Interactive and Conventional Teaching Approaches to Optimizing Reading Comprehension Performance

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Abstract

Literacy is essential, and it must be encouraged. Reading comprehension is the foundation of all aspects of education, so pupils must improve their reading comprehension skills. The study focused on fourth graders' reading comprehension skills performance through interactive and conventional teaching approaches using the quasi-experimental method with 30 pupils for control and 30 pupils for the experimental group. Results have disclosed a significant improvement in the pupils' performance from the control (t=15.63) and experimental groups (t=46.24). However, the post-test performance of the control group was below average while an above-average performance for the experimental group. Hence, there was a significant mean gain difference in the performance (t=12.16) between the two groups. Pre-post evaluation results showed that using an immersive approach to understanding English reading improved learning, deepening cognitive processes, and maximized information gains among pupils. Compared to the conventional method, the interactive teaching approach is instrumental in refining pupils' reading and comprehension performance. It demonstrates that digital school learners learn better today when exposed to meaningful and relevant school work and engaged in intellectual stimulation using the technology available. When multimedia instructional materials are accessible in schools, learning can be stimulating. Teachers may select and implement creative innovations to enable pupils' interest and switch from conventional teaching to technological-based techniques. While in the educational landscape, the effectiveness of an interactive approach is typical and ideal. Thus, further research may validate study results using the same experimental design and teaching approaches to a different group.

Key-words: Reading Comprehension, Literacy, Conventional Approach.

1. Introduction

Reading, according to Amin (2019), is an essential part of the curriculum. As children learn sound words and understand sight words, reading skills would improve, as Westerveld et al. (2020)

agree that early learning is paramount. As reading skills improve, learners gain advanced comprehension skills such as inferring, judging, and retelling. Insufficient reading comprehension affects pupils' academic pursuits. Reading is one of the methods for gathering knowledge (Shastina et al. 2019).

The success or failure of pupils in early reading resonates throughout the years, emphasized Winch et al.(2011) and how essential good reading contributes to the development of emotional intelligence and compassion, according to Cook (2019). As the pupil proceeds to the educational ladder, more reading is usually needed as subjects become more dense and challenging. Reading problems, as pointed out, were the main reason for some pupils' poor performance in the National Achievement Test (NAT). Empirical research reveals that most reading classes have insufficient reading skills and techniques (Miller & Perkins 1989). According to Darim et al. (2019), Illiteracy has a vast and complex impact on children and families and impacts community attitudes. It has to be emphasized by the education sector. Whereas in the Philippines, government organizations or even private individuals advocate and consider literacy a top priority. Comprehension needs a keen eye for detail, sound logic, and a positive attitude towards the different materials presented. These truths make reading comprehension essential for literacy to help learners understand English concepts in the classroom. It is necessary to balance the two most critical things, know the learner's type, and choose the appropriate strategy. If students understand what they are reading, they can explore and appreciate various learning materials to their gain (Gingerich & Adler 2020).

According to Muhammedova (2019), immersive training modes seek to coordinate pupils' practices in a knowledge search. Interactive teaching is about guiding learners to take part in the learning process (TărîΔă 2020). Interactive learning can be a technological feature of separate teaching, occupation, and extra-curricular activities; Zoirovna & Ziyodillaevna (2020) explained that reading is essential to education. Therefore, the pupils learning enrichment through reading and acquisition of knowledge must be maintained (Ding & Zhu 2019). Comprehension involves reading with critical thinking and reasoning, as this consists of seeking and questioning the meaning behind the text, the keys to better understanding(Harvey &Gouvis 2007). Asking as a reading strategy fosters understanding and links textual information with the learner's background knowledge (Duke & Pearson 2002). The pupils' understanding of the text improves when they learn to generate their questions. Thus, children's exposure to reading activities at home or in school is among the foundations of learning.

Theoretical Background

The study is anchored in Bartlett Schema Theory (Bartlett & Bartlett 1995), which notes that people have unconscious mental structures, representing generic knowledge in which old knowledge influences new pieces of information. Schema Theory describes how readers use prior experience to learn and understand the text. Later, (Rumelhalt& Carrell 1981) presented Bartlett Schema Theory when exploring context information's critical role in reading comprehension (An 2013). The fundamental principle of schema theory suggests that written text is meaningless unless it provides the reader instructions on reclaiming or creating sense from previously assimilated experience. Schema Theory, according to (Rasakumaran & Patrick's 2019), text understanding is a collaborative process between reader context and text.

Anderson et al. (1978) pointed out that any act of cognition often requires world knowledge. Reading comprehension is enabled in two ways, from top to bottom. Bottom-up processing is allowed with accurate text-based data, while top-down processing begins with a wide range to validate these predictions. These two processing forms are conducted in a state-of-the-art and collaborative way, improving the idea of interaction or comprehension between bottom-up and top-down processes (Carrell & Eisterhold 1983; Carrell & Konneker 1981). Adequate reading comprehension is the ultimate understanding of vocabulary, phonics, and articulation. However, pupils with strong reading comprehension skills are active readers who can communicate and grasp the learning materials' broad context and concept.

Figure 1 - Theoretical Framework of the Study
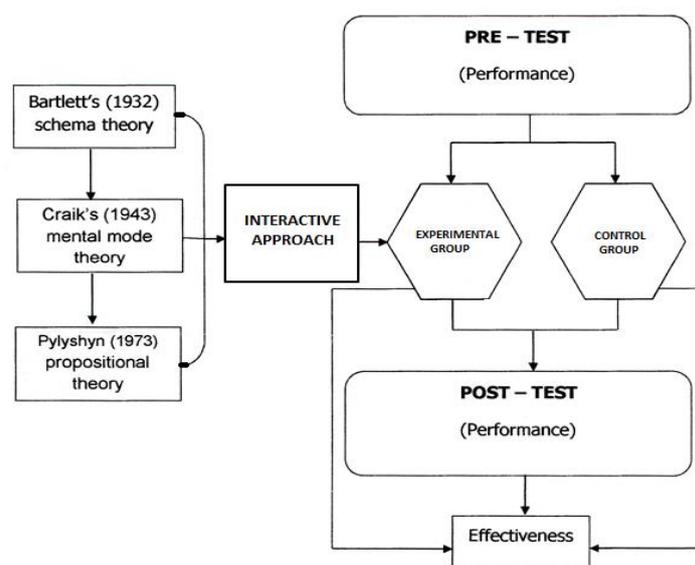
The study also referred to Craik's Mental Mode Theory as quoted by Wilson & Rutherford (1989), which can be considered a mind film created in one's head through reading sense. According to Gunning (1996), when pupils read fiction, the model is most often made. The reader accepts the main character, establishing a conceptual model of circumstances. The Mental Model is changed to fit the changing circumstances, but the character-important elements are kept in the foreground. When a person remembers a detail, his visualization creates a mental model of what things are before them in passing.

Furthermore, Pylyshyn's (2019) Propositional Theory involves the reader constructing the main concept when reading the text. The key concepts are hierarchically ordered, with the essential items to memorize has been given top priority. The proposed representation involves necessary knowledge underlying word recognition. To prefer such over indistinguishable associative, rational opinions are provided. The proposed representation is used to explain the memory recall effects of verbal meaning. These backgrounds that affect insinuations are considered for two-process, recall and recognition models.

Research Problem

The study determines the effectiveness of interactive and conventional teaching approaches in English reading comprehension among Grade IV pupils. The study responds to the following specific questions:

1. What are the pre-test and post-test performance assessments of pupils of the control and experimental groups?
2. Is there a significant improvement in the performance of both groups?
3. Is there a significant mean gain difference in the performance of both groups?
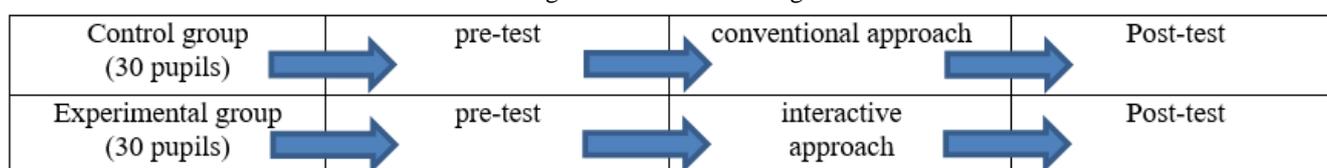
Hypotheses

1. There is no significant improvement in the performance of the two groups.
2. There is no significant mean gain difference in the performance between the two groups.

3. Method

This study used the quasi-experimental research technique to determine the immersive approach's efficiency of the reading comprehension skills of sixty (60) Grade 4 pupils who served as respondents, which were distributed as 30 pupils for the control group who were exposed to conventional teaching and 30 pupils for experimental group who were exposed to interactive teaching. The respondents were selected through random sampling. The researchers prepared the pre-test and post-test materials, which were pilot-tested and verified by an English language expert. Each test item is equivalent to 1-point. The pre-test was then administered to the pupils in both groups before the teaching intervention using interactive and conventional approaches. Visual charts were used in the control group, while PowerPoint and video clip presentations were employed in the experimental group. After the pupils have been exposed to interactive and conventional teaching methods, the post-test in English reading comprehension was performed. The researchers used the *z*-test to evaluate pupils' performance between the pre-test and post-test after being exposed to conventional and interactive teaching methods in English reading comprehension skills and determining if sixty (60) percent of the evaluation is achieved. Simultaneously, the *t*-test was also utilized to assess the control and experimental groups' performance improvement and determine a significant mean difference in both groups' performance.

Figure 2 - Research Design

Control group (30 pupils)	pre-test	conventional approach	Post-test
Experimental group (30 pupils)	pre-test	interactive approach	Post-test

4. Result and Discussion

Presentation, analysis, and interpretation of the data follow this sequence.

a. Pre-test and post-test performance assessment of pupils the control and experimental groups in English reading comprehension.

b. Significant improvement in the performance of both groups.

c. Significant mean gain difference in the performance of both groups.

Table 1 - The Pre-post Performance Assessment of the Control Group in English Reading Comprehension

Content Area	Pre-test Performance (n=30)					Post-test Performance (n=30)				
	AM	HM	SD	Z	Description	AM	HM	SD	Z	Description
Reading comprehension	1.00	6.00	0.74	37.01	below average	5.1	6.00	1.06	4.65	below average

Critical Z-value (±1.96) at 0.05 level

Table 1 presents the results for the pre-post of the control group in English reading comprehension. The reading comprehension of the pupils was assessed using the 10-point testing competence. The group's pre-test performance had an actual mean of 1.00 point below the hypothesized mean of 6.00 with a z-value of 37.01. On the other hand, the group's post-test performance had an actual mean of 5.1, which is also below the hypothesized mean of 6.00 had a z-value of 4.65. This suggests that the pupils did not meet the school's 60 percent passing mark.

Retention of reading awareness quality of pupils has a significant effect on their success during pre-test reading understanding. Therefore, pupils' pre-test evaluation before exposure to conventional teaching methods in English reading comprehension was described as below average. The result indicates that pupils in the control group lack previous awareness and strategies to develop their reading comprehension skills during the pre-test. Prior knowledge is a primitive learning base. Early learners should be introduced to possible learning facets to training them for the future. This uncompromising approach would be more straightforward for students to understand and connect advanced learning to understanding English reading. Lack of facts triggered pupils' below-average performance during the pre-test. The control group's measured z-test value was higher than the pre-test result during the post-test, but it was still below the school's standard. That means their performance remains below average. Pupils have not yet mastered reading comprehension skills and techniques; thus, they have not grasped the skills and techniques required to improve reading comprehension. These assertions exemplified the average intervention effect. The interest of learners was inspired by conventional teaching methods using traditional visual aids and techniques, enabling them to listen and do their best during the post-test.

Table 2 - The Pre-post Performance Assessment of the Experimental Group in English Reading comprehension

Content Area	Pre-test Performance (n=30)					Post-test Performance (n=30)				
	AM	HM	SD	Z	Description	AM	HM	SD	Z	Description
Reading comprehension	0.73	6.00	0.64	45.10	below average	8.83	6.00	0.70	22.14	above average

Critical Z-value (±1.96) at 0.05 level

Table 2 shows that the results for the pre-post of the experimental group in English reading comprehension. The group's pre-test performance had an actual mean of 0.73, which is below the hypothesized mean of 6.00 had a z-value of 45.10. However, the group's post-test performance had an actual mean of 8.83, which is above the hypothesized mean of 6.00 had a z-value of 22.14. This suggests that the pupils did not meet the school's 60 percent passing mark during the pre-test but had met the passing mark during the post-test.

Pupils have not yet acquired the requisite reading skills and techniques during the pre-test, so the outcome has been graded below average. Any strategy could be realistic if the pupils were enriched with the ability to perform higher skills. The experimental group pupils obtained an above-average performance during the post-test, as reflected in the z-value. This assessment suggests that the experimental group has achieved success above the school's general target, as it indicates that Grade IV pupils have already grasped the skills required to develop their reading understanding. Therefore, post-test evaluation of pupils following exposure to interactive methods in teaching comprehension is above average. Research shows that digital pupils today learn more when engaged in meaningful, relevant, and intellectually stimulating school work and that using technology would increase the pace of such learning. Learning could also be upgraded if computers and other multimedia instructional materials were used everywhere.

Table 3 - Improvement of Performance Levels in Two Groups

Content Area	TESTS	Control Group (n=30)				Experimental Group (n=30)			
		Mean	Mean Gain	Critical t-value	Computed t-value	Mean	Mean Gain	Critical t-value	Computed t-value
Reading comprehension	Pre-test	1.00				0.73			
	Post-test	5.1	6.00	1.699	15.63*	8.83	8.1	1.699	46.24*

significant at 0.05 level (one-tailed)

It was hypothesized that the two groups performed without change. The aim was to enhance English reading understanding output after exposure to interactive and conventional teaching approaches. Pre-test and post-test control and experimental group mean scores are shown. Furthermore, the computed *t*-values obtained by both groups in the field of competence are the basis for assessing whether or not pupils' performance-related progress after exposure to interactive and conventional teaching approaches is essential. Results revealed in Table 3 that the computed t-value of 15.63 for the control group is greater than the critical t-value of 1.699. Results imply that the control group's read-understanding scores have substantially increased. Post-test scores surpass pre-

test scores. The reading performance of the control group increased after intervention and exposure to conventional teaching methods. This rejects the null hypothesis of no substantial change in test groups reading performance after exposure to conventional approaches. Therefore, a significant improvement in pupils' reading skills is apparent. Results suggested that students assimilated reading comprehension skills after exposure to conventional teaching methods to a lecture-discussion process. The method dramatically improved pupils' reading comprehension efficiency.

On the other hand, the post-test performance of the experimental group is higher than the pre-test. Overall, pupils' average performance provided substantial improvements. The computed t-value of 46.24 is greater than the critical t-value of 1.699.This resulted in rejecting the null hypothesis that there was no change in the experimental group's English reading comprehension performance after exposure to interactive teaching methods. Thus, pupils achieved much more in the post-test than in the pre-test.

As a consequence, interactive teaching methods reinforced pupil performance in the experimental group. Computer-assisted education enhances learning (Ragasa 2008). Multimedia usage can involve more learners in learning (Aravind & Vinod 2019). Interactive instructor presentations inspire them not to skip reading comprehension sessions. Teaching styles attract students and play a constructive role in motivating students and enhancing academic performance (Anwer 2019). And they have been stimulated by the teacher's efforts to prepare for the lessons.

The findings show that conventional and interactive teaching methods are successful in understanding English reading. Table 3 shows that the above teaching methods have improved the control and experimental group's English reading comprehension efficiency. Any conventional or creative teaching methodology is expected to affect pupils' learning, but these methodologies differ in their performance quality. Results in (Fani et al.,2020) study show that the multimedia teaching community's level of expertise was substantial compared to the other group under the traditional system.

Table 4 - The Mean Gain difference in the Performance of Pupils in the Control and Experimental Group

Content Area	TESTS	Control Group (n=30)			Experimental Group (n=30)			Critical t-value	Computed t-value
		Mean	Mean Gain	SD	Mean	Mean Gain	SD		
Reading comprehension	Pre-test	1.00	4.1	1.47	0.73	8.1	0.96	1.672	12.16*
	Post-test	5.1			8.83				

significant at 0.05 level(one-tailed)

It can be gleaned in Table 4 the test on the main gain difference in the performance of the pupils in the control and experimental group. The control group had a mean gain of 4.1 while the experimental group had a mean gain of 8.1 with the computed t-value of 12.16, which is greater than the critical t-value of 1.672, resulting in rejecting the null hypothesis. This implies that the pupils' mean performance gains in both groups were substantially different.

In summary, the pre-test assessment of Grade 4 pupils exposed to conventional and interactive teaching reading comprehension approaches in terms of performance levels is below average. During the post-test, the conventional classroom had a below-average performance, while the interactive classroom had an above-average performance. There is a significant improvement in the level of performance of the control and experimental group of pupils. The mean gain difference in performance between the control and the experimental groups is significant. Interactive teaching approaches in English reading comprehension have stimulated better learning. Cognitive processes have been deepened, and knowledge gains have been enhanced, psychomotor skills have been activated and enhanced through simulations and video clips, and pupils' interest and learning modes have been maximized. Today, multimedia teaching resources are becoming more rapid, enabling educators to combine multimedia teaching resources to teaching, conducive to activating the classroom's dull atmosphere. For instance, playing a video for children enliven the classroom atmosphere, stimulating their interest and enthusiasm for learning, as Ruixue (2019) emphasized.

According to Kumpan & Kharlamova (2019), interactive approaches significantly increase enthusiasm and ability to learn, develop, and accelerate language skills and promote their practical application in real-life situations. The interactive teaching approach is instrumental in refining pupils reading English output compared to the conventional approach. Investing in new ways to inspire students is essential (Portela 2020). The present investigation supports the assertion that using, including, or integrating interactive media into learning improves pupils' output, particularly those disconnected in the classroom discussion.

5. Conclusion

To fulfill the pupils' learning needs, teachers can keep up with several learning styles, instructional methods, and digital techniques. When exposed to meaningful and relevant school work in today's trend and when engaged in intellectual stimulation using the technology available, digital school students learn better. Learning can also be stimulating if multimedia instructional materials are accessible in schools. Teachers could choose and implement creative innovations; they should switch

to a technology-based teaching approach rather than the conventional teaching method to enhance pupils' learning. Learners would acquire and analyze their facts as teachers would guide them to discover their skills. The study showed that in understanding English reading, conventional and interactive teaching methods are successful. Therefore, to validate research results, more studies should be performed using the same experimental design and teaching approaches applied to another group.

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