Polymedia Integration In Reading Comprehension

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Abstract — This study delves into the dynamic and transformative landscape of contemporary learning environments, underscored by a pronounced shift towards digital and visual platforms. In response, traditional notions of reading comprehension are undergoing a critical reevaluation. At the forefront of this paradigm shift is the exploration of polymedia and image integration as innovative tools aimed at fostering learner development in comprehension.

To comprehensively investigate the impact of these tools, a multi-method research design is employed, seamlessly integrating qualitative analyses—such as in-depth interviews—with quantitative measures, including a well-established reading comprehension test. The study strategically assembles a heterogeneous sample, encompassing learners across various educational levels. This diverse representation ensures a thorough exploration of how polymedia and images influence the intricate process of reading comprehension. Preliminary findings illuminate a positive correlation between the integration of polymedia and visuals and enhanced understanding among learners. The engagement of multiple senses and the accommodation of diverse learning styles emerge as instrumental factors contributing to this positive outcome. Qualitative insights, gleaned through interviews and questionnaires, provide a nuanced understanding of readers' perspectives on the amalgamation of polymedia and images within their comprehension tasks. A noteworthy contribution of this research lies in its proposition of innovative approaches utilizing polymedia and pictures to augment learner development and elevate reading comprehension skills. The synthesis of sensory inputs, coupled with the adaptability to diverse learning styles, emerges as a pivotal aspect of this integration. Beyond its immediate findings, this study serves as a guide for future researchers, offering valuable insights into emerging trends and potential developments within the realm of digital education. As the educational landscape continues its evolution, the implications of this study extend towards a broader understanding of how these insights can shape and refine strategies for fostering enhanced reading comprehension in learners. This research lays a foundation for ongoing exploration and adaptation in response to the ever-changing dynamics of contemporary education.

I. Introduction

Reading is extremely important in one's life. It is a path to limitless possibilities, a wide-open gateway to better intellectual progress. It broadens awareness, elevates standards and improves the effectiveness of any activity, business, trade or career. According to Villamin et al. (2021), experts concur that reading is the golden key to a world of enlightenment and delight. Reading without comprehension is nothing more than identifying the letters in a word. As a result, real resources as treatments are   required to improve Grade 1 learners reading comprehension. Current research reading comprehension shows that few have attempted to measure reading test as inputs. Authentic materials are essentials in the language classroom to help learners understand and remember what they read. Reading is essential for learning in school and in life. This ability enables everyone to connect prior knowledge with their learning, improve their understanding of ideas and practices and ensure that these are consistently handed on to the next generations (Torres, 2019). It is one of the fundamental abilities that every learner should have in order to gain knowledge, learn and progress to a higher level of education and live a normal life. Most learning is based on reading.

Technology breakthroughs and an increasing focus on digital and visual learning are driving constant changes in the educational landscape. The conventional understanding of reading comprehension is being reexamined in this dynamic environment. The goal of this research is to better understand and investigate the complex relationship that exists between visuals and polymedia integration in the learning environment and text comprehension.

Reading is an essential skill for learners to gain early in their education because it serves as the foundation for learning across all academic fields (Almutairi, 2018). Furthermore, strengthening reading ability before learners enter first grade is critical as learners begin to read, after first grade in order to get information and learn from academic content. In addition, leaners who do not master reading skills by the end of the first grade have a low passion for learning.

The learners' background knowledge and exposure to the world around them may affect how they will know what they read, the same research from Nation and Nate (2019) and Elleman and Orlund (2019) presents that reading comprehension is a complex task and behaviour in which humans engage and depends on a range of cognitive and linguistic processes.

Reading comprehension, a cornerstone of academic achievement, is no longer confined to the traditional realm of printed text. The increasing prevalence of digital media and visual stimuli necessitates a critical examination of how learners engage with and comprehend information in this evolving educational landscape. This study seeks to bridge the gap between conventional reading comprehension methods and the emerging dynamics of multimedia learning. Reading

comprehension occurs when the words on a page are more than simply words but include concepts and ideas (Carmen, 2021).

Reading become more entertaining, fun and informative when it is comprehended. It is required for academic and professional success. (Brandon 2019). Reading is recognized as top priority by the Philippine government, organizations and individuals, reflecting a recognition of the importance of literacy.

An important comprehension ability that learners must develop is the concept or idea of what they read. Individuals with these talents can distinguish between essential and non – essential information, including the most important notion and minor facts or example, from a mass of images, phrases or sentences. The ability to recognize the primary idea is a fundamental skill that allows students to comprehend the main meaning of a text and effectively interpret it. By honoring this skill, learners can get a greater understanding of their readings, making them ready to engage with and contribute to society.

Motivating oneself and creating a mental framework to retain information when reading concepts, focus, and effective study methods. Skilled readers are able to connect the dots between the author's stated and implied messages. They make use of both their schema and the text's hints. Reading comprehension is a difficult task requiring multiple processing levels. The ability to deal with unknown terms found in text is one of the most basic components of understanding. It is insufficient to guess the meaning of new words based just on context signals, as this approach frequently leads to a misunderstanding or cursory knowledge of important concepts, particularly in content-area reading (Carantes & Delos Reyes, 2021).

The integration of polymedia—embracing a variety of media formats—and images represents a novel approach to enhancing learner development in comprehension. The shift towards a multi-method research design, incorporating both qualitative and quantitative analyses, allows for a comprehensive exploration of how learners at different educational levels navigate and make sense of information presented through diverse media.

The study is enhanced by the heterogeneity of the selected sample, which offers valuable perspectives on the ways in which people with different educational backgrounds react to the incorporation of images and polymedia in their reading comprehension assignments. In order to shed light on the subjective experience of comprehension in a multimedia-rich environment, this research uses questionnaires and interviews to gather information in addition to quantitative performance indicators.

As the educational landscape continues to evolve, this research serves as a crucial exploration into the potential impact of multimedia integration on reading comprehension skills. By delving into this intersection, the study not only addresses the contemporary challenges of digital education but also provides a foundation for future research and development in fostering effective reading comprehension strategies within a multimedia-rich learning environment.

Literature Review

The complexities of reading comprehension are represented in Component models that take into account understanding subcomponents. The findings of component models like the direct and logical mediation models (Oslund, Clemens, Simmons, &Simmons, 2021), have been generally similar. These models show that vocabulary is consistently the best predictor of reading comprehension for younger learners, both directly and indirectly. Furthermore, these models indicated that, while not as powerful as vocabulary, inference- making and prior knowledge were nonetheless inference, making prior knowledge were still effective had a significant direct and indirect impact on comprehension. Reading is a complex skill that takes practice to master. Certain elements of reading, like word recognition and fluency, can be acquired in few years. While mastering these fundamentals is important, reading comprehension should also be prioritized. Pupils can spend all day memorization words on a page, but without the ability to comprehend what they are reading, they will not be able to predict what will happen next content, character order, elucidate unclear passages in the text, or make connections between what they're reading and their past experiences or knowledge (Carantes & Delos Reyes, 2021).

The majority of researchers and practitioners would agree that the majority of Standardized reading comprehension test fall short of their intended target record in reading comprehension process (Fuchs et al.; 2018). In addition to examining present measures, the low-level skills tapped by multiple choice questions and closed ended items will be converted into measures that provide information about students' deeper text processing.

The polymedia capacity expands on previous understanding of the communicative capacity by unpacking and highlighting the various levels of expression available to individuals in today's media world, allowing for through assessment of various ways in which these connect in meaning – making process.

Our attempt to reconceptualize the polymedia environment in terms of collection goes beyond a focus on the social significance of choosing one media over another to look into how social meaning is negotiated during interactions with in and across different media. In doing so, we investigate how media choice intersects with and mutually shapes other communicative choices and mode of communication as well as enabling use of already present media. (Lexander and 728 Caroline Tagg & Agnieska Lyons Androutsopoulos 2021). The poly media repertoire, by encompassing the configuration of semiotic and technological resources accessed by any one individual, provides an extension to our understanding of semiotic repertoires that is required in today's communicative landscape.

Compared to teacher dominate classrooms, studies have shown greater students' interest in the lesson, motivation, autonomy, and a willingness to learn in classrooms that mostly used computers and the internet, indicating a positive correlation between online instruction and learner

performance. (Alharbi, 2019; Katemba, 2019, Katemba, 2021). (Montero Perez et al., 2018) also stated that learner can improve their vocabulary by video.

Vocabulary knowledge in reading comprehension refers to a type of knowledge that facilities text comprehension by identifying the linguistic significance of the one, two or more word/characters, thereby providing the possibility of higher – level reading processes (Lervage et al., 2018) Literature has indicated that vocabulary knowledge contributes to reading comprehension through semantic meaning identification and plays a supporting role with inference on sentence meaning comprehension (Lervage et al., 2018; Lawrence et al.,2019)

It was shown that a lack of vocabulary knowledge can be an essential factor for learners being unwilling to be exposed to the skills of reading and listening in both foreign and second context of language learning. Furthermore, a wide range of important qualities are frequently grouped under the area of the problem of vocabulary acquisition, such as word frequency, saliency, learning burden and learners' specific vocabulary needs and desire. (Grabe & Stoller, 2018).

Learners require during the vocabulary development procedure; teacher should influence and guide learners' vocabulary growth in order to maximize learning both within and outside of the classroom. (Rogers, 2018). This classroom technique allows students to take control of their education. In recent years, there has been a surge of interest in learning methodologies aimed at increasing students' vocabulary acquisition and development (Van de Wege, Citation2018).

II.   Methodology

The chapter outlines the methodologies employed in a study, encompassing research design, population, locale, data collection instruments, procedures, and statistical treatment. The research design primarily utilized a descriptive method, employing open-ended questionnaires, pre-tests, and post-tests to explore participants' perspectives and understand quantitative results deeply. Qualitative research methods were also incorporated to evaluate non-numerical data, aiming to comprehend ideas, views, and experiences related to reading comprehension using polymedia.

The study focused on Grade 1 pupils from Casabula Elementary School, with a diverse sample of 26 participants (14 males, 12 females). Data gathering tools included an assessment guide administered to Grade 1 learners and Multi-Factored Assessment Tool (MFAT) results. Permission for data collection was obtained through signed letters from the school head, adhering to health and safety protocols.

The data gathering procedure involved several steps, starting with obtaining research approval from the school head. Assessments were conducted on the selected participants in a distraction-free and safe environment. The researcher expressed gratitude, explained the unstructured nature of the assessment, and obtained consent for recording. Results were

meticulously recorded and documented. Subsequently, the collected data underwent analysis and interpretation, utilizing qualitative methods.

In treating the data, the research instrument focused on gathering respondents' profiles and assessing the utilization of educators' teaching tools. The study aimed to address specific research questions through a thorough examination of the gathered information.

III.   Results and Discussion

In order to determine the effectiveness of contextualized learning activity sheets for Grade 1 students, the results, analysis, and interpretation of data related to the questions posed are presented in this chapter.

Table 1

Level of Reading Comprehension of Grade 1earners in the Pre- test and Post – Test along; sequencing of events, vocabulary, and drawing conclusions.

Descriptive Equivalent	Score Range	Pre – Test		Post – Test	
		Frequency	Percentage	Frequency	Percentage
Low	0-4	13	50%	0	0%
Average	5-7	10	38%	8	31%
High	8-10	3	12%	18	69%
Total		26	100%	26	100%

The data presented in the table highlights the performance of Grade 1 learners in a reading comprehension assessment, both before and after the implementation of an alternative medium of instruction using multimedia, specifically Polymedia. In the pre-test, it is evident that a significant portion of the Grade 1 learners scored in the "low" category, indicating challenges in comprehension. Conversely, the post-test results showcase a notable improvement, with a higher number of learners achieving scores in the "average" and "high" categories.

The change in performance indicates that the use of Polymedia as an alternate teaching medium has improved Grade 1 students' reading comprehension abilities. The post-test results show the potential efficacy of an interactive teaching strategy utilizing multimedia, especially the decrease in learners in the "low" group and the rise in learners in the "high" category.

The suggestion to use Polymedia is consistent with previous studies. Multimedia, especially when it incorporates images with text, improves reading comprehension, according to Guo et al. (2020). Furthermore, the Kosayashi (2022) reference emphasizes how learner

performance is impacted by the kind and structure of reading comprehension assessment exams. As demonstrated, learners with different levels of comprehension skills can be more effectively differentiated using structured examinations.

The definition of the Treasure Box domain, which includes event sequencing, language, and conclusion drawing, clarifies the study's larger context. An in-depth look at the areas of reading comprehension under consideration is offered by this domain-specific study. An in-depth knowledge of the effects of Polymedia on the reading comprehension tasks of first-graders at Casabula Elementary School is provided by the inclusion of both teacher feedback and learner assessments in the research.

Overall, the study's findings point to a link between better reading comprehension abilities among first-graders and the use of polymedia. The documented improvements in performance following the introduction of multimedia instruction highlight the potential effectiveness of this different method to teaching.

Through demonstrating the beneficial effects on reading comprehension, this study makes a substantial contribution to the continuous development of teaching approaches. With the emergence of digital technologies and multimedia resources, the quickly evolving educational landscape is forcing a reevaluation of traditional teaching techniques. The results of this study, with a focus on Polymedia in particular, provide insightful information about how this kind of technology integration might help students develop critical skills, especially in the early phases of their education.

Furthermore, the study's applicability is strengthened by its conformity to the larger conversation on the advantages of multimedia integration in the classroom. The findings indicate that there is a favorable association between reading comprehension skills and multimedia, namely Polymedia, which can be an effective tool for educators working to improve reading comprehension in first grade students. The idea that adopting multimedia tools is more than just a fad but rather a calculated reaction to the evolving demands of students in the digital age is supported by this alignment with more general educational conversations.

The favorable findings of this study support the deliberate use of multimedia technologies as educational approaches continue to adjust to the needs of the modern learning environment. The aforementioned conclusion urges educators, curriculum designers, and policymakers to contemplate the possible advantages of integrating Polymedia and analogous multimedia techniques into teaching methodologies. By doing this, it supports a more dynamic and interesting learning environment that accommodates kids' varied learning preferences and eventually advances the more general objectives of enhancing early literacy and comprehension abilities.

IV. Conclusion

The study underscores the profound impact of integrating polymedia and images on enhancing readers' comprehension skills, offering valuable insights for the education sector. The positive outcomes observed in multisensory reading, facilitated by diverse media and visual content, have stimulated higher levels of critical thinking and a more profound understanding of presented information among learners. Notably, the research demonstrates that polymedia and pictures cater to various learning styles, incorporating auditory, visual, and kinesthetic elements to establish a multisensory learning environment adaptable to diverse student abilities. Qualitative evidence supports the notion that combining visuals and polymedia makes reading engaging and pleasurable for learners, significantly improving their comprehension of visual context throughout reading sessions. The study suggests a plausible connection between learners' reading comprehension growth and the incorporation of polymedia and visuals, advocating for a fresh and innovative educational approach to stimulate further exploration in multimedia education. Teachers and curriculum developers are encouraged to explore the use of visuals and polymedia as effective tools for enhancing reading comprehension, with the anticipation that this research will inspire additional studies and innovative teaching strategies.

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