Effectiveness of the animated video method in vocabulary learning: A case study of noble technical institute in Arbil

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ABSTRACT

This research evaluates the effectiveness of animated videos in vocabulary learning among Noble Technical Institute (NTI) students. Experimental research methodology was used with 40 students as the study subject, and the study subjects were picked randomly. After the pre-test was conducted for all the students, they were grouped into two categories for the treatment regime: those taught with animated video and the rest without animated video. Post-test was conducted after the lesson. The data were analyzed statistically, hence, bivariate, and univariate analyses were conducted. From the pre-test result, the highest score was 89 and the lowest score was 41 from the data of 40 students as a research subject. As for the post-test for those taught without animated video, the highest score was 91, the lowest score was 46, and the mean score was 70 from the data of 20 students as a research respondent/subject. Likewise, those taught with animated video recorded their highest score to be 98, the lowest score was 53 and the mean score was 76 from the data of 20 students as a research subject. The bivariate analysis shows that teaching with animated video ($X^2 = 0.0005$, P-value= 15.675) was significant compared to teaching without animated video. From the questionnaire administered to the student, most of the students agreed that learning with animated video enhances assimilation, makes study more interesting, improve vocabulary learning, makes class interactive and makes learning of English to become faster. There are divergent views regarding learning with animated video being the best form of learning, few of the students agreed while some of the student did not agree to that. Conclusively, the result of this study shows that learning of vocabulary with the aid of animated video is very effective to aid students' understanding and assimilation.

Key words: Language teaching, experimental, animated video, receptive and productive vocabulary, NTI (Noble Technical Institute), pre and posttests.

INTRODUCTION

To Arbil, English is a foreign language, and it is an important aspect of modern cultures. The English language is spoken all over the world and is used as a first or second language in many workplaces and educational institutions. In comparison to institutes with local languages, English medium institutes are more widely accepted. Most societies use English as a common language of communication as suggested by Bohara (2018). Learning English necessitates the acquisition of abilities in speaking, reading, writing, and listening. For societies where English is not widely spoken or utilized, learning the language and teaching it is often difficult. Smith et al. (2017) argued that, the most difficult challenge for classroom teachers is to research the most effective methods for teaching English as a foreign language.
in the majority of emerging and impoverished societies. English language instruction necessitates not only textual knowledge, but also the instructor’s self-motivation, as well as the students’ learning abilities (Joo et al., 2020). Many studies have been published that outline various approaches and methodologies for teaching English as a second or foreign language, including task-based learning and Audiolingual, communicative language teaching, neutral approach, content-based instruction, grammar-translation method, and direct method, with the oral approach being added to these. These approaches can be used for a variety of purposes, such as exploring, guessing, and describing a foreign language (Kizi and Ugli, 2020). English has become the dominant language, particularly among academics; practically all curricula and courses are taught in English, and there is no way to avoid learning English as a second language.

The goal of this research is to incorporate technology and modern tools into the teaching and learning process so that learning is simple and long-lasting (Podorova et al., 2019). As a foreign language, English requires attention and every language is an art form. As a result, rather than focusing on a societal necessity, this study evaluated the teaching of English as a language by making it more fascinating and appealing as a piece of art (Kalinowski et al., 2019). The private institutes in Iraq and Arbil –NTI lack responsiveness strategies and techniques for improving the English vocabulary of the students (Doghonadze et al., 2020). Despite adopting English as a medium of language the students even in the English department lack skills to play with English vocabulary that is not only significant for learning English as a second language but also it is fundamental to speaking fluently, understanding and writing confidently (Ameen et al., 2019). Therefore, this study embarked on the idea of including the technological tools for innovative learning. It analyzed the effectiveness of visual technology especially animated video to implement this technique for teaching mid-career learners in Iraq. The aim of this study is to enhance the teaching mode of the students for sustainable knowledge and for a more adaptive approach towards English as a foreign language.

**Objective of the study**

The objective of the study was to analyze the effectiveness of animated video method in vocabulary learning among students of Noble Technical Institute (NTI) in Arbil. The following specific objectives guided the study:

1. To determine the performance of student taught with animated video in Noble Technical Institute (NTI) in Arbil.
2. To determine the performance of student taught without animated video in Noble Technical Institute (NTI) in Arbil.
3. To compare the performance of student taught with and without animated video in Noble Technical Institute (NTI) in Arbil.

**Research question**

The specific research questions are as follows:

1. How effective is the animated video method in vocabulary learning among students of Noble Technical Institute (NTI) in Arbil?
2. How is the performance of student taught with animated video in Noble Technical Institute (NTI) in Arbil?
3. How is the performance of student taught without animated video in Noble Technical Institute (NTI) in Arbil?
4. What is the difference in performance of student taught with and without animated video in Noble Technical Institute (NTI) in Arbil?

**Study hypothesis**

Ho: There is no significant improvement or difference in the effectiveness and learning achievement in mastering the vocabulary by students being taught via animation or cartoon video.

Ha: There is a significant improvement or difference in the effectiveness and learning achievement in mastering the vocabulary by students being taught via animation or cartoon video.

**Significance of the study**

This study analyzes the impact of animated video in learning of English language as a foreign language. The study added to the body of knowledge on learning with video. This study is unique and peculiar to the participants; it will gain a good view to the literature of language teaching.

**Theoretical framework**

This study was guided by the Cognitive Theory of Multimedia Learning, which established that there are two channels for obtaining information and using it: visual and verbal channels, which are also known as pictorial and verbal channels. Each channel has its own set of restrictions, but combining the two will make integrative learning easier to integrate into the existing cognitive system (Davis, 2018; Mutlu-Bayraktar et al., 2019). Using the two systems allows for the most efficient use of working memory. This is the same technique used with
animated/video learning, where what is being said verbally is accompanied by a pictorial/video illustration to enhance comprehension. The purpose of this study was to test the effectiveness of the learning system based on this hypothesis.

METHODOLOGY

Study design

In this study, quantitative experimental research methodology was applied. The experiment and control groups are compared using quantitative experimental research technique. After the learning sessions, the results of each group (control and experiment) were used to analyze the efficiency of animation in vocabulary learning among the study subjects. All of the parameters for both groups are kept constant in experimental research, but the independent variable is changed (Krebt, 2017).

Study area

Noble Technical Institute Located in the City of Arbil, the capital of Kurdistan region - Iraq, the institute was established in 2014 as Hawler Petroleum Institute. In 2017, the institute expanded and became known as Noble Technical Institute. The institute has a modern study environment comprised of modern class setups equipped with multimedia facilities. In addition, it has specialized labs and workshops for each department. More than dozen labs are available and equipped with modern apparatus that are required to carry out the subjects' relevant practical and experimental part.

Study sample

The study participants were chosen from the Noble Technical Institute of Northern Iraq using a simple random sampling procedure. Simple random sampling is a probability sampling technique that allows researchers to randomly select individuals. The students in this study ranged from pre-intermediate to intermediate diploma students at Noble Technical Institute's English Language Department. For the control and experiment groups, a total of 20 students were chosen at random. The participants are between the ages of 19 and 22 (Moser and Korstjens, 2018).

Data collection procedures

The data was collected using questionnaire and test results, the test results comprise of both pre-test and post-test results of both the experiment and control group. Both experimental and control groups tested pre and post learning session. Their responses were described in the results for comparison. The study compared the learning outcome of the control and experimental group.

Data collection materials

Productive and receptive vocabulary learning were used for this study. Therefore, the test focused on all the four parts of language testing reading, writing, speaking, and listening. Secondly, the control group focused on these four parts through text whereas, the experimental group members were administered through animated videos. Animated videos were specifically developed for this study. The animated video was developed by the help of software specialists that made use of the relevant information from the learning materials. Furthermore, the study included the post-test, the post-test emphasized on academic writing and short essays on current issues. For speaking test, it tested the ability of the students on productive and receptive vocabulary before and after the animated video methods of teaching and learning. However, the post-test exercise entails 20 vocabulary words for each section that is reading, writing, and listening. For speaking, the post-test students were free to include words they learnt. The title of the course is Building Vocabulary. Figure 1 shows the steps in data collection.

Data analysis procedures

The data was collected through test results and questionnaire. Univariate and bivariate analyses were conducted. The univariate shows the frequency and distribution of the participant. The bivariate analyses were used to compare variables to determine the association between the variables.

Ethical considerations

A written consent form was presented to the participants to get their consent. The consent form clearly outlines the aim and objective of the study and the participants were briefed about the research before the beginning. The consent and approval of NTI management were sought for before the research. Confidentiality, anonymity, and no harm were done to the participants.

RESULTS AND DISCUSSION

The findings from the research are hereby presented based on the thematic areas:
Demographic data of the respondent

Table 1 shows the demographic data of the respondents. Majority of the respondents are 21 years old (27.5%) and male constitute the highest proportion of the respondents (55%).

Pre-test results

From the pre-test results for vocabulary test, it is seen that the highest score was 89 and the lowest score was 41 from the data of 40 students as a research respondents/subject. The result data can be seen in Table 2. According to the pre-test results (Result range: 89-41 and Mean Score: 66), the vocabulary knowledge of institute’s pre-intermediate - intermediate students ofNTI was averagely satisfying. Some students performed well while the others below average. Therefore, it is necessary to deploy teaching techniques to improve the student’s vocabulary knowledge. This buttresses the need to implement and check the effectiveness of animated videos to improve students’ vocabulary mastery in treatment sessions after the pre-test was conducted.

Treatment session

Post-test results

After observing the gaps in the understanding of vocabulary by the students, teaching techniques with the aid of animated videos was introduced, to determine the effectiveness of animated video teaching techniques, the students of the pre-test were grouped into experiment (taught with animated video) and control group (taught without animated video) to compare. The results of the post-test for the two groups are as follows:

Teaching without animated video

After calculating the post-test, the highest score was 91, the lowest score was 46, and the mean score was 70 from the
Table 2: Result of the vocabulary test in the pre-test

<table>
<thead>
<tr>
<th>Student’s No</th>
<th>Score</th>
<th>Student’s No</th>
<th>Score</th>
<th>Student’s No</th>
<th>Score</th>
<th>Student’s No</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>41</td>
<td>11</td>
<td>65</td>
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<td>53</td>
<td>12</td>
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<tr>
<td>3</td>
<td>64</td>
<td>13</td>
<td>74</td>
<td>23</td>
<td>67</td>
<td>33</td>
<td>77</td>
</tr>
<tr>
<td>4</td>
<td>55</td>
<td>14</td>
<td>72</td>
<td>24</td>
<td>58</td>
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<td>75</td>
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<td>5</td>
<td>73</td>
<td>15</td>
<td>52</td>
<td>25</td>
<td>77</td>
<td>35</td>
<td>55</td>
</tr>
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<td>6</td>
<td>86</td>
<td>16</td>
<td>56</td>
<td>26</td>
<td>89</td>
<td>36</td>
<td>59</td>
</tr>
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<td>7</td>
<td>83</td>
<td>17</td>
<td>68</td>
<td>27</td>
<td>86</td>
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<td>71</td>
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<td>8</td>
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<td>18</td>
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<td>70</td>
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<td>10</td>
<td>42</td>
<td>20</td>
<td>77</td>
<td>30</td>
<td>45</td>
<td>40</td>
<td>81</td>
</tr>
</tbody>
</table>

Mean Score 66
Highest Score 89
Lowest Score 41

Table 3: Result of the vocabulary test in the post-test

<table>
<thead>
<tr>
<th>Teaching without animated Videos</th>
<th>Teaching with animated Videos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student’s No</td>
<td>Score</td>
</tr>
<tr>
<td>1</td>
<td>46</td>
</tr>
<tr>
<td>2</td>
<td>58</td>
</tr>
<tr>
<td>3</td>
<td>69</td>
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<tr>
<td>4</td>
<td>60</td>
</tr>
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<td>78</td>
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<td>6</td>
<td>91</td>
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<td>88</td>
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<tr>
<td>8</td>
<td>73</td>
</tr>
<tr>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>47</td>
</tr>
</tbody>
</table>

Mean Score 70
Highest Score 98
Lowest Score 46

data of 20 students as a research respondent/subject. The result data can be seen in Table 3.

Teaching with animated video

After calculating the post-test, the highest score was 98, and the lowest score was 53 and the mean score was 76 from the data of 20 students as a research respondent/subject. The result data can also be seen in Table 3. Based on the post-test conducted by the researcher, it can be identified that the post-test session with animated video showed the highest scores of the two treatments. The score is higher than that of the session without animated video. Furthermore, the researcher also used SPSS to calculate and compare these results with the initial results. The researcher used P-value and Chi-square to find out the significant variable.

Hypotheses result

To answer the hypothesis above, Table 4 shows that there is significant difference in the effectiveness and learning achievement in mastering the vocabulary of students who
Table 4: Bivariate analysis.

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>X²</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Teaching without animated videos</td>
<td>20</td>
<td>70</td>
<td>10.768</td>
<td>2.345</td>
<td>0.567</td>
</tr>
<tr>
<td>Teaching with animated videos</td>
<td>20</td>
<td>76</td>
<td>12.567</td>
<td>15.675</td>
<td>0.0005</td>
</tr>
</tbody>
</table>

Table 5: Questionnaire summary

<table>
<thead>
<tr>
<th>No</th>
<th>QUESTIONNAIRE</th>
<th>SA(%)</th>
<th>A(%)</th>
<th>N(%)</th>
<th>D(%)</th>
<th>SD(%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Learning with animated video enhance assimilation</td>
<td>37.5</td>
<td>50</td>
<td>18.8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>Learning with animated video makes study more interesting.</td>
<td>50</td>
<td>37.5</td>
<td>6.3</td>
<td>6.3</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>Learning with animated video improved vocabulary learning</td>
<td>0</td>
<td>81.3</td>
<td>18.8</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>4</td>
<td>Learning with animated video makes the class interactive</td>
<td>6.3</td>
<td>68.8</td>
<td>18.8</td>
<td>6.3</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Learning with animated video makes learning of English to be faster.</td>
<td>0</td>
<td>18.8</td>
<td>50</td>
<td>25</td>
<td>6.3</td>
</tr>
<tr>
<td>6</td>
<td>Learning with animated video is the best form of learning</td>
<td>12.5</td>
<td>37.5</td>
<td>56.3</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Discussion

From the pre-test, it was found that few of the students understands English very well and there is need to teach the students with the aid of a befitting technique to make the study easier to assimilate therefore, the need to evaluate the effectiveness of learning with animated video. Figure 2

are taught by using animation or cartoon video. The bivariate analysis shows that teaching with animated video ($X^2 = 0.0005$, P-value= 15.675) is significant compared to teaching without animated video as displayed in Table 4.

Questionnaire findings

From the questionnaire administered to the student, most of the students agreed that learning with animated video enhance assimilation, makes study more interesting, improved vocabulary learning, makes class interactive and makes learning of English to be faster. There is divergent view as regards learning with animated video being the best form of learning, few of the students agreed while some of the student did not agreed to that. The findings are displayed in Table 5.
shows that the mean score and the highest scores of those taught with the aid of animated video are higher than other categories. As well, learning with animated video is more significant compared to the normal learning system. Furthermore, the report of the questionnaire administered to the students shows that the students attest to the effectiveness of learning with animated video. Based on this, it can be concluded that H0 was rejected and Ha was accepted. Students’ vocabulary learning was significantly improved by using cartoon or animation/computer-animated short films and educational videos. According to Andriano (2019), video helps students improve their speaking and listening skills since it gives real information and encourages students to learn the target language. According to a study by Adhannisa et al. (2020), children enjoy hearing stories about how media is employed in the learning process. The findings of this study align with those of Aditama and Solikhah (2018), who discovered that short movies are an effective tool for teaching and enhancing vocabulary mastery. Kocak and Goktas (2020) claimed that using a cartoon film to teach English verbs was particularly beneficial. It aids in the absorption of students.

CONCLUSIONS AND RECOMMENDATION

Conclusion

In conclusion, the study investigates the effectiveness of teaching with animated videos using quantitative experimental method; students were divided into control and experiment groups to compare the performance of animated and non-animated teaching methods. Considering the results of the pre and post-test conducted for the selected students for both the treatment and control groups, the average result of students taught without animated video was good while the students taught with animated video have better results. This implies that learning of vocabulary with the aid of animated video is very effective to aid students’ understanding and assimilation therefore, it is highly recommended for learning of other languages. Although, findings shows that some people are either auditory or visual learners. It is necessary for teachers to have essential knowledge of modern education system. Timely capacity building on use of media and modern teaching methods should be conducted for teachers to update their knowledge.

Recommendations

1. English subtitled video can be encouraged among the students.
2. A similar research design related to English subtitles films should be encouraged for broader knowledge.
3. Educational policies should be developed to enforce the usage of instructional media (materials, methods, and technologies) to enhance learning in schools.
4. Teachers should be encouraged to go for seminar, workshops, and conferences for them to be exposed to advanced system.

LIMITATION AND IMPLICATIONS OF THE FINDINGS

The implication of this study is that animated learning has proven to be viable and should be encouraged in all levels of learning. There is assurance that it will improve student's assimilation. This study was conducted among bachelor students alone, they are predominantly young adult, the effectiveness among secondary school students and aged adult (andragogy) should be determine in future studies.

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