail-oriented, while the participants from the Middle Eastern and Mediterranean countries recognized they were in need of a *whole, big picture* in order to be able to understand the events in the text. The participants from the South and Latin America expressed the idea of importance of observing the actions in the form of gestures, positions, and movements by the actors through the space on the screen. The available actions helped these students to better understand the meaning of the visual, print-based, and auditory text. The above findings support the ideas about socially and culturally constructed knowledge expressed by Gould (2017), Gould-Yakovleva (2023), Miller (2013), Shanahan et al. (2014), Vygotsky (1978), and Wertsch (1991).

Additionally, this research found the following variation between the two groups: the randomly sampled Group 1 appeared to be formed by 43% of the younger generation learners. These students shared in their interviews and surveys that they had been most recently exposed to the research-based best teaching practices during their studies in their high schools in their home countries.

With regards to the above findings, further studies with larger numbers of diverse participants are needed. The research on socio-cultural approach to education of the International ELL college students has a potential to identify and implement the teaching and learning strategies tailored and individualized for every particular set of international English language learners grouped homogeneously or within the inclusive classrooms.

7.3. Usage of Unimodal and Multimodal Strategies

The data from the interviews and surveys helped to identify the strategies used and found most helpful by each individual participant. Interestingly, none of the students attempted to organize the available to them information graphically in order to sort out the hard-to-comprehend situation in the Shakespearian text. Yet, each of Group 1 participants implemented 4.7 reading comprehension strategies on average. The most commonly used strategies were: Identifying the Main Idea (71% of Group 1 participants), Sequencing the Events in the Text (71%), Using Text Features (57%), Using Context Clues (57%), Key-word Matching (43%), Making Predictions (43%). It appeared that only one person analyzed Cause and Effect Relationship and utilized Making Inferences strategy.

It is interesting that three of the participants in Group 1 (43%) employed a sensory mode while working with the print-based text: all three of them tried to Evaluate Emotions of the Characters in the Text, while one of them Associated Himself with a Character in the Text. The amount of the strategies used by all the participants in Group 1 was limited to eleven unimodal, print-based reading comprehension strategies.

In contrast to Group 1, the participants in Group 2 enjoyed availability of multimodal features in addition to the unimodal print-based text. Group 2 students utilized 10.6 strategies per person (versus 4.7 in Group 1). Combined, Group 2 members utilized the unimodal and multimodal reading comprehension strategies 74 times more often versus 33 times by Group 1, which read unimodally. Group 1 implemented print-based text strategies in 88% of all cases and the sensory-mode-based strategy in 12% of all cases. In Group 2, as it appears, 53% of all the used strategies were multimodal, counting off the 74 cases of reading comprehension strategies implementation.

To sum up, Group 1 implemented only eleven unimodal, text-based strategies, while Group 2 implemented about 20 of available to them reading comprehension strategies, such as eleven text-based strategies and, additionally, eight more multimodal ones on top of the print-text-based ones. This means that Group 2 enjoyed the opportunity to utilize **42% more** of reading comprehension strategies in contrast to Group 1.

The most frequently used text-based strategies in Group 2 were: Using Context Clues (86%), Identifying the Main Idea (71%), and Making Inferences (57%). The most frequently used multimodal strategies implemented by Group 2 participants were: Observing the Movements and Gestures of the Characters (100%), Observing Actions of Characters (86%), Examining Facial Expressions (86%), Listening to the Characters' Speeches (86%), Understanding the Intonation of the Speeches (86%), Evaluating Emotions of the Characters (86%).

The above findings strongly correlate with the numeric data in the previously published research reports by this author i (e.g., Gould 2017; Gould, 2023).

7.4. Test-Based Findings

Regardless of the fact that 71% of Group 2 participants (versus 43% in Group 1) identified the text used in the project as *hard* or *very hard*, while 57% of Group 2 members were struggling readers (versus only 43% in Group 1), there was a difference in number of correct answers to the comprehension test questions in favor of Group 2.

It is the right time in this report to stress that, initially, Group 2 members were not able to comprehend the unimodally read text as per their sincere confessions confirmed by the researcher's observations. Nevertheless, the students in Group 2 answered 79% of the comprehension test questions correctly versus 74% in Group 1, which students were apparently higher EL reading proficient. This finding is congruent with the findings by Gellevij et al. (2002) and Gould-Yakovleva (2017; 2023) whose research studies found multimodality highly helpful to the ELL student populations with their reading comprehension.

Table 2 aims to display the information on the usage of the reading comprehension strategies by participants organized by group.

Table 2.

Number and percentage of students who implemented each strategy by group

Strategy Name	Students Group 1		Students Group 2	
a. Text features	4	57%	3	43%
b. Key-word matching	3	43%	3	43%
c. Making predictions	3	43%	3	43%
d. Identifying the main idea	5	71%	5	71%
e. Compare and contrast	2	28%	1	14%
f. Cause and effect	1	14%	1	14%
g. Using context clues	4	57%	6	86%
h. Making inferences	2	28%	4	57%
i. Text marking strategies			1	14%
j. Organizing information graphically	0	0	0	0
k. Sequencing the events	5	71%	2	28%
l. Summarizing			2	28%
m. Observing actions of the characters			6	86%
n. Examining facial expressions			6	86%
o. Listening to the characters' speeches			6	86%
p. Understanding the intonation			6	86%
q. Observing the movements and gestures			7	100%
r. Evaluating emotions of the characters	3	43%	6	86%
s. Associating oneself with a character	1	14%	2	28%

8. Discussion and Conclusion

Within the context of the previously conducted studies, the major finding of this project was that, as perceived by all participants, addition of the multimodal features to the traditional print-based text powerfully assisted them with their reading comprehension via the means of multimodality in combination with the unimodal, print-based text. The findings of this research support the ones in the previously conducted studies (Gould, 2017; Gould-Yakovleva, 2023; McVee et al.; 2008, Miller & McVee, 2012; Miller, 2013; Shanahan et al., 2014). One of the most important implications of this study is that Vygotsky's (1978) socio-cultural constructivism theory has been found fundamental for studying the reading comprehension processes in the diverse International ELL college students while their working with the print-based text without multimodal support and when assisted by the addition of the multimodal features.

The high significance of this study rests on the fact that the participants addressed in detail the first research question and described in their interviews in which exactly ways multimodal features assisted them with their reading comprehension within this project. Thus, educators may use this research findings for teaching their International ELL college students via embedding multimodal means of education in their instruction.

One of the major implications of this study is that further research is needed on the topics of multimodality in service of reading comprehension. This current project had some limitations, for example, the relatively small size of the sample. Though, the benefits of small-scale samples to the qualitative research had been discussed above in this paper and also explained by the well-known theorists (e.g., Creswell, 2007). Larger samples of participants with more diversity with regards to their educational and cultural backgrounds might allow to apply the findings to larger and diverse student populations. Another limitation of this study is the fact that the mainstream American students did not participate in this project due to the fact that the American public schools expose their students to some Shakespearean texts, which are included in many US high school curriculums. The author of this research strongly suggests selecting the texts, which would be equally unknown to all the research participants in the future studies.

The most significant implication of this research for the American educators and curriculum developers is that all the research participants who were exposed to the features of multimodality in addition to the traditional print-based text within this project highly **recommended** the educational communities in the United States and world-wide to include teaching multimodalities in the curriculums as the participating in this project International ELL college students found visual and auditory modes of multimodality extremely helpful for their reading comprehension in the process of working with the text and comprehension test-questions during this study. The above findings respond to the second question of this study.

Importantly, with regards to the third research question in this study, all participants emphasized the benefits of the visual and audible texts added to the print-based ones. Thus, the effects of the visual and auditory modes of multimodality need to be further investigated.

Another important finding of high significance is that, in response to the fourth research question, this study participants identified those unimodal and multimodal reading comprehension strategies, which they perceived as most helpful to them in the process of their reading the text, watching the supporting video, and answering the comprehension test questions. Vast communities of educators may consider implementation of these strategies for their classroom instruction for the benefit of their International ELL students.

Essentially, during the process of this study, all the participants were extremely enthusiastic and supportive, as they understood this research was designed and purposed specifically for the learner populations just like themselves, while this study aimed to help the future generations of the International ELL college learners in the American schools to achieve high academic and further professional success. By the end of this project, all the research participants expressed their hope that their endeavors within this study would not vainly vanish upon the completions of this research. These students invested their time and effort in helping to find the new ways of teaching and learning, which might have a strong potential to assist greater numbers of the International ELL readers with their reading comprehension.

One of the participants, Salma, thought for a moment, then concluded,

I see... It's like being at a doctor's who listens to understand where it hurts. And then... will look for the remedy, for the right treatment.

The above statement contains the words, which elucidate the perceptions by the International ELL college readers of their struggles with the reading comprehension of the highly complex for them texts. - Salma unintentionally revealed that *it hurts*. This one confession by this study participant sums up the hidden concerns of many of her peers, the International college-level English language learners, which stoically try to camouflage their high-level internal tension, pain of a repeated, but vain effort, and the fear of failure behind their polite and respectful smiles. A stronger effort is needed from the side of educators and researchers, so those struggling readers were able to better comprehend and truly enjoy their readings. More research studies are needed in the field of multimodality with the purpose to find the working remedies, which might assist the International ELL college students with their reading comprehension, thus help them achieve higher academically and in their future careers. It is tremendously important to understand that helping the students of today, educators are preparing to launch a high-powered intellectual force of the rising generation of the mindful designers and caring upholders of the ensuing viability in their local communities as well as the universal society.

References

- Ajayi, L. (2009). English as a second language learners' exploration of multimodal texts in a junior high school. *Journal of Adolescent & Adult Literacy*, 52(7), 585-595. <https://doi.org/10.1598/JAAL.52.7.4>
- Baker, S. E., & Edwards, R. (2018). How many qualitative interviews is enough?: Expert voices and early career reflections on sampling and cases in qualitative research. *National Centre for Research Methods Review Paper*. https://eprints.ncrm.ac.uk/id/eprint/2273/4/how_many_interviews.pdf
- Baildon, M., & Damico, J. S. (2009). How do we know?: Students examine issues of credibility with a complicated multimodal web-based text. *Curriculum Inquiry*, 39(2), 265-285. <https://doi.org/10.1111/j.1467-873X.2009.00443.x>
- Bakhtin, M. M. (1981). Discourse in the novel. In M. Holquist (Eds.), *The dialogic imagination: Four essays by M. M. Bakhtin* (pp. 259-422). Austin: University of Texas Press.
- Callow, J., & Zammit, K. (2012). "Where lies your text?" ("Twelfth Night" act I, scene V): Engaging high school students from low socioeconomic backgrounds in reading multimodal texts. *English in Australia*, 47(2), 69-77.
- Cloonan, A. (2011). Creating multimodal metalanguage with teachers. *English Teaching: Practice and Critique*, 10(4), 23-40.
- Creswell, J. W. (2007). *Qualitative inquiry and research design: Choosing among five approaches*. Thousand Oaks.
- Ely, M., Anzul, M., Friedman, T., Garner, D., & Steinmetz, A. M. (1991). *Doing qualitative research: Circles within circles*. Bristol, PA: The Palmer Press.
- Jacobs, G. E. (2012). Developing multimodal academic literacies among college freshmen. *Journal of Media Literacy Education*, 4(3), 244-255. <https://doi.org/10.23860/jmle-4-3-5>
- Exley, B., & Cottrell, A. (2012). Reading in the Australian curriculum English: Describing the effects of structure and organization on multimodal texts. *English in Australia*, 47(2), 91-98.
- Gellevij, M., Van der Meij, H., de Jong, T., & Pieters, J. (2002). Multimodal versus unimodal instruction in a complex learning context. *Journal of Experimental Education*, 70(3), 215-239. <https://doi.org/10.1080/00220970209599507>
- Glesne, C. (2010). *Becoming qualitative researchers* (4th ed.). New York: Longman.
- Gould, O. (June 12, 2017). *'Please, tell them!': Voices from university classrooms on the effects of multimodality on polylingual EAL speaking college students' meaning making*. (Doctoral dissertation). ProQuest LLC.
- Gould-Yakovleva, O. (2023). Voices from university classrooms on effects of multimodality on polylingual EAL college students' meaning making. *International Journal of Second and Foreign Language Education*, 2(2), 1-19. <https://doi.org/10.33422/ijsfle.v2i2.450>
- Gould-Yakovleva, O., McVee, M., & Fronczak, D. (2020). "Ready-ready" to teach: The telling case of a reflective teacher-practitioner. *The Qualitative Report*, 25(2), 306-319. <https://doi.org/10.46743/2160-3715/2020.4040>

- Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (pp. 105-117). Thousand Oaks, CA: Sage.
- Huang, Y. (2023). Open learning environment for multimodal learning based on knowledge base technology. *International Journal of Emerging Technologies in Learning*, 18(11), 38-51. <https://doi.org/10.3991/ijet.v18i11.39397>
- Jacobs, G. E. (2012). Developing multimodal academic literacies among college freshmen. *Journal of Media Literacy Education*, 4(3), 244-255. <https://doi.org/10.23860/jmle-4-3-5>
- Kitson, L. (2011). Reconceptualising understandings of texts, readers and contexts: One English teacher's response to using multimodal texts and interactive whiteboards. *English in Australia*, 46(3), 76-86.
- Leander, K., & Boldt, G. (2012). Rereading "A pedagogy of multiliteracies": Bodies, texts, and emergence. *Journal of Literacy Research*, 45(1), 22-46. <https://doi.org/10.1177/1086296X12468587>
- Levy, M., & Kimber, K. (2009). Developing an approach for comparing students' multimodal text creations: A case study. *Australasian Journal of Educational Technology*, 25(4), 489-508. <https://doi.org/10.14742/ajet.1125>
- McVee, M. B., Bailey, N. M., & Shanahan, L. E. (2008). Teachers and teacher educators learning from new literacies and new technologies. *Teaching Education*, 19(3), 197-210. <https://doi.org/10.1080/10476210802250216>
- McVee, M. B., Bailey, N. M., & Shanahan, L. E. (2008). Using digital media to interpret poetry: Spiderman meets Walt Whitman. *Research in the Teaching of English*, 43(2), 112-143.
- Miller, S. M. (2013). A research metasynthesis on digital video composing in classrooms: An evidence-based framework toward a pedagogy for embodied learning. *Journal of Literacy Research*, 45(4), 386-430. <https://doi.org/10.1177/1086296X13504867>
- Miller, S. M., & McVee, M. B. (2012). *Multimodal composing in classrooms: Learning and teaching for the digital world*. New York: Routledge. <https://doi.org/10.4324/9780203804032>
- Mills, K. (2011). "I'm making it different to the book": Transmediation in young children's multimodal and digital texts. *Australasian Journal of Early Childhood*, 36(3), 56-65. <https://doi.org/10.1177/183693911103600308>
- Molyneux, P., & Godinho, S. (2012). "This Is my thing!": Middle years students' engagement and learning using digital resources. *Australasian Journal of Educational Technology*, 28(8), 1466-1486. <https://doi.org/10.14742/ajet.782>
- New London Group (2000). A pedagogy of multiliteracies: Designing social futures. In B. Cope & M. Kalantzis (Eds.), *Multiliteracies: Literacy learning and design of social futures* (pp. 9-38). South Yarra, Vic: Macmillan.
- Pantaleo, S. (2012). Exploring grade 7 students' responses to Shaun Tan's "The Red Tree." *Children's Literature in Education*, 43(1), 51-71. <https://doi.org/10.1007/s10583-011-9156-x>
- Pantaleo, S. (2012). Meaning-making with colour in multimodal texts: An 11-year-old student's purposeful "doing." *Literacy*, 46(3), 147-155. <https://doi.org/10.1111/j.1741-4369.2012.00664.x>

- Querol-Julian, M., & Fortanet-Gomez, I. (2019). Collaborative teaching and learning of interactive multimodal spoken academic genres for doctoral students. *International Journal of English Studies*, 19(2), 61-83. <https://doi.org/10.6018/ijes.348911>
- Saldaña, J. (2012). *The coding manual for qualitative researchers*. Sage Publications.
- Shakespeare, W. (1993). *Romeo and Juliet*. Dover Publications.
- Shanahan, L. E., McVee, M. B., & Bailey, N. M. (2014). Multimodality in action: New literacies as more than activity in middle and high school classrooms. In R. E. Ferdig and K. E. Pytash (Eds.), *Exploring multimodal composition and digital writing* (pp. 36-53). Hershey, PA: Information Age. <https://doi.org/10.4018/978-1-4666-4345-1.ch003>
- Spradley, J. P. (1980). *Participant observation*. Holt, Rinehart, and Winston.
- Varaporon, S., & Sithittikul, P. (2022). Effects of multimodal tasks on students' critical reading ability and perceptions. *Reading in a Foreign Language*, 31(1), 81-108.
- Vincent, J. (2006). Children writing: Multimodality and assessment in the writing classroom. *Literacy*, 40(1), 51-57. <https://doi.org/10.1111/j.1467-9345.2006.00426.x>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Vygotsky, L. S. (1987). *The collected works of L. S. Vygotsky: Vol. 1. Problems of general psychology, including the volume thinking and speech* (R. W. Rieber & A. S. Carton, Eds., Trans. N. Minick). New York: Plenum.
- Walsh, M. (2008). Worlds have collided and modes have merged: Classroom evidence of changed literacy practices. *Literacy*, 42(2), 101-108. <https://doi.org/10.1111/j.1741-4369.2008.00495.x>
- Wang, M. (2011). Using multimodal presentation software and peer group discussion in learning English as a Second Language. *Australasian Journal of Educational Technology*, 27(6), 907-923.
- Wang, M. (2022). The cultivation of students' multiple practical ability under the multimodal blended teaching mode. *International Journal of Emerging Technologies in Learning*, 17(12), 106-120. <https://doi.org/10.3991/ijet.v17i12.32087>
- Wertsch, J. V. (1991). *Voices of the mind*. Cambridge, MA: Harvard University Press.
- Xiaoyan, S., & Hicks, T. (2022). "It improves our writing enthusiasm": Exploring multimodal resources for teaching contemporary College English writing in China. *Educatio Siglo XXI*, 40(3), 199-226. <https://doi.org/10.6018/educatio.535051>
- Zeffirelly, G. F. C. (Director). (1968). *Romeo and Juliet*. [Film]. Paramount Pictures.