



Using PowerPoint in Learning Prepositions: A case study at University of Basrah

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Abstract

This study aims to prove that the effect of PowerPoint in learning prepositions. Quantitative research was used. Data were collected during pre-test and post-test. In this study, the researcher has adapted three learning outcomes as Level-1 (to identify the suitable prepositions); Level-2 (to differentiate the prepositions), and Level-3 (to apply the suitable prepositions). The participants were the 32 male at the first year in the department of English, College of Art, at the University of Basrah the results also showed that using of PowerPoint was effective in learning prepositions compared to the conventional teaching method. The students' outcomes were improved after conducting this experience. The results of post-Test showed that all the null hypotheses were rejected in this study.

Keywords: PowerPoint, achievement, prepositions, Dual Coding Theory.

INTRODUCTION

English language has proven itself as the most prevalent language and an international language in this world (Crystal, 2003). Nevertheless, teaching and learning the target language (English) is a constant challenge for many students from various parts of the world, which include Iraq. The process of English learning is an intricate and difficult process and can be a discouraging task (Al Hosni, 2014). In Iraq, for example, the most pressing concern is how to improve Iraqi EFL learners' English language learning and their competency in the language.

Many students were still facing difficulties in English due to the lack interest and exposure to the language. Not only students' competency is poor but quite often they are not proficient to use the language. There could be many factors that attribute to such a predicament. Among others, not sufficient learning time in formal settings (class time); lack of resources; lack of opportunities to use the language; poor classroom environment; poor teaching and learning; etc. Much effort has been made by the Iraq Ministry of Education to help improve the situation, but change is slow and taking a toll on the overall improvements.

However, the invention and advancement of technological communication have a significant role in improving and facilitating the effectiveness of the process of language learning (Montazeri & Hamidi, 2013). PowerPoint presentation in English learning can be one of the methods to promote the students' English proficiency. Nowadays, multimedia has played a very important role in supporting the learning process.

Using PowerPoint became prevalent in the first of the twentieth century because students began spending their time with audiovisual aids more than using textbooks. In this regarding, the employment of PowerPoint's in the process of English learning has long been the concern of many studies (Balbay and Kilis, 2017).

The key element in the use of PowerPoint as a presentation tool and its potential to increase student interest and attention to the lecture when combined with active teaching method and student involvement. From the above explanation stated by previous researchers, the current study aims to show the effects of PowerPoint Presentation on students' achievements. This study also will further the previous studies about the use of technology in enhancing learning outcomes.

Problem Statement

The incorporation of technology has been widely studied by many researchers, and many have found that the presentation of technological tools can improve and offer valuable teaching plans and methods which assist both teachers and learners (Sola,2012). However, Iraqi EFL students are still manifesting a low achievement in English with very poor the competency and proficiency due to the curriculum and teaching methods which in today's measurement may not be sufficient to improve the English language for Iraqi EFL students (Al Khayyat,2016).

Nor Hashimah Jalaluddin et al. (2008) conducted their study on 315 students, found that the most obvious students' weaknesses were in grammar, principally in morphology and syntax. They added some of the grammatical categories were affixes, adverbs, adjectives, plural forms, copula, subject-verb agreement. However, Hazita Azman (2006) indicated that the weaknesses of students in English Language attributed to geographical location and ethnic. Khazriyati, Tan Kim Hua, and Marlyna (2006) observed the occurrence of mistakes in "subject-verb agreement".

The researcher looked this matter as one of the student's weaknesses and that must be solved. Therefore, the researcher wants to show the effects of PowerPoint presentation as an educational tool in achieving learners learning outcomes on learning grammar. In this study, the researcher focuses on the prepositions item only.

Hypotheses of The study

1. There are no effects when using PowerPoint presentation in the students "learning outcomes.
2. There are no learning outcomes derived from the PowerPoint presentation.
3. There is no significant difference by using PowerPoint presentation in learning prepositions.

Significance of the study

EFL students can gain a lot of benefits because PowerPoint will be exposed to them in the English language learning. That is, English teacher will use PowerPoint to search the relevant materials from the web sites. It gives the student flexibility in constructing their English language learning. It is also hoped that by integrating this kind of technology can enhance student's English proficiency. This is a possibility that the success of those few will be extended to other learning areas. Therefore, this will also help educational institutions to overcome the problems of low English proficiency, particularly in grammar, for students in academic stages.

PowerPoint in English Classroom

PowerPoint can help EFL learners by providing them with authenticity. As Ishihara and Chi (2004) indicated that the use of PowerPoint reflects the authentic use of the English language. According to these researchers, authentic resources can be spoken or written language that has been created in real communication, and not specially written for language teaching aims. There is a variety in authentic materials can be in forms of TV, feature films, song and the like. Because of the naturalness of authentic materials, they have the ability to connect learners in the real environment (Joy, 2011).

According to Perrin (2006), Bob Gaskins and Dennis Austin developed the other version of visual aids which is PowerPoint. In combining educational technology with educational approaches and regard variances in learning strategies, educational technology can improve on a strong tool offering the best education for all learning strategies. Peslak (2005) used PowerPoint in his study. According to him, this technology assists scholars in transforming their ideas. This type of education is very beneficial to students as this visual aid assists students to learn easily (Peslak, 2005).

Thus, PowerPoint is beneficial to increase students' sharing with motivation. Students who consider traditional teaching as the boring method would regard their lesson more exciting with the PowerPoint technology. In this context, the use of visual and PowerPoint clips options is accessible in PowerPoint. Teachers can make use educational technology to make their student as a center of learning environments. However, educational technology is only a tool: The proficiency of a teacher who recognizes the requirements of the Twentieth-century student for educational technology as being a very active approach to learning (U.S. Department of Education. (2007). PowerPoint technology is also named presenter in 1984 and Microsoft released the first form of the software in 1990(Shaikh and et al, 2016). Before using PowerPoint, teachers spent many times in illustration and writing on the board and slides. Therefore, the use of PowerPoint kept many-hours every lesson (Hewitt, 2008). That is why PowerPoint has received a broad welcoming among the academic institutions.

Debevec, Shih, and Kashyap (2006) said this new technology also provides new learning approaches for students who have low performance in the target language as well as using traditional learning method. For example, if a student has a low level in language proficiency or is lacking in stimulation to learn, the teachers may make use visual cues in PowerPoint to assist students to understand and conceptualize new information and create interest in the subject matter. With computer-assisted instruction, teachers can also provide different approaches to improve the process of learning

besides of using traditional learning methods. Nail (2006) showed that PowerPoint is a common aid which teachers use commonly in classrooms. Jones (2004) has stated some good purposes to use PowerPoint in teaching and learning.

One of the suitable purposes for the use of PowerPoint is to improve the teaching and learning process of both teachers and students. Clark (2008) stated that PowerPoint used as a presentation device in academic lectures is educationally effective only while it creates variety and motivations in the learning environment. She added that students' motivation can be bigger if PowerPoint is exploited to link the direct and constructivist teaching models. According to Kasim (2010), the key element in the use of PowerPoint as a presentation means and its potential to increase and make students interest and attention to the lesson when integrated with a new teaching method. From the above explanation stated by previous researchers.

Furthermore, a projector is a device which is designed to take the display of a computer screen and project a large version of it onto a surface. It is a significant device. A projector gives the teachers the chance to offer their lessons easily and in an interesting way. It is a tool exploited to present subjects to the students. Students are more motivated to lesson if it is presented during visual tools as it allows them to see pictures, maps, and graphics; learners can also use PowerPoint to present their assignments (Abdullah, 2014)

In Iraq, English is taught in schools, but many Iraqi students do not know how to speak and write English for some causes. Iraqi EFL student need to improve their syllabus and teaching methods. To achieve the students' academic needs and assist them to improve their English performance, many ways should be applied. One of these ways is using multimedia through the teaching and learning process. Using multimedia in the classroom enables the students to interact with different texts (Alkadry, 2016).

Dual Coding Theory (DCT)

It is an established theory of general comprehension that has been applied to literacy. The founder of this theory was Paivio who suggested that memory has two separate but interconnected systems for processing information-verbal and visual.

The connections between these two codes allow to dual coding of Knowledge. Dual coding enhances information cognition and retention. The Function of Verbal system is processing and storing information (i.e., words, sentences, etc.). However, the function of Visual system is to processing and storing image.

The theory proposed that we should offer a visual PowerPoint presentation to introduce facts to learners including the use of pictures along with text information. Finally, when improving assignments for learners, we should try to present a visual picture as an instance to for learners.

Methodology

The main sources of this study were the pre-test and post-test questions, which were administered by the researcher to get the required data. The participants were the 32 male at first year in the department of English, College of Art, at University of Basrah. The researcher divided the students into two groups: experimental and control groups. . The experimental group had an N of 16 and received the PowerPoint presentation in learning prepositions. Group 2, the control, had an N of 16 and received the traditional teaching presentation in learning prepositions.

Data collection procedures

The data were collected from first year students in the department of English, College of Art, at University of Basrah the study began in the first semester of the academic year 2018-2019.

The pilot Study

The researcher has conducted a pilot study on a group of form four students which is not involved in the study. There were 31 students involved in pilot study. The main purpose of this pilot study is to try out the instruments and improve the instruments for the treatment lesson. In the pilot study, the researcher has analyzed the reliability by using Generalizability Theory (*GStudy*) and Cronbach Alpha to test the internal consistency of the items.

The output from Generalizability theory showed 0.72785 and Cronbach alpha reading for the items is 0.732. The results from Generalizability theory and Cronbach alpha are shown in the following tables of this study.

Procedures of the study

The following procedures are conducted in this study:

1. Reviewed some related literature to set up a theoretical background.
2. Prepared the pre-test and post-test of the study, and then establishing its validity and reliability.
3. Got permission from the dean and the head of English Department.
4. Designed and validated an instructional program.
5. Identified the samples of the study for both groups: the experimental and control groups.
6. Conducted pre- test for the participants.
7. Conducted the study.
8. Administrating post-test.
9. Analyzed the findings of the collected data.

Pretest and Posttest:

Before using PowerPoint, the teacher used pretest to check the students' outcomes in preposition to explore the outcomes of students. However, the posttest was employed for two groups to show the differences in the students' outcomes after conducting the experience.

RESULTS OF DATA COLLECTION

The findings showed that PowerPoint presentation gain better performance compared to the control group. Most students in the experimental group displayed a positive attitude towards using presentation software to learn prepositions. All the null hypotheses were rejected in this study. In this study, the instruments were used to elicit and collect information in the form of test. The test was divided into three different levels of learning outcomes, Level-1 (identification of prepositions), Level-2 (differentiation of prepositions) and Level-3 (application of prepositions). It can be said that, the students' learning outcomes of the experimental group were improved because the mean score of the group was higher compared to the control group. The effectiveness of using PowerPoint presentation was accepted in the experimental group. As a result, the first hypothesis was rejected.

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 PRE	48.44	16	12.874	3.218
POST	71.56	16	9.259	2.315

Table-1: The T-Test of Paired Samples Statistics for the experimental group

From the findings of the means, standard deviations, and T-Test of both groups, therefore, there were learning outcomes derived both from PowerPoint presentation and traditional teaching presentation. The learning outcomes showed significant difference in the experimental group. As the result, these findings rejected the second hypothesis of this study.

The students' scores in the experimental group were analyzed in the pre-test and post-test. The third hypothesis was tested in the experimental group in order to prove that whether this hypothesis is accepted or not.

Paired Samples Statistic

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 PRE	42.19	16	17.318	4.329
POST	64.69	16	12.037	3.009

Table-2: The T-Test of Paired Samples Statistics for the experimental group

From the table above, the (M= 64.69) score for the experimental group in the post test and the (M= 42.19) score in the pre-test. After the treatment, the post-test showed an increase of 22.5 in the mean score among the students in the experimental group. On the other part, the standard deviation (SD) was decreased from 17.31 to 12.03. The higher decreasing in standard deviation means the performance gained better.

The students' scores in the experimental group were analyzed in the pre and post-test. This research question was used to answer the second hypothesis and determine the learning outcomes derived from the experimental group after being exposed to PowerPoint presentation.

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 PRE	47.50	16	12.517	3.129
POST	53.12	16	12.230	3.058

Table-3: The T-Test of Paired Samples Statistics for the control group

The above table shows that the mean scores and standard deviation before and after the treatment in the experimental group. The mean score was slightly increased and the standard deviation was slightly decreased. The (M=71.56) in the post-test compared (M=48.44) before the treatment. The standard deviation (SD) was 12.87 during the pre-test and it was 9.25 after the post-test. This proves that learning outcomes can be accomplished by using PowerPoint presentation in learning prepositions.

Finding on Ho2

From the findings of the means, standard deviations, and T-Test of both groups, therefore, there were learning outcomes derived both from PowerPoint presentation and traditional teaching presentation. The learning outcomes showed significant difference in the experimental group. As the result, these findings rejected the second hypothesis and answered the second research question.

The students' scores in the experimental group were analyzed in the pre-test and post-test. The third hypothesis was tested in the experimental group in order to prove that whether this hypothesis is accepted or not.

Paired Samples Statistics

	Mean	N	Std. Deviation	Std. Error Mean
Pair 1 PRE	42.19	16	17.318	4.329
POST	64.69	16	12.037	3.009

Table-4: The T-Test of Paired Samples Statistics for the experimental group

From the table above, the (M= 64.69) score for the experimental group in the post test and the (M= 42.19) score in the pre-test. After the treatment, the post-test showed an increase of 22.5 in the mean score among the students in the experimental group. On the other part, the standard deviation (SD) was decreased from 17.31 to 12.03. The higher decreasing in standard deviation means the performance gained better.

Finding on Ho3

The findings from the means, standard deviations, and T-Test of the experimental group, showed more significant difference in learning prepositions when using PowerPoint presentation compared to the control group. In the other words, the students in the experimental group displayed better performance of scores compared to the control group. As the result, the researcher has rejected the third hypothesis and answered the last research question.

As a conclusion, both groups have significant difference in learning prepositions when using PowerPoint or traditional teaching presentation. The post-test results of the experimental group showed that the students had grasped a better understanding and performance than the control group after being exposed to the PowerPoint presentation.

DISCUSSIONS OF THE RESULTS

This section presents all the findings which were analyzed in Chapter 4. These findings are based on the objectives and research questions of the study. The findings are as follow:

Assessing the effect of PowerPoint presentation and traditional teaching presentation on students learning outcomes

In the study, the researcher has assessed this two types of teaching which have effects on the respondents (experimental and control groups). By using the same topics, researcher measured the learning outcomes (Level 1, Level 2, and Level 3) for the both groups. Mean, standard deviation, and T-Test of scores were compared among the two groups. The (M= 68.19) score looked increase in the experimental group after the post-test compared (M=45.31) before the treatment. The difference of mean is about 22.88. The mean score for pre-test among the students in the control group was 45.25 compared to the mean score of 51.50 in the post test. The post-test showed the difference of 6.250 in the mean score among the respondents in the control group. For standard deviation (SD), experimental group seen decreasing higher value compared to the control group. In Ho1, the pre-test SD in the experimental group was 11.38 compared 8.87 after the treatment.

This study showed that there were some improvements for the both groups, but in general we can say that, the experimental group is performing much better in the learning outcomes because the mean score of the group is higher compared to the control group.

The other reason is the standard deviation in the experimental group is likely to decrease in higher value. Smaller in value of standard deviation, means more performance in score. The effectiveness looked more improvement in the experimental group. As a result, the first hypothesis was rejected and this finding has answered the first research question. In a study leveraging the theories of cognitive load and dual coding, Gellevij, Ven Der Meij, De Jong, and Pieters (2002) showed that multimodal instruction leads to better learning outcomes than unimodal instruction.

Determining the learning outcomes derived from PowerPoint presentation and traditional teaching presentation

Learning outcomes seem very important in determining level of our student's understanding to fulfil the objectives of the lesson. For the purpose of this, the research intends to see the learning outcomes from which types of teaching mode bring or derive better learning outcomes. The Ho2 was tested in this in study to know the findings. The researcher used the learning outcomes of (Level 1 and Level 2) on both groups. As findings from the output (T-Test of group statistics of the experimental and control groups) which were analyzed in previous sections, the mean score in the experimental group was 48.44 compared to 48.00 of mean score in the control group during the pre-test. After the post-test, the mean score of the experimental group was 71.56 compared 54.00 of the control group.

The experimental group looked higher increasing of mean score value compared to the control group. The mean score of the control group increased only 6. For the standard deviation (SD), the decreasing value was higher in the treatment group from 12.87 in the pre-test to 9.259 after the post-test but the control group was slightly smaller decreasing in the SD value. This finding totally rejected the Ho2 and answered second research question.

Investigating whether PowerPoint presentation has significant difference or not in learning prepositions

For the last research question and third hypothesis, the researcher focused on experimental group only. Since the experimental group has undergone the treatment, so this group seemed suitable and reliable to be tested. This is because the main point here is to prove that the Ho3 is not true. In proving this, the researcher has applied it to the Level-2 and Level-3 learning outcomes.

First, let see the output of this finding of this study Based on the SPSS output (paired samples test), it showed significant difference in using PowerPoint presentation in learning prepositions. The t value was -7.517 which was smaller than the significant level (< 0.05). Based from the Ho1 and Ho2 findings, here the researcher concluded that experimental group had performed better than the control group. This also means Ho3 is totally rejected in this study. As the result, PowerPoint presentation of the experimental group has resulted better performance in this study.

Recommendations for a Future Research

The researcher has suggested that further study could be implemented in other schools in Perlis because it would bring feedback on how this kind of teaching facilitates the learning process. Technology integration at all levels of education seems to be a need in preparing our students with high level of knowledge and learning skills.

Besides that, more instrumentation could be used to collect data. Apart from using test, other data collection methods such as questionnaires, interviews, and classroom observations are also suitable. This can provides a wide range of relevance data to support the studies.

CONCLUSION

As a conclusion, this study has showed that PowerPoint presentation looks more effective compared to the traditional teaching method. The findings from this study had supported the previous studies. This finding confirms the findings of Blokzjl and Andeweg (2005). The researcher gained a lot of experiences and knowledge as a facilitator for both groups in conducting the study. The most challenging part was to conduct the experimental research which included teaching to the respondents and analyze the (pre-test and post-test) collected data. Furthermore, it is also possible for future researchers to explore the potential of PowerPoint and to experiment with other types of activities apart from presentations. This can add variety to the type of activities that can be done through the use of PowerPoint.

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