Implementing Animated Videos to Enhance Vocabulary Comprehension among Early Childhood EFL Learners[1]

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Abstract

The purpose of this study is to examine the effectiveness of implementing animated videos to enhance vocabulary comprehension among English as a foreign language (EFL) learners. A total of sixty primary students in the fourth Grade at a public primary school in the Kingdom of Saudi Arabia (KSA) participated in this study. They were taking EFL classes and ranged in age from nine to eleven. The data were collected using a pre- and post-test quasi-experimental research design. Statistical analysis indicated a significant difference in the students between the two groups. The use of animated videos resulted in higher achievement for the experimental group which outperformed the control group. Furthermore, the substantially large effect size demonstrated that using animated video instruction was more effective than the conventional teaching techniques for assessing EFL learners in learning English vocabulary. These findings suggest that teaching using multimedia can have a major impact on vocabulary enhancement. The present instructional treatment was also beneficial to teachers in general since it allowed them to explore vocabulary comprehension using a new strategy that could be effective in English classes. As a result of these findings, some instructional and pedagogical implications for future research were presented.

Resumen

El propósito de este estudio es examinar la efectividad de implementar videos animados para mejorar la comprensión del vocabulario entre los estudiantes de inglés como lengua extranjera (EFL). En este estudio participaron un total de sesenta estudiantes de primaria de cuarto grado de una escuela primaria pública del Reino de Arabia Saudita (KSA). Estaban tomando clases de inglés como lengua extranjera y tenían entre nueve y once años. Los datos se recopilaron mediante un diseño de investigación cuasi experimental previo y posterior a la prueba. El análisis estadístico indicó una diferencia significativa en los estudiantes entre los dos grupos. El uso de vídeos animados resultó en mayores logros para el grupo experimental que superó al grupo de control. Además, el tamaño del efecto sustancialmente grande demostró que el uso de instrucción en video animado era más efectivo que las técnicas de enseñanza convencionales para evaluar a los estudiantes de inglés como lengua extranjera en el aprendizaje de vocabulario en inglés. Estos hallazgos sugieren que la enseñanza utilizando multimedia puede tener un impacto importante en la mejora del vocabulario. El presente tratamiento instruccional también fue beneficioso para los profesores en general, ya que les permitió explorar la comprensión del vocabulario utilizando una nueva estrategia que podría ser efectiva en las clases de inglés. Como resultado de estos hallazgos, se presentaron algunas implicaciones educativas y pedagógicas para futuras investigaciones.

Introduction

The key to developing a strong command of a language is to consistently improve language comprehension and vocabulary knowledge (Milton, 2013; Milton & Hopwood, 2022). Vocabulary is an essential component of language for language learners because communication is impossible without it. Its knowledge is also crucial to develop communicative competence for foreign language (FL) learners in any language (Muftah, 2023b).

The majority of schools today teach English because it has become a global language (Hikmah, 2021). It is taught as a FL in many countries with a high priority in the school curricula (Katemba, 2022). In most cases, mainly in Arab-speaking regions, English as a foreign language (EFL) requires effort and attention to assure students' grasp of the language and mastery of new vocabulary (Milton & Hopwood, 2022). This is due to the difficulties students frequently encounter when learning English as it differs from Arabic in its syntactic structure, pronunciation, and vocabulary (Taouka & Coltheart, 2004). Besides, as a tool of instructional design, vocabulary building is vital for promoting listening and reading comprehension while learning foreign languages.

There are many different approaches to teaching the English language, both in theory and in actual classrooms, throughout the world. Nevertheless, visual methods seem to have a greater effect on students than written ones do (Obla & Ukabi, 2021; Rauf et al., 2021). In the study conducted by Shareef and

Farivarsadri (2020), it was found that students who were exposed to visual and creative learning methods learned the concepts more quickly and easily (see also D'Mello, 2013).

In the current era of digitalization, multimedia in English language instruction is widely used, and animated videos have been linked to accelerated vocabulary learning. Studies conducted by Baarda (2019) and Copland et al. (2014) demonstrated an association between multimedia instruction and English language learners' ability to interpret and grasp new, unknown vocabulary. Compared to the use of single multimedia annotations, such as images or textual definitions, Aldera and Mohsen's (2013) study revealed that the integration of textual definitions and images plays a vital role in facilitating good mastery of new vocabulary.

The use of animated videos in English instruction has led to the creation of more vibrant and engaging learning environments, and assisted students' vocabulary acquisition processes (Akhtar, 2016). Since acquiring and comprehending new vocabulary is a time-consuming process that necessitates checking up on the definitions of several terms in text-based dictionaries, the possibility of learning and mastering vocabulary decreases. Therefore, the use of animated videos as a method for learning new terms is essential. Baarda (2019) contends that integrating animated videos to teach vocabulary is beneficial due to their mutually interactive nature and capacity to simultaneously engage our sensations and contextualize unfamiliar vocabulary.

Additionally, animated videos "contextualize new terms and their definitions, then graphical definitions" (Ridha et al., 2022, p. 3) which is essential in helping students comprehend challenging words. Furthermore, they frequently offer interesting, vibrant characters and settings that grab students' attention and enhance their ability to concentrate. However, some educators claim that using animated videos in learning new vocabulary causes distractions because it diverts students' attention from the vocabulary itself and toward the entertaining characters and illustrations. This, they claim, makes it more difficult for learners to comprehend new vocabulary. Consequently, it is necessary to carry out an empirical inquiry to ascertain the effectiveness of animated videos in language acquisition in young EFL students as this study aims to highlight.

Using a collection of animated videos, this study evaluates the value of using technology for young EFL learners. It further examines the effects of implementing animated videos to enhance students' learning of English vocabulary through the use of more adaptable teaching techniques and the promotion of long-lasting knowledge. Considering the significance of vocabulary for creating meaning and conveying ideas for EFL learners, the role of instructional videos to improve vocabulary and enhance students' language achievements and content comprehension in the Saudi EFL context has been investigated. In this study, two groups were compared: one experimental group using technology—animated video learning—and another using conventional teaching methods—a control group that does not use technology. The following research questions were addressed by this study:

1. *Which group of students—those taught by using animated videos or conventional teaching methods—had the highest achievement?*
2. *Are there differences in vocabulary comprehension between those students who are taught using animated videos and conventional teaching methods?*

Moreover, to answer the second research question, an alternative hypothesis was generated:

H^a – *Vocabulary comprehension differs significantly between students who are taught using animated videos and conventional teaching methods.*

Literature Review

Vocabulary comprehension in EFL Context

Vocabulary is a key part of FL learning because it is required for creating meaning and conveying ideas through both receptive and productive skills (Carpenter & Olson, 2012). According to Horst and Meara (1999), productive knowledge is the capacity to recall and retain information that has already been taught, including a term or definition from a vocabulary perspective. Receptive vocabulary, on the other hand, refers to terms that are comprehended immediately after hearing, seeing, or reading (Ringbom, 1998). As a result, when acquiring new words, the knowledge curve starts with receptive vocabulary before moving on to productive vocabulary, which is more complex (Arrogante, 2021).

Vocabulary is also one of three English language components that are essential for mastering all English skills (Mubarok et al., 2017). The development of vocabulary is crucial to learning a language (Susanto,

2021). Additionally, vocabulary is necessary for learning the ability to speak, write, read, and listen. People cannot effectively communicate and express their feelings in oral or written form if their vocabulary is insufficient. If the amount of known vocabulary is insufficient, comprehension of other skills including listening and reading skills would not be achieved (Hiebert & Kamil, 2005). In this sense, understanding becomes challenging when there is not enough vocabulary known to be able to interpret the meanings of unfamiliar vocabulary. Besides that, students will struggle to establish their ideas to produce language for speaking and writing skills (Susanto, 2021).

Cameron (2001) introduced that vocabulary is essential for primary-level FL learning. It is one aspect of language proficiency that improves overall language skills. In the Kingdom of Saudi Arabia (KSA), English has been taught in fourth grade in primary schools since 2005 (Aljohani, 2016). However, starting from the academic year of 2021/2022, English has been introduced in first grade. However, most students still lack lexical knowledge, resulting in poor overall English achievement. FL vocabulary acquisition is generally recognized to be wide-ranging and complicated (Kim, et al., 2018). According to Wilkins (as cited in Thornbury, 2002), "without grammar, very little can be conveyed, but without vocabulary, nothing can be conveyed" or spoken (p. 16). Ineffective communication is hampered by a limited FL vocabulary. That is to say, without having enough vocabulary, learning languages is inconceivable, and not fully understanding the words inhibits the adequate flow of ideas and aspirations to others (Katemba, 2022).

To address challenges with vocabulary comprehension, English teachers have tried to employ technology to redirect students' attention and boost their excitement for learning the English language (Clark, 2013). Compared to the traditional classrooms, research findings have revealed that classrooms that generally utilized technology have shown student engagement in the learning process, motivation, inspiration, independence, and a desire to learn, implying a significant correlation between online instruction and learner achievement (Alharbi, 2019; Davidson et al., 2018, Flavin, 2016; Johnson, et al., 2016; Katemba, 2019; Katemba, 2021; Muftah, 2022; Muftah, 2023a).

Animated videos instruction and vocabulary comprehension

Utilizing technology is one of the most effective techniques to improve students' vocabulary. According to Harmer (2007), teachers should consider technology as a means to assist them in whatever strategy and practice they have preferred to use. It can be stated that there is one way of making teaching vocabulary intriguing and enhancing the students' vocabulary, and that is to use technology such as audiovisual media or videos. Bocanegra-Valle (2014) confirmed that audiovisual materials like animated videos are frequently applied to various classroom settings as a tried-and-true approach to teaching second languages and assisting students in learning vocabulary. It is appropriate and students were satisfied with video-based learning (The state of video in education, 2015).

Many studies on the use of instructional videos to improve vocabulary and enhance students' language achievement have been conducted. They have found that watching videos improves students' vocabulary learning and content comprehension (Devi, 2012; Hsieh, 2019; Montero Perez, 2019; Pratama, 2017; Suárez & Gesa, 2019).

The use of animated videos will also assist students in word composition and provide opportunities for students to practice repeatedly so that they can memorize vocabulary, structure sentences, and speak effectively (Ridha et al., 2022). Hikmah (2021) has argued that learning vocabulary through animated videos also assists students in reciting words by observing vivid scenes for better vocabulary retention. Students in the experimental group had better vocabulary retention, as evidenced by their post-test vocabulary score. The video's vivid scenes and sound effects may aid them in recalling the vocabulary they have learned (Hikmah, 2021).

Cartoon animation provides students with the opportunity to view real life objects and hear the best English pronunciation, which helps pique their interest in what they are learning. In this regard, Hikmah (2021) has asserted that videos will ultimately make the learning process more engaging. Students can be delighted by a wide range of visually appealing things, including characters, plotlines, colorful items, music, and tales.

According to Vargo (2017), the use of animation in learning activities has several benefits, including 1) increasing students' analytical reasoning since animation has multi-sensory facets, such as seeing, hearing, and talking. 2) Enabling students to create real-world action or to visualize an event or process. 3) Enticing students to participate in learning, and 4) Allowing evaluation in learning activities on a specific topic. As a

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result, it is critical to consider the significant impact of the animated video on the students' vocabulary in order to achieve the best results.

Lin and Tseng (2011) discussed the benefits of using animated videos to teach vocabulary from various points of view. The first was that its occurrence prevents students from making incorrect assumptions. The students can view the video containing visual content and sound effects that they could use as a glimpse to presume the meaning. Furthermore, utilizing animated videos in teaching vocabulary makes it easier for students to apprehend complex texts, which inevitably leads to them becoming more independent and autonomous learners. There are some indications in the video that students can use to assist them to understand the text without having to ask the teacher several times. The second, learning vocabulary by watching animated videos, generates solid meaning interpretations for better vocabulary retention. While watching the video, students employ their visual and auditory senses, which can help them recall the vocabulary much better than by reading a text from a textbook.

To identify students' problems with vocabulary accomplishment and determine the significant effect of animated videos on vocabulary mastery, Rizky (2020) conducted a quantitative study with experimental and control class designs that were then analyzed using the T-test formula. The results have shown that there was no effect of using animated videos on vocabulary mastery at eleventh-grade SMAN 1 Siabu[3] which meant that H^a was rejected and H^0 was rejected as well.

Sukriah (2021) suggested using animated videos in improving students' vocabulary achievement. This study employed a qualitative approach, with observations and interviews serving as data collection tools. Results showed that animated videos were effective tools for teaching vocabulary. The use of animated video elicited a very positive response from students, who became more motivated, interested, and active in their English learning.

Finally, Duerahae (2019) conducted a study to determine whether the use of animated videos can improve students' vocabulary achievement and to determine what happens when they are used as media in teaching vocabulary to fifth-grade MI Darussalam Wonodadi, Blitar[4]. The study employs a Collaborative Action Research (CAR) design with two cycles. The findings indicated that animated videos are an appealing and effective medium for teaching vocabulary. During the action, the researcher discovered that students had improved their pronunciation by repeating what the narrator was saying in the video. Furthermore, using pictures with subtitles in the video enabled the students to better understand and recall the words. The students were excited and took an active role in joining the class and the class became more interactive. The students' pre-test means score for the vocabulary test increased to 61.90 percent in the first post-test and 80.95 percent in the final post-test. Therefore, it can be concluded that using animated video as a teaching medium improved students' vocabulary mastery.

Based on previous research, it can be seen that animated videos have a significant impact on students' vocabulary achievement. Therefore, it is crucial to investigate how animated videos could improve vocabulary comprehension in young Arab EFL learners. The findings of the present study may contribute to the body of research by shedding more light on vocabulary instruction in the Arab world context in general and the Arab context in particular.

Research Methodology

Participants

The students who took part in this study were all monolingual Arab students in the fourth grade EFL. They were between the ages of nine and eleven, and they all came from the same cultural background. Consent forms were distributed to 105 students. Completed consent forms were obtained from 85 students, who were then randomly divided into three groups: the first group (n=25) participated in the pilot study, the experimental group (n=30) who were taught vocabulary using animated videos, and the control group (n=30) who were taught vocabulary using conventional teaching methods. The groups were taught vocabulary that was associated with the following topics: a) daily routines, b) feelings and things, c)

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[3] The research was conducted at SMA Negeri 1 Siabu in Mandailing Natal, North Sumatera, Indonesia. It is about 48 KM from the central of Padangsidimpuan. The researcher chose this school because it is one of the quality schools in the Siabu district

[4] The participants of the research were fifth grade students at an Elementary School in MI Darussalam Wonodadi, East Jawa. It is an Islamic elementary school.

adjectives, d) verbs, e) nouns f) people, g) colors, h) classroom and house items, i) time, j) animals, k) days, seasons and weather, l) food (fruits, vegetables, and other plants). The two groups studied the same vocabulary and met for forty-five minutes three times a week. All the terminology to be learned was contained in the animated videos which were selected based on the lessons and academic content taught to students of Grade 4.

Ethical considerations

Two-page consent forms with a one-paragraph cover letter signed by the researcher were administered to the participating students' parents. The cover letter explained the primary goals of the study and what was expected of participants. Furthermore, the research objectives, data confidentiality, and experiment criteria were all prudently clarified to ensure that ethical considerations were met. The cover letter and the consent form were sent to the student's parents along with the researcher's contact information two weeks before the experiment requesting parents to indicate whether or not they wanted their children to participate and contribute to the research study.

Sections of the signature page were spotlighted to aid parents in recognizing where to mark and sign the consent form. Additionally, a space was presented for parents to write their contact numbers if they had any queries and required the researcher to contact them to clarify aspects of the study. Parents were given three days to respond to the consent form either positively or negatively. Reminders to inspire the return of the consent forms within the timeline were sent to students and teachers. Students were allowed to participate if their parents signed and returned the consent forms to the teacher. Moreover, students were then asked to participate in the study, if interested. Teachers were given a folder in which to collect the returned materials. Then, the experiment was immediately conducted after the approval of the participation of all parents.

Study procedure

In the initial phase of the research, the researcher developed a non-standardized general English proficiency assessment based on the fourth grade English curriculum to gauge the classes' level of proficiency. The test was administered to the students as a pre- and post-proficiency test after being revised by the researcher and two certified English teachers. The test's final format included twenty multiple-choice items. English is formally introduced in the first grade following the national curriculum starting from the first semester of the academic year 2021/2022, therefore; all of the students were at the beginning English level.

An experimental method was then employed in this investigation which includes a pre- and post-test design. To collect the data, a vocabulary exam was prepared consisting of 65 multiple-choice items that tested several sets of vocabulary including match words to pictures, match terms with definitions, choose the proper word, fill in the blanks, and odd one out. The items were chosen and prepared by the researcher based on the teachings and academic material provided to students in the fourth grade. Using the Anates software tool, the test was administered to a different class (n=25) that was not a part of either the experimental group or the control group to determine if the instrument was reliable, valid, and understandable. The internal reliability coefficient of the test was found to be significantly high. The Cronbach's Alpha value for the test is 0.824, which is greater than the minimum acceptable 0.70. After analyzing the pilot test findings, the results showed that 15 items were not valid and were discarded. Therefore, only 50 items were confirmed to be valid and reliable and implemented for the pre-and post-test of the study. The final version of the test evaluated 10 nouns, 11 verbs, 10 adjectives, and 19 miscellaneous words.

The pre-test was administered two weeks before initiating the instructional treatment. There were two goals for the pre-test. The first was to demonstrate that there was no significant difference in competence between the two groups (one experimental and one control), and the second was to provide a baseline for assessing before and after the treatment. The researcher and the class teacher were in charge of teaching vocabulary lessons to both the experimental and control groups during the treatment. The students met with the teacher in the classroom about three times a week for 14 weeks and a total of 31.5 hours. The post-test was provided to all students immediately after finishing the treatment.

Treatment procedure

Before the instructional treatment began, students were asked if they knew what an animated video was, and the majority of them said they did not. As a result, the teachers created descriptions of the main

characteristics of animated videos. They defined them as drawings that combine visuals and images with text or computer-generated effects that have been made to move and are typically used to display information in an appealing manner using a variety of artistic styles. The treatments were carried out concurrently with the experimental group being instructed using animated videos and the control group being instructed using conventional teaching materials.

Procedures of animated videos instruction (experimental group)

The first step in implementing the study was to collect a number of animated videos related to vocabulary to present to the students and to adhere to the current syllabus of the fourth grade at the same time.

The lesson was introduced to the students by the teacher. Later, the teacher used a data projector to show the students the animated video with an English text script that described the lesson. This study used thirty videos in total, all of which are available online at websites such as *TalentLMS*, *Tutway*, *Rock 'N Learn*, *Children's Fun* Learning, and *7ESL Learning English.* Worksheets are also available at the *Islcollective* website. Table 1 displays selected samples of animated videos and links to them.

	Title	URL
Nouns	Our body	https://youtu.be/3JJrr7ffjjE
	Clothes and accessories	https://youtu.be/4m9tDeLEbI4?list=PLMR3lYBIrUziW6qYc-gccRiGX74AQtzaf
	List of sports	https://www.youtube.com/watch?v=i2yhyaNb4ac
Verbs	Some common verbs	https://www.youtube.com/watch?v=VhvpOkEFFEk
Colors	Different colors	https://youtu.be/Rp94HTAg10U https://youtu.be/05-m4xp0zjY
Feelings and things	Body parts, family & feelings	https://www.youtube.com/watch?v=ggk4ws_E17I
	Household appliances & equipment	https://www.youtube.com/watch?v=NmFVYxr_eT0
People	Family tree chart	https://www.youtube.com/watch?v=zNLRiB-qOAs
Objects and things	Classroom objects	https://www.youtube.com/watch?v=nVdteH89iQI
Food	Food names & types of food	https://www.youtube.com/watch?v=Q793ho7TtAA
Plants	Vegetables	https://www.youtube.com/watch?v=sRQ5lAVI1xg
	Fruits	https://www.youtube.com/watch?v=PY2OxP_jMZ0
	Parts of plants	https://www.youtube.com/watch?v=0jaHxc-7COg
	Kinds of plants	https://youtu.be/GPIIu22UPBE
Days, seasons & weather	Time	https://youtu.be/tm1T8k4pmIY
	Days	https://youtu.be/In2Vtlj7Nrs https://www.youtube.com/watch?v=XKnRahzQiKc
	Weather	https://www.youtube.com/watch?v=4gHK-sbKBzw
Others	Nature	https://www.youtube.com/watch?v=qM4goU44w6A
	Numbers	https://youtu.be/TrMrRBWCo_o
	Linking words	https://youtu.be/wbqgmIYyRJc
	Adverbs of frequency	https://youtu.be/L0USJe44yS4

Table 1: Vocabulary-related animated videos selected for the study

The animated video was viewed by the teacher and students. The teacher then asked questions and assigned new words to the students to practice in their groups or as a whole class. The students wrote down the vocabulary that they had recently learned and understood the meaning of the words that they wrote down and used them in context. Worksheets were also distributed on which students could write the words they had learned after watching the animated video. For each meeting, the students were given a different worksheet based on the same video. To see what they had learned, students were asked to write down the words they remembered from the video and to pronounce them out loud. At that point, the animated video was replayed by the teacher so that the students could double-check their words.

Procedures of conventional teaching material (control group)

The control group was taught vocabulary using a conventional method that did not include the use of technology. In the beginning, the lesson was introduced to the students by the teacher. The students were

then provided with a list of vocabulary and their meanings were explained. At that time, the teacher inquired about the meanings of the new words from the list.

The students practiced the words in class through repetitions and question-answer drills. Similarly, the teacher gave the students worksheets on which they could write the new words they had learned. For each meeting, they were given a different worksheet.

Vocabulary was also taught using flashcards. The students moved around the classroom looking for the meaning of the word on the card they were holding; They also moved around the classroom looking for synonyms. The teacher explained the meaning, and students looked up the words in the word list. They matched words to pictures and fill in the blanks with the appropriate vocabulary.

Later, the students wrote the words that they remembered from the vocabulary list and pronounced them to see what they had learned. The vocabulary that they had recently learned was assessed by the teacher. The procedures were completed at the end of the class period. The teacher was also required to teach the course requirements and discuss what was in the textbook. The vocabulary activity enhancement was performed from the textbooks at the end of the lesson.

The post-test

The post-test was used to determine the impact of using animated videos, and conventional teaching methods on students' vocabulary enhancement and to find out the significant differences between them.

Criteria for testing the alternative hypothesis of the study (the significant difference).

The following criteria were used to determine if there was a significant difference in vocabulary comprehension between the two groups.

If (Sig.) ≤ α (.050), then Hª was accepted. This means that there was a significant difference in vocabulary comprehension between the students who were taught using animated videos, and conventional teaching methods. On the other hand, if (Sig.) ≥ α (.050), then Hª was rejected. This means that there was no significant difference in vocabulary comprehension between the two groups.

Results

The post-test results of this study were quantitatively examined using descriptive and inferential statistics, as well as effect size calculations, to determine whether animated videos have a substantial impact on students' vocabulary comprehension in EFL Education. Table 2 summarizes the descriptive statistical analysis of the control and experimental groups.

	Group	Mean	Standard Deviation	Median	Mode	Max Score	Min Score	Range	Variance
Pre-Test	Control	51.93	9.35	50.5	43	70	36	34	87.51
	Experimental	52.87	11.34	52	64	72	32	40	128.53
Post-Test	Control	68.73	6.76	67.5	65	80	55	25	45.72
	Experimental	79.03	11.89	80.5	90	96	51	45	141.41

Table 2: Descriptive statistical analysis of the two groups

The results revealed that the mean score of students' vocabulary comprehension in the experimental group (M= 79.03, SD =11.89, s^2 = 141.41) was higher than that in the control group (M = 68.73, SD =6.76, s^2 = 45.72). It may be inferred that the experimental group, which was taught using animated videos, outperformed the control group, which was taught using the traditional teaching method or without using technology. Figure 1 shows the same findings in a more visual manner.
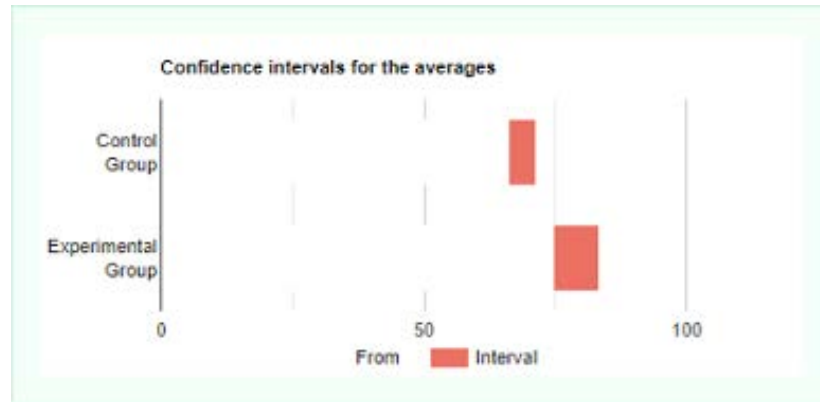
Figure 1: Distribution of mean scores of the two groups

Normality tests were undertaken based on the students' post-test scores to ensure that both groups were distributed normally. Table 3 represents the results of the normality tests.

Tests of Normality							
Score		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pre-Test	Control	.132	30	.623	.130	30	.223
	Experimental	.118	30	.751	.958	30	.280
Post-Test	Control	.126	30	.679	.952	30	.197
	Experimental	.119	30	.747	.941	30	.100

a. Lilliefors Significance Correction

Table 3: Normality test results of the two groups

The average of the normalized post-test scores was computed for both the control and experimental groups and tested for normality. Using the Kolmogorov-Smirnov Statistics, the result of the normality test for the experimental group ($p=.747$) indicated that the data did not differ significantly from that which is normally distributed. In addition, The Shapiro-Wilk tests did not show a significant departure from the normality ($W(30)= .941$, $p= .100$). The data of the control group is also normally distributed, with a normality test of ($p=.679$). Moreover, the results of the Shapiro-Wilk tests indicated that there is a non-significant difference from the normal distribution ($W(30)= .952$, $p= .197$). Therefore, the data of both the experimental and the control groups ($p>0.05$) were normally distributed.

In order to test the similarity of the samples in the experimental and control groups, a homogeneity test was also required. The Levene Statistic Test from IBM Statistics SPSS version 20 was employed to calculate the homogeneity test. Table 4 showed the outcome obtained from the test.

Test of Homogeneity of Variances				
Score				
	Levene Statistic	df1	df2	Sig.
Pre-Test	1.575	1	58	.215
Post-Test	8.526	1	58	.146

Table 4: Homogeneity of variances test results of the two groups

Based on the Levene Statistic test results, the significant level of the data from the experimental and control post-test scores was ($f =8.526$, $p= .149$). It signified that the result is not significant at $p < .05$. The homogeneity test revealed that the requirement of homogeneity among the groups was met.

Consequently, the independent t-test in Table 5 was run to compare the post-test mean scores of the experimental and control groups to see if there was a significant difference in the two groups' results after employing animated videos in teaching vocabulary.

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	F	Sig.	t	df	Sig. (2- tailed) Mean Difference	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Equal variances assumed	8.526	.146	4.124	58	.0001	10.30	2.497	1.298	10.30
Equal variances not assumed			4.124	57.884	.0001	10.30	2.497	1.298	10.30

Table 5: Independent paired sample t-test results

The result showed that there was a significant difference in the level of students between the experimental and control groups (t = 4.124, df = 58, p = .0001). In other words, Hº is rejected which indicated that there was a significant difference in students' vocabulary comprehension between students taught utilizing animated videos and those who were taught using the conventional methods of teaching. For this reason, it can be concluded that there was a significant effect of employing animated videos on students' vocabulary learning and comprehension. Figure 2 illustrated the same findings represented in Table 5 where the two groups 95% confidence intervals of the difference are shown as vertical lines (see Figure 2).
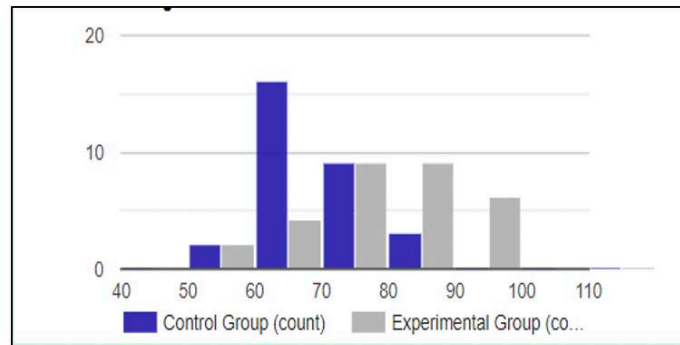

Figure 2: Confidence intervals of the difference of the two groups

Table 6 compares the average effect size, which was calculated to identify how the treatment works by examining the impact of the independent variable on the dependent variable.

Experimental Group		Control Group	
Mean (*M*)	79.03	Mean (*M*)	68.73
Standard Deviation (SD)	11.89	Standard Deviation (SD)	6.76
Sample Size (*n*)	30	Sample Size (*n*)	30
Cohen's *d* = (68.73 - 79.03) ∕ 9.671342 = 1.065002.			
Glass's *delta* = (68.73 - 79.03) ∕ 11.89 = 0.866274.			
Hedges' *g* = (68.73 - 79.03) ∕ 9.671342 = 1.065002.			

Table 6: Average effect size test results

As given in Table 6, the overall effect size was Hedges'*g*= 1.065 and Cohen's *d*=1.065, which is a large effect size according to Cohen's (1962) classification. This demonstrated that the employment of animated videos had a significant effect on students' vocabulary competency, as Cohen's scale displays d ≥ 0.80 as having a large effect size.

In summary, the students in the experimental group had increased the level of their achievement with the effects of video-based learning instructions in their learning of English vocabulary. We can determine that implementing animated videos in teaching vocabulary supports the idea about the effectiveness of multimedia-based learning instructions through the students' performance.

Discussion

This study aimed to determine the effect of implementing animated videos as media in teaching to enhance vocabulary comprehension among early childhood EFL Learners. The results address two research questions: RQ1. Which group of students—those taught by using animated videos or conventional teaching methods— has the highest achievement? And RQ2. Are there differences in vocabulary comprehension between those

students who are taught using animated videos and conventional teaching methods? The results indicated a significant difference ($p<.05$) between the methods in terms of enhancing vocabulary comprehension. Students who were taught employing animated videos outperformed those who were taught using more traditional approaches in terms of vocabulary improvement and accomplishment. The statistical analysis showed that multimedia methods were effective ($d \geq 0.80$) in improving students' vocabulary learning. The animated video method had the potential to pique the interest of the students who used it (Baarda, 2019).

Furthermore, the results showed that students learn, understand, and retain vocabulary more easily when it is presented in an animated form using images and sound effects. They were able to recognize and comprehend the meaning of vocabulary throughout classroom treatment sessions. They could also spell and pronounce words appropriately. This is consistent with previous research which reported that videos created significant effects on learning vocabulary knowledge (see e.g., Devi, 2012; Duerahae, 2019; Hikmah, 2021; Hsieh, 2019; Lin & Tseng, 2012; Montero Perez, 2019; Suárez & Gesa, 2019; Sukriah, 2021; Teng, 2020).

The use of animated videos has a positive effect on the students' vocabulary accomplishment. The positive effect of this media has been reflected in the students' behavior in the classroom during the treatment. Learning through animation increased vocabulary retention, engaged students, enhanced vocabulary learning, and made the class more dynamic without accelerating English language learning. Animated videos used in the treatment were prepared in smaller chunks so that they were presented in short but vocabulary-rich formats while the teacher was able to use and reuse them and concentrate on responding to students' inquiries. Thus, learning through animation encouraged students to engage with both the concept and the content. Given that they were entertaining and distinctive, they also helped imprint the lessons in students' minds and improved their vocabulary retention (Baarda, 2019).

Videos also assisted students in developing their speaking and listening abilities by supplying accurate information and inspiring them to learn the vocabulary of the target language (Bajrami & Ismaili, 2016; Chen, 2022; Milton, 2013; Milton & Hopwood, 2022). All the students were equally open to learning the vocabulary drill through the pleasant environment of using animations (Katemba, 2022). The students were enthusiastic, eager to know, and engaged in learning and doing their assignments and they were very curious about the upcoming video. These results support those of Aditama and Solikhah (2018), who discovered that using short videos to teach and improve vocabulary mastery is a successful strategy. In a similar vein, Kocak and Goktas (2021) and Ridha et al. (2022) claimed that employing cartoon videos to teach English verbs was particularly beneficial as it facilitated the integration of students.

When compared to other vocabulary-teaching methods, animated videos were found to assist students to comprehend a word upon hearing or seeing it and to produce a word when using it in writing or speaking knowledge. This clarifies how animated videos make use of both receptive and productive vocabulary to enhance students' knowledge and facilitate the learning of new vocabulary (Ridha et al., 2022).

The results of this study are comparable to those of a study by Arrogante (2021), who noted that the usage of animated videos plays a crucial role in enhancing students' vocabulary knowledge through the use of both receptive and productive vocabulary. She asserted that the employment of both receptive and productive vocabularies in animated videos makes it possible to meet the objectives of arousing students' interest, offering realistic listening exercises, encouraging language use, and raising students' awareness about certain language issues.

Learning vocabulary using animated videos has a significant and favorable impact on vocabulary development and makes English learning more productive. It is also indicated by the significant value in the independent sample t-test which was lower than 0.05 ($p <0.05$). Results imply that students in the experimental group who were taught vocabulary utilizing animated video performed better on vocabulary tests and comprehended more vocabulary than students in the control group who were instructed using the conventional teaching methods.

According to Pratama (2017), using animated videos in the classroom has a positive effect. Students appeared more enthusiastic in the teaching-learning process; students also became more energetic and self-assured in answering worksheets and questions. It was also observed that the experimental group students outperformed the control group students ($p =.0001$) and correctly answered more post-test questions. In other words, integrating animated movies into English instruction resulted in higher achievement than traditional teaching (Katemba, 2022) and has led to more dynamic and engaging learning settings (Akhtar, 2016). These findings imply that visual learning has a major impact on vocabulary development.

To sum it all up, animations are effective ways to improve the teaching of English vocabulary to young EFL students. This study reveals that using animations to comprehend English vocabulary has a significant effect on students' achievement. The findings also suggest that students gain confidence and make fewer mistakes with regard to using words in different contexts. Additionally, students' comprehension and awareness of the vocabulary lesson are more effective than the conventional method. According to the study findings, the implementation of animated videos as a medium of teaching vocabulary in classroom settings has an impact on students' overall language achievement.

Conclusion

The implementation of animated videos for vocabulary learning follows the procedures of the language learning process. Teachers should approach vocabulary teaching through animated videos as a proper and practical learning medium to enhance students' vocabulary achievement. Animations not only assist students in learning English vocabulary but also assist teachers in developing engaging techniques to improve teaching and learning strategies. That is to say, video content can help students comprehend lessons better, while it can help teachers focus on quality.

As a result, it is reasonable to conclude that using animated videos enhances students' vocabulary knowledge and comprehension. The videos were a helpful tool and a great resource for the students, and they assisted teachers in achieving their objectives. Teaching with animations can help students learn more deeply by promoting instructional goals. However, choosing the best tools while keeping your students' learning goals in mind can be tricky. Once those tools have been identified, integrating them can be a challenge. In line with the findings, animated videos are one of the most effective presentation techniques for increasing students' achievement in learning vocabulary. This result should encourage teachers to use animated videos when teaching vocabulary to their young EFL students.

Pedagogical implications and limitations

In light of the outcomes of this investigation, the following recommendations are provided for English teachers, language learners, and research scholars. As for English teachers, it suggested that animated videos be used in the curriculum to promote vocabulary knowledge and raise students' awareness regarding the significance of practicing English vocabulary in context as students become more engrossed in such methods. The students will enjoy the process of teaching, learning, and entertaining themselves, and as a result, they will successfully learn vocabulary.

For language learners, it is recommended that they watch animated videos and use advanced technologies and some other online applications to expand their language awareness in terms of vocabulary learning. Such methods can assist language learners in better comprehending the text and learning in a much more satisfying and motivating manner. Moreover, the researcher suggests that future researchers conduct another study targeting different students' levels for a longer period of time and evaluate different language skills using animated videos, animated infographics, and educational online games.

Despite the results, there are a few limitations to our study. Firstly, data were obtained from one primary school due to time constraints. As a result, approaching a larger sample size would yield more generalizable and comparable results. Secondly, data were gathered solely through quantitative measurements. Incorporating qualitative data such as interviews with students and instructors into future studies would provide a more in-depth awareness of potential opinion and reactions towards the effectiveness of implementing animated videos to enhance vocabulary comprehension.

References

Abdo, I. B., & Al-Awabdeh, A.-H. (2017). Animated videos prove to be beneficial in teaching English grammar as EFL: A neurological study of how students learn and retain English grammar. *Creative Education*, 8(9), 1415-1423. https://doi.org/10.4236/ce.2017.89099

Aditama, A. P., & Solikhah, I. (2018). *The implementation of English short movie to improve students' vocabulary mastery at the first grade students of SMA N 8 Surakarta in the Academic Year of 2017/2018 (Classroom Action Research)* [Unpublished undergraduate thesis], State Islamic Institution. http://eprints.iain-surakarta.ac.id/id/eprint/2575

Akhtar, M. I. (2016, 1 February). Research design. *SSRN.* https://dx.doi.org/10.2139/ssrn.2862445

Aldera, A. S., & Mohsen, M. A. (2013). Annotations in captioned animation: Effects on vocabulary learning and listening skills. *Computers & Education*, 68, 60-75. https://doi.org/10.1016/j.compedu.2013.04.018

Alharbi, M. A. (2019). Integration of video in teaching grammar to EFL Arab learners. *CALL-EJ*, *20*(1), 135-153. http://callej.org/journal/20-1/Alharbi2019.pdf

Aljohani, O. (2016). Does teaching English in Saudi primary schools affect students' academic achievement in Arabic subjects? *Advances in Language and Literary Studies*, 7(1), 214-225. https://journals.aiac.org.au/index.php/alls/article/view/2074/1854

Arrogante, O. (2022). Sampling techniques and sample size calculation: How and how many participants should I select for my research? *Enfermeria Intensiva*, *33*(1), 44-47. https://doi.org/10.1016/j.enfie.2021.03.004

Baarda, B. (2019). What does the researcher want to find out? *In research: This is it*! Routledge, 10–33. https://doi.org/10.4324/9781003022152

Bajrami, L., & Ismaili, M. (2016). The role of video materials in EFL classrooms. *Procedia-Social and Behavioral Sciences*, *232*, 502-506. https://doi.org/10.1016/j.sbspro.2016.10.068

Bocanegra-Valle, A. (2014). 'English is my default academic language': Voices from LSP scholars publishing in a multilingual journal. *Journal of English for Academic Purposes*, *13*, 65-77. https://doi.org/10.1016/j.jeap.2013.10.010

Cameron, L. (2001). *Teaching languages to young learners*. Cambridge University Press.

Carpenter, S. K., & Olson, K. M. (2012). Are pictures good for learning new vocabulary in a foreign language? Only if you think they are not. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, *38*(1), 92–101. https://doi.org/10.1037/a0024828

Chen, C.-M., Li, M.-C., & Lin, M.-F. (2022). The effects of video-annotated learning and reviewing system with vocabulary learning mechanism on English listening comprehension and technology acceptance. *Computer Assisted Language Learning*, *35*(7), 1557-1593. https://doi.org/10.1080/09588221.2020.1825093

Clark, M. (2013). *The use of technology to support vocabulary development of English language learners* [Masters thesis], St. John Fisher University. [Fisher Digital Publications, Paper 238]. https://fisherpub.sjf.edu/education_ETD_masters/238

Cohen, J. (1962). The statistical power of abnormal-social psychological research: A review. *Journal of Abnormal and Social Psychology*, *65*(3), 145-153. http://dx.doi.org/10.1037/h0045186

Copland, F., Garton, S., & Burns, A. (2014). Challenges in teaching English to young learners: Global perspectives and local realities. *TESOL Quarterly*, *48*(4), 738-762. https://doi.org/10.1002/tesq.148

D'Mello, S. (2013). A selective meta-analysis on the relative incidence of discrete affective states during learning with technology. *Journal of Educational Psychology*, *105*(4), 1082-1099. https://doi.org/10.1037/a0032674

Davidson-Shivers, G. V., Rasmussen, K. L., & Lowenthal, P. R. (2018). *Web-based learning: Design, implementation, and evaluation* (2nd ed.). Springer.

Devi, I. (2012). Animation video to improve students' vocabulary mastery. *English Education: Jurnal Pendidikan Bahasa Inggris Universitas Sebelas Maret 1*(1). https://media.neliti.com/media/publications/60691-EN-animation-video-to-improve-students-voca.pdf

Duerahae, A. (2019). *Improving student's vocabulary mastery using animation video for the fifth grades of MI Darussalam Wonodadi, Blitar*. [Unpublished undergraduate thesis, IAIN Tulungagung. http://repo.uinsatu.ac.id/id/eprint/12532

Flavin, M. (2016). Home and away: The use of institutional and non-institutional technologies to support learning and teaching. *Interactive Learning Environments*, *24*(7), 1665– 1673 https://doi.org/10.1080/10494820.2015.1041404

Hsieh, Y., (2019). Effects of video captioning on EFL vocabulary learning and listening comprehension, *Computer Assisted Language Learning*, *33*(5-6), 567-589. https://doi.org/10.1080/09588221.2019.1577898

Hikmah, S. D. (2021). The use of animation video for vocabulary mastery. *English Education: English Journal for Teaching and Learning*, *9*(2), 151-162. https://doi.org/10.24952/ee.v9i02.4804

Hiebert, E. H., & Kamil, M. L. (Eds.) (2005). *Teaching and learning vocabulary: Bringing research to practice*. Routledge.

Horst, M., & Meara, P. (1999). Test of a model for predicting second language lexical growth through reading. *Canadian Modern Language Review*, *56*(2), 308-328. https://doi.org/10.3138/cmlr.56.2.308

Johnson, L., Becker, S. A., Cummins, M., Estrada, V., Freeman, A., & Hall, C. (2016). *NMC horizon report: 2016 higher education edition*. New Media Consortium.

Katemba, C. (2019). Student vocabulary enhancement at grade 10: A comparative study using CALL & MALL in Indonesia. *CALL-EJ*, *20*(1), 87-114.

Katemba, C. V. (2021). Enhancing vocabulary performance through mobile assisted language learning at a rural school in Indonesia. *Acuity: Journal of English Language Pedagogy, Literature and Culture*, *6*(1). https://doi.org/10.35974/acuity.v6i1.2457

Katemba, C. V. (2022). Vocabulary enhancement through multimedia learning among grade 7th EFL students: *MEXTESOL Journal*, *46*(1). https://www.mextesol.net/journal/index.php?page=journal&id_article=46009

Kim, M., Crossley, S. A., & Kyle, K. (2018). Lexical sophistication as a multidimensional phenomenon: Relations to second language lexical proficiency, development, and writing quality. *The Modern Language Journal*, *102*(1), 120–141. https://doi.org/10.1111/modl.12447

Kocak, O., & Goktas, Y. (2021). The effects of three-dimensional cartoons on pre-school children's conceptual development in relation to spatial perception. *International Journal of Early Years Education*, *29*(4), 420-437. https://doi.org/10.1080/09669760.2020.1814213

Lin, C.-C., & Tseng, Y.-F. (2012). Videos and animations for vocabulary learning: A study on difficult words. *Turkish Online Journal of Educational Technology-TOJET*, *11*(4), 346-355. http://www.tojet.net/articles/v11i4/11434.pdf

Milton J. (2013). Measuring the contribution of vocabulary knowledge to proficiency in the four skills. In C. Bardel, C. Lindquist, & B. Laufer (Eds.), *L2 vocabulary acquisition, knowledge and use: New perspectives on assessment and corpus analysis* (pp. 57–78). European Second Language Association.

Milton, J., & Hopwood, O. (2022). *Vocabulary in the foreign language curriculum: Principles for effective instruction*. Routledge.

Montero Perez, M., (2019). Pre-learning vocabulary before viewing captioned video: An eye-tracking study. *The Language Learning Journal*, *47*(4), 460-478. https://doi.org/10.1080/09571736.2019.1638623

Mubarok, A. F., Sundari, S., & Wahjuningsih, E. (2017). The effect of using animation video on the eighth grade students' vocabulary achievement at SMPN 5 Jember. *Proceeding of the workshop on intercultural communication, 13 January,2017*. https://jurnal.unej.ac.id/index.php/fkip-epro/article/view/4286

Muftah, M. (2022). Impact of social media on learning English language during the COVID-19 pandemic". *PSU Research Review*. https://doi.org/10.1108/PRR-10-2021-0060

Muftah, M. (2023a). Data-driven learning (DDL) activities: Do they truly promote EFL students' writing skills development?. *Education and Information Technologies*, *28*. https://doi.org/10.1007/s10639-023-11620-z

Muftah, M. (2023b). Communication apprehension and self-perceived communication competence: A study of undergraduate students in their final year. *Higher Education, Skills and Work-based Learning*, *13*(6), 1187-1203. https://doi.org/10.1108/HESWBL-08-2022-0174

Obla, M., & Ukabi, E. (2021). Education in the virtual space: A sustainable strategy for achieving tension-free and inclusive learning in COVID-19 dispensation. *Journal of Studies in Science and Engineering*, *1*(2), 17-35. https://doi.org/10.53898/josse2021122

Pratama, F. N. A. (2017). *Improving students' vocabulary mastery using animation videos (A classroom action research at the fifth grade of SD Negeri Purworejo 35 Surakarta in the academic year of the 2015/2016)*. [Unpublished undergraduate thesis], Sebelas Maret University]. https://digilib.uns.ac.id/dokumen/detail/67593

Ridha, S. K., Bostanci, H. B., & Kurt, M. (2022). Using animated videos to enhance vocabulary learning at the Noble Private Technical Institute (NPTI) in Northern Iraq/Erbil. *Sustainability*, *14*(12). https://doi.org/10.3390/su14127002

Ringbom, H. (1998). High-frequency verbs in the ICLE corpus. *Language and Computers*, *23*, 191-200.

Rizky, N., K. (2020). *The effect of using animation video to vocabulary mastery at grade XI students of SMAN 1 Siabu.* [Unpublished undergraduate thesis], IAIN Padangsidimpuan. http://etd.uinsyahada.ac.id/id/eprint/5920

Rauf, H. L., Shareef, S. S., & Othman, N. N. (2021). Innovation in architecture education: Collaborative learning method through virtual reality. *Journal of Higher Education Theory and Practice*, *21*(16). https://doi.org/10.33423/jhetp.v21i16.4909

Shareef, S. S., & Farivarsadri, G. (2020). An innovative framework for teaching/learning technical courses in architectural education. *Sustainability*, *12*(22). https://doi.org/10.3390/su12229514

Suárez, M. d. M., & Gesa, F. (2019). Learning vocabulary with the support of sustained exposure to captioned video: Do proficiency and aptitude make a difference? *The Language Learning Journal*, *47*(4), 497-517. https://doi.org/10.1080/09571736.2019.1617768

Sukriah. (2021). Improving students' vocabulary mastery using animation video. *Bogor English Student and Teacher (BEST) Conference*, *Bogor, 27 April*, 137-140. http://pkm.uika-bogor.ac.id/index.php/best/article/view/815

Susanto, H. (2021). A study on students' difficulties in learning vocabulary. *Journey: Journal of English Language and Pedagogy*, *4*(2), 46-50. https://doi.org/10.33503/journey.v4i2.1413

Taouka, M., & Coltheart, M. (2004). The cognitive processes involved in learning to read in Arabic. *Reading and Writing*, *17*, 27-57. https://doi.org/10.1023/B:READ.0000013831.91795.ec

Teng, M. F. (2020). *Language learning through captioned videos: Incidental vocabulary acquisition.* Routledge.

The state of video in education. (2015).: A Kaltura report. https://site.kaltura.com/rs/984-SDM-859/images/The_State_of_Video_in_Education_2015_a_Kaltura_Report.pdf

Thornbury, S. (2002). *How to teach vocabulary.* Longman.

Vargo, J. (2017, 5 October). 10 reasons to use animation in the classroom. *ASCD Blog.* Retrieved 17 November, 2023 from http://inservice.ascd.org/10-reasons-to-use-animation-in-the-classroom