

Multimedia English Teaching Approach Based on Constructivist Learning Theory

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Abstract

In the context of English study, multimedia has provided learners with unique features and benefits. Constructivist learning theory, on the other hand, has had a considerable impact on students' learning processes and progress as one of the most fundamental teaching theories in the field of education. This study looks at a wide range of sources to support the claim that integrating multimedia and constructivism theory improved students' overall English learning experience. While the authors of this study thought it would help students improve their English learning, they also wanted to give teachers a better method to help them reduce stress in the classroom while still providing an effective teaching-learning process. The integration of multimedia and constructivist learning theory has shown to be one of the most practical and effective approaches for acquiring the necessary skills and knowledge. The usage of multimedia and constructivism highlights the need of putting the student first. The application of theory to the tool has transformed teaching into learning and vice versa. The authors believe that English teaching should be in line with multimedia and constructivism, in which students are free to construct meaning from content and interact, with teachers serving as facilitators of learning, assisting students in scaffolding their potential and internalizing learning through application and experience.

Keywords: Constructivism, English Teaching, Learning Theory, Multimedia

Introduction

Filipinos' English proficiency is very renowned throughout the world, in fact, in 2012 and 2013 the Philippines was named the world's best country in business English proficiency according to the results of its annual Business English Index (BEI) even beating the United States (Mendoza 2012). However, for the past years, the country has been declining in the English Proficiency Index. It was placed in the 13th spot in 2016, the 15th spot in 2017, the 14th spot in 2018, and the 20th spot in 2019 (CNN Philippines Staff, 2020). In 2020, the Philippines dropped from the 20th to 27th spot on the English Proficiency Index (EPI) (Baclig, 2020). The consistent drop in the country since 2016 has become the Philippines' one major concern. Furthermore, in 2021, WHO reported that 80 percent of Filipino children "don't know what they should know" in response, the Philippines Department of Education (DepEd) said that this will be taken as a challenge to improve the Philippines' quality of education (Aguilar, 2021).

The Senate has submitted a senate resolution No. 622 directing the declining English proficiency of Filipino Students. According to Pangket (2019), the factors that affect the decline of the English proficiency of the students are still unclear. However according to Mangada, 2017 motivation play a significant role in attaining English language proficiency, thus, demotivating factors impede learners' learning motivation and this led to the unsuccessful mastery of English language proficiency. This remark was supported by Pangket, 2019 stating that motivation influences learners' proficiency. But he further added that cognitive and linguistic factors, teaching strategies, curriculum, and other requirements impede the mastery of proficiency of learners (Pangket, 2019). As a matter of fact, the Philippines in its language proficiency has aided the economy and helped the country surpass India as the world's top voice outsourcing destination in 2012 (Cabigon, 2015). According to the World Economic Forum Annual Meeting 2017, high English proficiency is associated with greater GDP per capita, and job seekers with strong English language skills earn 30-50% of the country's revenue (World Economic Forum, 2018).

English as a second language is now more important than ever in the Philippines, as seen by its standing as a core subject of education and curriculum (Crookes, 2018). As the number of English language learners grows the efficacy of the English language the teachers should grow and enhance. In terms of good advances, technology offers a variety of ways to make education more engaging and productive. Technology is one of the most powerful elements influencing social and linguistic change. It's been proven that mixing words and graphics improve people's ability to assimilate vast amounts of information. Utilizing multimedia increases people's capacity to absorb large volumes of data it provides a complex multi-sensory experience in exploring the world (Mayer, 2001). It is critical to employ a variety of teaching approaches

and to make the classroom atmosphere as interesting and dynamic as possible in order to attain the ultimate aim of student learning (Nagler, 2016).

There are numerous learning styles, teachers must incorporate activities that appeal to each one in their curriculum to ensure that all students succeed in their classes (Gilakjani, 2012). Multimedia technology and its application to teaching, which includes audio, visual, and animation effects, has come into full play in English class teaching, providing a favorable platform for reform and exploration of the English teaching model in the new era (Shabiralyani, 2015). With the advancements in ICT multimedia learning and teaching approach can be easily integrated (Mayer & Moreno, 2002). Almara'beh (2015) supported the idea by saying that it aids in the enhancement of the learning process and improves information retention.

However, Rapanta, et al., (2020) highlighted that without an interactive environment and strong teacher-student interaction, multimedia alone would not suffice.

Constructivism is a teaching and learning philosophy based on the premise that cognition (learning) is the result of students' blending new information with what they already know (Bada, 2015). Constructivism is concerned with the scenarios and that are necessary for multimedia learning, such as research and decision-making applications, as well as cooperation and active involvement among learners (Gilakjani, 2013). Constructivists believe that the setting in which a topic is taught, as well as the beliefs and attitudes of students, have an impact on learning (Gray, 2019). Jaleel & Verghis (2015) on one hand, said that by integrating the multimedia approach with constructivism theory, a dynamic knowledge production system may be created. Thus, the goal of this study was to compile various literature that may support the assertion that the integration of multimedia and constructivist learning theory is essential for students' learning mastery.

Methodology

During the review process, the retrieval, selection, and analysis of the literature were all rigorously followed. To find the sources, search terms and phrases such as multimedia, constructivism, learning theory, motivation, and a combination of constructivist multimedia were utilized. The paper focused on secondary sources that could provide strong grounds for the importance and influence of integrating multimedia and constructivist learning theory on students' English learning progress. This review was based on journal articles, a report, and a published journal in a local, national, and international publication that was cited by numerous significant authors.

Theoretical Framework

The rapid development of information and communication technology in the 21st century promotes a significant impact on the teaching and learning process. Incorporating the media (symbols, images, pictures, audio, video, animations, or a combination of all) into teaching enhances learners' interest, understanding, and interaction (Abdulrahaman, et al., 2020).

In the field of education, teaching and learning theories are essential to ensure the quality and relevance of education. Integrating constructivism learning theory and the media technology approach into the paradigm of teaching can expand classroom boundaries and improve the learners' practical experiences. Constructivism theory stresses the individual construction of knowledge by connecting their preexisting conceptions to their experiences (Mathews, 1998; Olusegun, 2015). According to Cobern (1993), "Learning by construction thus implies a change in prior knowledge, where change can mean replacement, addition, or modification of extant knowledge" (p.1). Effectively utilizing the media and understanding the principles of constructivism can efficiently enable the teacher's role as a "facilitator of learning" –supporting the learners to progressively move toward mastery of tasks and create a unique learning environment necessary for achieving the desired learning outcomes.

The Decline of Filipino's English Proficiency

In the conducted online Standard English Test (SET), administered by English Proficiency Education First, a Swiss-based global company focusing on language, academic, cultural exchange, and educational travel programs. The Philippines' fall from 14th place in 2018 to 20th in the 2019 English Proficiency Index (EPI) is a cause for worry that the country's education sector should immediately address. According to the result, the Philippines' drop from 14th to 20th on the 2019 English Proficiency Index (EPI) is concerning, and the school system should address the problem as quickly as feasible (Valderama, 2019).

In one of the studies, college graduates in the Philippines received an average score of 631.4 in English proficiency, which was lower than the 650-goal established for taxi drivers in Dubai, United Arab Emirates. This was revealed in the early findings of two-year research-based on TOEIC measurements, which indicated that Filipino graduates' English abilities were below compared of the taxi drivers in Dubai (Morallo, 2018).

As seen by its standing as a core subject of education and development, English as a second language is now more important than ever in the Philippines, as seen by its standing as a core subject of education and curriculum. Many teaching approaches have been developed to improve the efficacy of the English language teaching process as the number of English language learners grows.

In this era, contemporary English teachers' challenges and obligations have risen. The direction of English language training has fundamentally changed as a result of the spectacular arrival of new technologies. In terms of good advances, technology offers a variety of ways to make education more engaging and productive. Technology is one of the most powerful elements influencing social and linguistic change.

The Application of Multimedia in the Teaching of English

It's been proven that mixing words and graphics improve people's ability to assimilate vast amounts of information. Utilizing multimedia increases people's capacity to absorb large volumes of data it provides a complex multi-sensory experience in exploring the world through the presentation of information through text, graphics, images, audio, and video, and there is evidence to suggest that combining words and pictures increases the likelihood of people being able to integrate a large amount of information (Mayer, 2001).

Students learn best when they can perceive the value and significance of the knowledge offered in class. Students will not learn if they are not interested in the subject offered. It is critical to employ a variety of teaching approaches and to make the classroom atmosphere as interesting and dynamic as possible in order to attain the ultimate aim of student learning. Students learn in a variety of methods. Some like to learn visually, while others prefer to learn through aural or kinaesthetic means. Charts, graphs, and drawings are used to teach visual learners. Listening to lectures and reading is how auditory learners learn. Learners who are kinaesthetic learn by doing. One, two, or three learning styles are available to students.

There are numerous learning styles, teachers must incorporate activities that appeal to each one in their curriculum to ensure that all students succeed in their classes. We all appear to have distinct learning processes, despite the fact that we use all of our senses to gain information. To help all students learn, we need to teach as many of these preferences as possible (Gilakjani, 2012).

Multimedia technology and its application to teaching, which includes audio, visual, and animation effects, has come into full play in English class teaching, providing a favorable platform for reform and exploration of the English teaching model in the new era, thanks to the rapid advancement of science and technology. Multimedia technology has been proved to play an important role in enhancing student activities and initiatives, as well as efficient classroom instruction.

Larsen-Freeman & Freeman (2008) stressed that with the advancements in ICT which multimedia learning and teaching approaches can be easily integrated, it

is now feasible to create linguistically rich learning environments by gathering recorded data and providing immersive inputs in lieu of the instructor.

In the sphere of educational technology, the multimedia approach is undeniably one of the most important advances. It aids in the enhancement of the learning process and improves information retention. However, without an interactive environment and strong teacher-student interaction, multimedia alone would not suffice. Again, although multimedia can objectively provide high-quality learning outcomes, failure to communicate and collaborate will nonetheless result in poor performance.

English Teaching Based on Constructivist Learning Theory

In the field of education, learning theories are extremely valuable and important since they aid in the development of a high-quality learning process. According to the definition, learning theories are conceptual frameworks in which knowledge is gained, processed, and retained during learning. Understanding is gained or lost, and knowledge and abilities are retained, all of which are impacted by cognitive, emotional, and environmental variables, as well as previous experience.

Jean Piaget is widely regarded as the founder of constructivism theory. Constructivism is a learning theory that proposes that individuals learn by experiencing things and then "constructing" their own understanding of those things using the information they already have (Cherry, 2020).

Jean Piaget was a Swiss philosopher who was born on the 9th of August, 1896. He was also a natural scientist who was well-known for his research on cognitive development and learning theories, which he referred to as "genetic epistemology." He started his scientific career at the age of eleven, while he was a student at Switzerland Latin High School when one of his short writings was published (Ibid).

Davis, et al. (1990) enumerate some points of Jean Piaget's contribution to constructivism theory, the following are as follows:

1. We do not acquire knowledge passively, either via the senses or through speech;
2. The subject who is cognizant is actively accumulating knowledge.
3. Cognition has an adaptive function in the biological sense, in that it seeks fitness or viability;
4. Cognition, not the discovery of an objective ontological reality, serves the subject's construction of the experiencing world.

Constructivism is a teaching and learning philosophy based on the idea that cognition (learning) is the outcome of "mental construction," or pupils learning by combining new knowledge with what they already know. Constructivists think that the environment in which a concept is taught, as well as students' ideas and attitudes, influence learning (Olusegun, 2015). As a result, it may be utilized in the classroom immediately away. Humans develop knowledge and significance through their experiences, according to this view. In and of itself, constructivism is not a specific pedagogy. Many educational ideas and instructional practices have been affected by Piaget's constructivist learning theory, and it is a prominent theme in many reform movements. Constructivist education techniques have elicited a mixed response from the scientific community, with some research confirming their conclusions and others opposing them.

According to Driscoll (2000), constructivist philosophy holds that knowledge may exist entirely in the human mind and does not have to be related to any real-world reality. Learners will be attempting to construct their own mental model of the real world based on their observations all the time. Learners will update their mental models to integrate new information as they observe each new event, resulting in their own interpretation of reality. Jonassen (1991) stipulates in his article entitled, *Objectivism versus Constructivism: Do We Need a New Philosophical Paradigm?* cited by almost one thousand times that thinking is based on the observation of physical and social occurrences that only the intellect can comprehend. The mind creates mental models to explain what has been witnessed to the knower. Mental models, according to Kant, are a priori rather than affected by extrinsic structures. Furthermore, he argues that "... learning occurs most effectively in context, and that context becomes an important part of the knowledge base associated with that learning. So, rather than decontextualizing learning in isolated school environments, we should create real-world environments that employ the context in which the learning is relevant. A related approach is to require learners to serve a cognitive apprenticeship" (Ibid., p. 11).

Davis, et al. (1990) said that in constructivism, learners are said to acquire their knowledge both collaboratively and autonomously. Each person has their own set of abilities and concepts that they utilize to learn new things, and the community helps them by offering context and asking questions.

Jenkins (2000), believes that constructivist learning theories entail progressive teaching, or that 'active learning requires students to participate in practical activities. It suggests that constructivist theories are appealing to learners in particular. Jenkins sees the need for the implementation of constructivism in improving classroom procedures and activities.

The integration of multimedia to constructivist learning theory in English teaching

By integrating the multimedia approach with constructivism theory, a dynamic knowledge production system may be created. Constructivism is a teaching and learning philosophy based on the premise that cognition (learning) is the result of students blending new information with what they already know. Constructivists believe that the setting in which a topic is taught, as well as the beliefs and attitudes of students, have an impact on learning. Constructivism is a psychological learning theory that describes how humans learn and gain information (Olusegun, 2015).

Learning, rather than being a stimulus-response event, requires self-regulation and the construction of conceptual frameworks through reflection and abstraction, according to von Glasersfeld (1995). Constructivism is concerned with the scenario and content that are necessary for multimedia learning, such as research and decision-making applications, as well as cooperation and active involvement among learners.

Students' Learning Motivation Utilizing Multimedia and Constructivist Learning Theory

According to Kozma (1991) from the University of Michigan, Media may be described in terms of technology, symbol systems, and processing capability. The most visible feature of a medium is its technology, which comprises the mechanical and electrical components that determine how it works, as well as its shape and other physical qualities to some extent. These are the characteristics that determine whether a medium is classified as "television," "radio," and so on. If these characteristics have any effect on cognition, it is primarily indirect. Because of its size, form, and weight, a student is more likely to learn on the bus with a book than with a computer, but this is changing as computers get smaller, lighter, and less expensive. On the other hand, certain cognitive effects of technology are more obvious. Because of the size and resolution of many computer screens, reading text on a computer screen can be more difficult than reading text in a book.

Guan, et al. (2018) in their article entitled, *On the Advantages of Computer Multimedia-aided English Teaching*, published Elsevier Ltd. Defined multimedia as a phrase used to describe a collection of many sorts of data. Content kinds include text, music, static images, animation, video, and interactivity. It's usually recorded, exhibited, or accessed by information content processing devices like computers and electronics, but it can also be part of a live performance. Multimedia devices are electronic media devices that are used to store and enjoy multimedia content.

Alemdag and Cagiltay (2018) stated that the act of creating mental representations from words and visuals in many situations is referred to as multimedia tailored for learning. They are meant to aid learning by providing tools that may be utilized in presentations, classroom or laboratory learning, simulations, e-learning, computer games, and virtual reality, allowing learners to assimilate information both verbally and visually.

Multimedia learning involves a fundamental understanding of several topics. For example, the cognitive theory of multimedia learning presents three assumptions about how people learn from instructional resources (Ibid.).

Guan, et al., (2018) enumerate some advantages of Multimedia-aided English Teaching. The following are as follows.

1. Turning the Abstract into the Concrete - When teaching a class, teachers will face certain difficult challenges or abstract subjects that are difficult to describe. Multimedia may therefore be utilized to make abstract knowledge more real and immerse students in a visual environment. As a result, multimedia has a wide range of uses in English teaching, and it has the potential to assist students in learning English quickly. Students appreciate seeing fascinating films and graphics that engage their interest in English training, as we all know. Multimedia-assisted English training can pique their attention while also improving their vocabulary and phrase understanding. It assists students in retaining a high level of interest in their studies at all times.
2. Providing Information Within Limited Time - Because reading and writing are both vital and difficult to teach, most instructors put in a lot of effort; nonetheless, the outcomes aren't always as excellent as they had planned. We all know that reading is an important source of information and a must for improving communication skills. When it comes to reading lessons, students should be able to recollect a lot of information from a chapter; yet, class time is limited, and they will most likely not be able to finish reading in the time provided. Multimedia-assisted English education can help students comprehend and recall passages by delivering a lot of information in a short amount of time.
3. Stimulating Students' Interest in Learning - In school, the purpose of English education is to improve students' language learning abilities while simultaneously improving their excitement for studying. Many English teachers have tried almost every method to achieve this goal, but the results have been unsatisfactory. The most potent instrument for learning English is interesting, and increasing students' interest is

important in today's teaching process. Multimedia may pique students' interest, and they may acquire a great hunger for knowledge as a result. Multimedia can also attract students' attention and kindle their enthusiasm for studying English.

4. Highlighting the Main Position of Students - According to education reformers, students should change passive learning into active learning. Students' critical roles will be stressed through multimedia-assisted English teaching, and students will understand the need for self-study. It has the power to change the perspectives of both teachers and pupils. Finally, the students take over as the teacher and leader of the class.

Multimedia technology's integration, diversity, and engagement allow students and teachers to share information or ideas across digital and print resources. In this context, the phrases "digital" and "print" refer to multimedia-based apps or tools that communicate information to people in order for them to better understand concepts.

Al-Hariri and Al-Hattami (2016) stressed that the use of technology in clinical and basic science activities has been suggested to be encouraged and even incorporated as a routine part of students' daily activities. Internet learning, which has become one of the fastest-moving trends in education and offers a promising alternative to traditional learning, is the most important element that supports the use of technology in the educational system. People learn substantially better from a combination of words and visuals (which technology delivers) than from just words alone, according to a study. Technology may assist students in becoming self-sufficient, capable members of society, and researchers.

Technology has a significant impact on how we live, study, and work. As a result of these shifts, technology tools and innovative applications of technology have the potential to improve people's lives through enhancing the efficacy of education and learning, business and government productivity, and national well-being. It's also been argued that teachers that incorporate a lot of technology into their classes do a better job of encouraging students to study and develop critical thinking skills.

Milovanovic, et al. (2013), claim that it is impossible to overestimate the value of multimedia technologies and apps in education as a teaching and learning aid. Several research looking at the influence of multimedia technologies on the educational system has proven this. Multimedia technology aids in the simplification of abstract content allows for individual modifications and allows for the coordination of numerous representations from various points of view.

With the correct typefaces and design, using computer-based technology as an interface between students and what they're studying might be quite beneficial.

When multimedia-based education is employed primarily in specific contexts, the benefits are maximized. Using it in every situation would not provide the intended effects and would cost a lot of money in terms of infrastructure. We'll go through three scenarios in which multimedia training would be beneficial (Gilakjani, 2012). Furthermore, he provides the usefulness of multimedia in instruction. The summary is as follows:

1. When students' prior domain knowledge or spatial learning aptitude is low
2. When Students Aren't Interested
3. When Multimedia Content that is Effectively Designed is Available

It is thought that incorporating multimedia-based resources into the teaching and learning process has a substantial and favorable impact on the achievement of learning objectives. It boosts the motivation of students.

According to the interviews conducted by Dodd, et al. (2015), the primary motivation for the teachers to use the materials was to pique the kids' attention. The quantitative and qualitative results of our study are favorable in that they were able to explain the motivations of instructors to use additional resources in their classes, as well as the effects those items have on students, as Dodd, et al (2015) discovered in Teachers appeared to assume that students can only learn and comprehend when they are motivated. This underlines the importance of properly utilizing auxiliary resources in the classroom. According to the results of their survey, students are more motivated when the teacher uses flashcards, pictures, music, realia, and video. As a result, while deciding how to design classes and courses, instructors and education professionals should take these findings into account.

Teachers said that a good learning environment is necessary for students to properly learn and grasp the knowledge they are teaching and that a good learning environment can only be created after students are motivated. Similarly, they emphasized that in order to have motivated students, the correct use of extra materials must be used to keep their attention (Ibid.).

Teachers must be more knowledgeable as facilitators than as information providers. Instead of just one or two works, facilitators must be aware of a wide range of materials available to assist students to enhance their language abilities. The language textbook is no longer the exclusive source of information. Multimedia programs use sound and video to show how native speakers interact; electronic dictionaries and encyclopedias are available for quick reference; online newspapers provide current events in the target

language's countries; and (official) websites provide background information on policy, tourism, and political viewpoints. Teachers must be able to teach pupils how to use all of this effectively. Teachers must be adaptable as facilitators, responding to students' needs rather than what has been pre-planned based on a curriculum developer's expectations about who would be in the classroom.

Discussion and Conclusion

Based on the reviews, multimedia and constructivism theory have varying degrees of relevance and impact on learners' learning experiences. Consider how combining the two could benefit the students' English learning. True, this review highlights the value of multimedia applications in education and their integration with constructivist learning theory. Teachers should not, however, dismiss the value and significance of traditional teaching, as both have advantages and disadvantages, and both contribute to the enrichment of students' learning processes and experiences.

The teacher must understand that no matter how good or effective the tool is, it is useless if they do not know how to use it effectively or do not have the confidence to do so. This simply implies that the teacher needs to broaden their teaching perspectives and be responsive to changing conditions. Everyone must comprehend that learning is a never-ending process and that teaching requires the ability to relearn and unlearn.

Furthermore, in terms of theories, the teacher must recognize that while there is no one-size-fits-all teaching theory for students, it is still necessary to comprehend those notions in order to effectively stress and deliver lessons. As previously stated, no matter how amazing the tool or model is, if the instructor does not understand how to use it properly, both the teacher and the learners will suffer. More importantly, as can be seen, the constructivist approach to teaching has provided principles and guidance to improve students' learning and acquire the skills that are in need in today's society.

The integration of multimedia and constructivist learning theory has shown to be one of the most practical and effective approaches for acquiring the necessary skills and knowledge. The usage of multimedia and constructivism highlights the need of putting the student first. The application of theory to the tool has transformed teaching into learning and vice versa. The authors believe that English teaching should be in line with multimedia and constructivism, in which students are free to construct meaning from content and interact, with teachers serving as facilitators of learning, assisting students in scaffolding their potential and internalizing learning through application and experience.

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