



E-ISSN: 1658-9602
www.jahs.qu.edu.sa



18، (4)، شوال،

1446

April, 2025

The Effect of Captions in a Flipped Blended Learning Environment on Developing EFL Vocabulary among Saudi University Students

Mohammad Alolayan



Department of English Language and Literature, College of Languages and Humanities, Unaizah, Qassim University, Saudi Arabia

Abstract

This study aimed at investigating the effect of blended learning environment through the flipped classroom model. Authentic videos with captions extracted from YouTube (Ted Talk community) were used. The quasi-experimental method was employed with a pre-test - post-test control group design. Twenty college Saudi students were divided into a control group and an experimental group. A vocabulary test was pre- and post-administrated to measure learned vocabulary. The results revealed statistically significant differences between average ranks of students' scores in the experimental and control in favor of the experimental group students, which highlighted the positive impact of using captions accompanying authentic videos introduced on YouTube within a flipped blended learning environment on the acquisition of vocabulary among English language students at Qassim university.

Keywords: Flipped classroom, multimedia learning, authentic videos, vocabulary acquisition

الملخص

تهدف هذه الدراسة إلى التحقيق من تأثير بيئة للتعليم المدمج من خلال نموذج الفصل الدراسي المقلوب، ولتحقيق هذا الهدف استخدمت الدراسة مقاطع فيديو مع تعليقات مستخلصة من يوتيوب (مجتمع تيد توك Ted Talk)، وباستخدام منهج البحث شبه التجريبي تم تقسيم العينة التي تتألف من 20 طالباً سعودياً جامعياً إلى مجموعة ضابطة ومجموعة تجريبية. بعد إجراء اختبار المفردات قبل وبعد التجربة لقياس مستوى اكتساب المفردات، كشفت النتائج عن فروق ذات دلالة إحصائية بين متوسط درجات الطلاب في المجموعتين التجريبية والضابطة لصالح طلاب المجموعة التجريبية، مما يوضح أثراً إيجابياً لاستخدام التعليقات المصاحبة لمقاطع الفيديو التي قدمها مجتمع تيد توك على يوتيوب في بيئة التعلم المدمج المقلوب على اكتساب المفردات لدى طلاب اللغة الإنجليزية في جامعة القصيم.

الكلمات الدالة: الفصل المقلوب، التعلم من الوسائط المتعددة، الفيديوهات الأصلية، اكتساب المفردات.

APA Citation:

Alolayan, M. (2025). The Effect of Captions in a Flipped Blended Learning Environment on Developing EFL Vocabulary among Saudi University Students. *Journal of Arabic Sciences & Humanities*, 18, (4), 392-416.



استلم في: 20-02-1446 / قبل في: 26-03-1446 / نُشر في: 28-10-1446

Received on: 05-10-2024/Accepted on: 01-12-2024/Published on: 26-04-2025

1. Introduction

As a global language (Crystal, 2003), English is gaining increasing importance in today's world in all areas of life, which makes its learning a pivotal necessity in the twenty-first century, even for non-native speakers. With attention paid to achieving Saudi Vision 2030, learning and proficiency of English language by all students at various educational levels become essential due to its role in the natural and human sciences, as well as in trade, business, tourism, economics and all life activities.

Learning and acquiring English vocabulary is considered a key component for enhancing proficiency in all language skills (Durbahn, 2019). However, one of the persistent problems faced by English as a Foreign Language (EFL) learners is the difficulty embedded in vocabulary acquisition and retrieval along with weakness in various language skills, which are mainly related to the weak vocabulary repertoire (Nekoui, 2018, p. 151).

Multimedia instructional materials are currently widely used in EFL teaching and learning all over the world with the purpose of providing learners with authentic language inputs they can understand and learn (Chen, Liu & Todd, 2018), in light of the documented positive effects of these materials on the development of all language learning outcomes and different language skills (Kanellopoulou, Kermanidis & Giannakouloupoulos, 2019). With regard to multimedia instructional material, using authentic material, especially videos that involve speaking the native language, is among the most effective approaches to teach and learn EFL vocabulary (Ghanbari, Esmaili & Shamsaddini, 2015). This is due to the fact that authentic videos introduce EFL learners to real-world language inputs in a rich and authentic context (Peters, Heynen & Puimege, 2016).

There is, however, an inherent problem in using authentic material and videos in EFL learning. Videos introduced in native language are typically difficult and complicated in terms of pronunciation and the accelerated pace that exceeds the ability of Second Language (SL) and Foreign Language (FL) learners (Yan, 2014). This has paved the way to the emergence of captioning and subtitling for the first time in the field of Second and/or Foreign Language in the early 1980s (Behroozizad & Majidi, 2015). Captions can help EFL learners understand authentic material as well as learn included vocabulary spontaneously and automatically (Nekoui, 2018), in addition to providing these learners with two integrated language learning inputs, i.e. written and phonetic (Peters et al., 2016).

Moreover, the use of authentic videos in learning English vocabulary provides flexibility to apply contemporary instructional models such as blended learning, which combines traditional classroom instruction with online e-learning. Flipped classrooms, as an integrated model, replace traditional educational settings to maximize instructional time by providing online lectures to students before the classroom study begins, while classroom time is dedicated to student-centered activities.

It is generally noted, however, that despite its significance as a contemporary educational model, the studies investigating the effect of flipped classrooms on the development of language skills in general and vocabulary in particular are very few in number (Yeşilçınar, 2019). This highlights the need for further research examining the role of flipped classrooms in vocabulary learning via the use of authentic videos supplied with captions.

In this context, English language proficiency has emerged as one of the most crucial competencies for graduates in the Kingdom of Saudi Arabia (KSA) to master, enabling them to effectively address the challenges of the modern era and achieve the aspirations outlined in Saudi Vision 2030. Vocabulary serves as a cornerstone for students to empower them to master all EFL skills, including reading, writing, listening and speaking. It is, therefore, necessary to adopt effective instructional strategies and advanced techniques that help students acquire vocabulary in an authentic context.

English authentic videos are considered, in this respect, one of the greatest opportunities to provide a real-world authentic context for vocabulary of the target language. However, using authentic videos for teaching EFL vocabulary should be based on rigorous educational foundations. Thus, this study focuses on using authentic videos supplied with captions in the context of a flipped blended learning environment, building on pedagogical foundations of the contemporary learning theories for the development of EFL vocabulary among a sample of university students in KSA.

1.1. Statement of the problem

Despite the critical importance of vocabulary learning for EFL students, this particular process represents one of the most notable challenges facing foreign language learners at various educational levels. This is consistent with the findings reached by several studies conducted on Saudi students, which revealed poor efficiency and proficiency of students in terms of EFL vocabulary (e.g., Altalhab, 2019; Alshalan, 2019; Mohammed & Alwadaï 2019; Alghamdi & Al Ahmed, 2018). This difficulty is attributed to many factors, one of which is that vocabulary is being taught and learned as individual words in isolation of the linguistic context in which they occur and the communication purposes they serve. Traditional teaching methods of vocabulary, which are legitimately based upon introducing words and their equivalents in the source language, do not provide efficient learning of vocabulary, in addition to adopting learning strategies based on memorization and repetition by learners as revealed by several studies (e.g., Yaacob et al., 2019; Alyami, 2018).

These findings align with the researcher's personal observations about EFL vocabulary teaching in tertiary education in KSA, which heavily relies on traditional methods. Traditional teaching methods such as grammar translation and presenting word lists with their Arabic equivalents are common, yet these passive methods isolate vocabulary from its context, reducing learning opportunities. Consequently, they contribute to shaping negative student attitudes towards the difficulty of vocabulary learning and acquisition.

Despite the significant advancements in Information and Communication Technology (ICT) and the availability of authentic videos on platforms like YouTube, many of which are in native English and suitable for EFL vocabulary learning, students often find these materials challenging. As a result, utilizing authentic videos effectively for vocabulary development requires the integration of modern educational approaches to overcome these difficulties.

Based on the above, the problem of the present study lies in poor acquisition of EFL vocabulary among university students and the adoption of passive methods in vocabulary teaching and learning, which indicate the need to use authentic videos in its learning based on principles derived from contemporary learning theories.

1.2. Questions of the study

This study explores the use of captioned authentic videos in a flipped blended learning environment to enhance EFL vocabulary among seventh-level English students at Qassim University, KSA. Moreover, the study aims at examining the effect of using captions on improving students' vocabulary. In order to achieve these goals, the study tried to answer the following two questions:

1. How can captions be used in a flipped blended learning environment for developing students' EFL vocabulary based on the principle of dual coding and multimedia learning theories?
2. What are the statistically significant differences between the mean scores of the experimental and control group students on the post-administration EFL vocabulary tests?

1.3. Significance of the study

The results of this study hold theoretical and practical significance. Practically, the study introduces an innovative approach for enhancing EFL learners' vocabulary in KSA, leveraging authentic videos grounded in rigorous pedagogical and methodological frameworks, such as flipped blended learning, dual coding, and multimedia learning theories. This approach aligns with modern technological advancements. Consequently, English language instructors at universities can adopt this method for teaching English, particularly vocabulary.

Theoretically, on the other hand, this study makes an important contribution to this particular area. Although several studies aimed at examining the effect of authentic videos on EFL learning, there is relative paucity in studies focusing on using them in the context of flipped blended learning, or trying to take advantage of dual coding and multimedia learning theories, which the present study attempts to achieve.

1.4. Limitations of the study

This study has the following limitations:

- a. Human and place limitations: the study was conducted on a sample of 7th level students at the Department of English language, College of Arts and Sciences, Qassim University.
- b. Time limits: the study was implemented during the first semester of the academic year 2019-2020.
- c. Subject limitations:
 - The intervention included some general English vocabulary words that are not associated with any specific course of study.
 - Using authentic videos derived from Ted Talk community as authentic material to learn English language.
 - The adoption of captions (introduced in English language) accompanying videos, rather than subtitles (written in Arabic language).
 - Building on a theoretical framework based on dual coding and Multimedia learning theories.
 - Using authentic videos supplied with captions within a flipped blended learning environment.

1.5. Terminology

- **Captions:** this term refers in the present study to a written a verbatim transcription of the auditory or voice content contained in authentic videos, which are spoken in English, with captions are also written in the same language.
- **Flipped blended learning environment:** a learning approach that utilizes a commensurate level of face-to-face, in-campus classroom learning along with online learning at the time and place the student chooses. In this study, blended learning is based on flipped classroom model, which involves flipping the typical classroom setting by means of introducing lecturing and presentation activities, that have been traditionally implemented in the classroom to learn vocabulary, via short video clips students can watch anywhere prior to coming to the campus. The in-class time, however, is allocated to student-centered instructional activities and strategies that act as substitutes for the homework previously performed in students' homes.
- **Authentic videos:** a collection of video clips on social media networks (YouTube in this case), in which native language speakers speak English in order to achieve authentic communication purposes. More specifically, the present study relies on videos derived from Ted Talk community.
- **EFL vocabulary:** a set of English language words students majoring in English at the College of Arts and Sciences, Qassim University have to master in terms of their spelling, writing and pronunciation, as well as knowledge of their meanings, connotations, and contexts of use. Vocabulary learning in this study is measured by the score the student gets on the vocabulary test developed for this purpose.

2. Literature review

This literature review focuses on the main concepts and variables of the study. In more detail, the following elements are discussed: English language vocabulary learning and acquisition, authentic videos supplied with captions, dual coding and multimedia learning theories, and flipped blended learning.

2.1. *EFL vocabulary*

Vocabulary is defined by Nekoui (2018) as a set of English language words that carry specific meanings and connotations. Learning and acquisition of vocabulary are key components in the acquisition of all EFL skills (i.e., listening, speaking, reading, and writing). Thus, mastering vocabulary is a major area of attention for any English language curriculum or program (Mahdi, 2017; Benzidane, 2017). Learning vocabulary refers to how students know and are able to use these words in a meaningful context and apply them in different language purposes (Pullaguari Cano, 2019). EFL vocabulary learning includes three main aspects: format (vocalization, writing, syllables), meaning (linking form to meaning, concept to reference, and connections), and usage (collocations, restrictions on use) (Durbahn, 2019; Pullaguari Cano, 2019).

2.2. *Authentic videos & captions*

Authentic videos can be viewed in the context of English language learning as materials primarily developed for linguistic communication purposes among native speakers that are not intended to teach or learn English. These materials may take written or audiovisual forms (Romero Suárez, 2018). Authentic materials used for English language learning can be gathered from several sources, most notably documentaries and TV movies. Currently, YouTube has become one of the most important sources for getting authentic video clips (Babu & Rao, 2018).

Using authentic videos for EFL teaching and/or learning involves many advantages, including increasing students' enthusiasm and motivation to learning by providing real-world materials, which makes it a more creative and communicative approach to language learning (Sinyashina, 2019; Romero Suárez, 2018). Authentic videos also provide precise pronunciation of language and contextual use of vocabulary, which help students integrate the written texts with the sounds and spoken speech (Pullaguari Cano, 2019; Bjork Olivares, 2018). Therefore, these materials can help students in acquiring the target language spontaneously and automatically, thus, increasing their opportunities for informal and lifelong learning.

Using authentic videos for EFL learning in general, and vocabulary in particular results in significant impact (e.g., Sinyashina, 2019; Babu and Rao, 2018; Djiwandono, 2018; Awaad & Ahmed, 2018). For instance, a study conducted by Soltani and Soori (2015) highlighted the superiority of authentic videos over teaching or educational videos in developing vocabulary for a sample of Iranian students. Similarly, Umar and Irmayanti (2017) concluded that using authentic videos helped in effective implementation of a communicative approach aimed at teaching and developing vocabulary for a sample of Indonesian students.

In order to achieve efficiency and effectiveness of using authentic videos for teaching and/or learning EFL vocabulary, they should be supplied with captions, which are verbatim transcripts that appear on the screen in synchronization with the audio input of the same language to help the non-speaking viewer understand the auditory content. The use of captions along with authentic video clips is based on the premise that EFL learners who watch these videos may encounter difficulties in understanding and/or interpreting the language communication occurring among foreign language native speakers (Mahdi, 2017).

Despite differences, there is a close resemblance between captions and subtitles. Both of them are text articulations of the auditory inputs delivered at the videos, and both appear as written texts on the screen. The difference, however, lies in language of the written transcript. That is when EFL learners watch English videos, captions are written in the same language of the video, (English language) while subtitles are introduced in the mother tongue of the learner (Arabic language in this case) as a text translation of the audio provided in the video clips (Kim, 2019; Leveridge & Yang, 2012).

There are two main types of captioning: full captions that involve transforming all auditory inputs of the video clip into written text, and keyword captions, which focus on more important and significant words and vocabulary of the narration (Behroozizad & Majidi, 2015). In this study, attention is devoted to the former category, i.e., full captions.

Previous related studies document many benefits of captions for EFL learners, including making auditory inputs more comprehensible for EFL learners so they can process them (Kim, 2019). In other words, captions accompanying video clips serve in transferring auditory input into text input with the aim of helping achieve understanding (Hsieh, 2020). In addition, captions facilitate learners' knowledge of phrases, speech, and syllables by means of writing the whole sentences on the screen (Hsieh, 2020).

Bensalem (2018) carried out a study on a sample of 57 EFL learners in KSA with the purpose of comparing the effect of three interventions in the context of watching authentic videos. These are: full captions, keyword captions, and no captions on vocabulary learning. It was found that using captions had positive impact on the development of vocabulary among the participants in terms of recognizing vocabulary and remembering its meaning. In a parallel vein, the study of Durbahn (2019) compared students' viewing of a scientific documentary supplied with captions versus viewing the same video without captions in order to investigate their effect on spontaneous learning of vocabulary among a sample of 43 EFL learners in Chile. Based on a quasi-experimental design and using a vocabulary test that included spelling and recognition of meaning, the results revealed significant outperforming of the students who studied using videos with captions on their peers in the control group.

In another study conducted by Hsieh (2019) an attempt was made to examine the effect of captions on English language vocabulary acquisition and listening comprehension for a sample consisting of 105 university students in China. The study adopted a quasi-experimental design with five groups of students. Data was collected by means of a vocabulary test covering the format and

meaning of vocabulary words. The results revealed that the use of full captions accompanying authentic English video clips had a positive impact on the development of EFL vocabulary and listening comprehension skills of the participants.

On the other hand, there are limitations of using authentic videos for English language learning. They may be culturally biased, not directly related to students' learning needs, or utilize difficult language that exceeds the language proficiency levels of students (Romero Suárez, 2018). The use of captions can increase the cognitive load on EFL learners, potentially hindering their learning process. For example, if captions are presented too quickly or in excess, learners may struggle to process the information effectively, leading to difficulties in integrating verbal and non-verbal content (Kruger, 2013). Therefore, careful attention should be given to the speed and volume of captions to ensure they support, rather than overwhelm, the learning experience.

Additionally, EFL learners may encounter a range of cultural and linguistic difficulties that can hinder their learning of vocabulary. First, cultural differences can make it challenging for learners to fully grasp the meaning of certain words or phrases. For example, idiomatic expressions, slang, or culturally specific references may appear in videos that are difficult for learners to interpret without additional context. Second, learners may also face linguistic challenges in vocabulary retention when captions are used. While captions provide written forms of new words, they may not always align with how those words are used in different contexts, making it difficult for learners to develop a comprehensive understanding of their meaning.

However, using captions strategically, coupled with a wise selection of these videos, can help avoid these flaws. Therefore, when selecting authentic videos appropriate to teach vocabulary for EFL learners, the main criteria that could be adopted include utilizing authentic videos related to the significant vocabulary students need to learn, the level of language proficiency needed to understand these videos, and the use of captions concurrently with narration.

2.3. *Dual coding & multimedia learning theories*

Dual coding theory, suggested by Alan Paivio in 1971, is considered one of the influential cognitive theories applicable to language teaching and learning (Kanellopoulou, Kermanidis & Giannakoulopoulos, 2019). Dual coding theory, along with multimedia learning theory, will be discussed in a later section. The theory provides a solid theoretical framework for employing captions and subtitles in vocabulary teaching and learning (Kanellopoulou et al., 2019).

According to dual coding theory, there are two parallel channels for learning any foreign language: a visual channel (such as relying on written texts) and a verbal channel (like processing audio in video clips). These channels facilitate acquiring the language and vocabulary due to the activation of both the verbal and non-verbal systems of the learner (Paivio, 2007). Captions serve as visual representation of what students hear in video clips. They greatly contribute to learning vocabulary and developing their language proficiency levels, especially when the video clips are slightly above their levels in a way that challenge and encourages them to learn (Hsieh, 2020).

Captions can be a nonverbal element accompanying narration introduced in the video clips, which enables achieving Paivio's dual coding assumption postulating that humans process received information via two separate channels: a verbal system and a visual (nonverbal) system. This would, in turn, enhance our ability to retrieve and deeply process information (Ashari & Rahmati, 2019). Given the importance of dual coding theory, it has been utilized in several studies with the purpose of improving language learning (e.g., Wong & Samudra, 2019; Qian, 2018).

Mayer (2009) defines multimedia learning as students' acquisition of new knowledge through visual (nonverbal) and auditory (verbal) information introduced in various electronic instructional materials. Mayer's theory is based on three main assumptions, namely, dual-channel cognitive processing, limited working memory capacity, and active processing. The first assumption is based on dual coding theory in that people should use and integrate both auditory and visual channels in order for effective processing of information. The assumption of limited mental processing capacity, however, is based on the notion of cognitive load theory, which postulates that learners have limited cognitive resources and that a cognitive load can easily be created on working memory because they cannot process a large amount of information at the same time. Finally, active processing postulates that learners process information actively through selective processes to choose and integrate new information with previous knowledge (Mayer, 2009).

The use of video clips supplied with captions for EFL vocabulary teaching and/or learning should draw on the above theories to enhance the multimodality of input delivered through these captioned videos. This can take place by means of considering the following practical implications in the context of using video clips supplied with captions for introducing EFL vocabulary.

- a. In adherence to Mayer's (2009) limited mental processing capacity assumption, chosen video clips aimed at teaching have to involve minimum visual distractions (like pictures or animations) to enable students concentrate on auditory content and written text on screen. The intent behind this is to reduce cognitive load resulting from redundancy effect (Sweller, 2009), thus facilitating information processing in the learner's working memory.
- b. The level of the language used in the video clip should not exceed students' proficiency levels significantly and be aligned to their interests, thus contributing to diminishing the intrinsic cognitive load attributed to the difficulty of content (Sweller, 2011).
- c. By invoking Mayer's (2009) active processing assumption and Sweller's (2011) germane cognitive load concept, video clips supplied with captions need to be included in instructional activities for enhancing learners' ability to process information, in addition to providing a meaningful context for using vocabulary.
- d. In keeping with Mayer's (2009) earning transfer assumption, earning tasks should ask learners to recall information from their long-term memory in order to complete these tasks.
- e. The precise time synchronization of captions and narration is indispensable for learning according to the principle of contiguity (Sweller, 2009).

In their multimedia learning-based-study, Rahimi and Allahyari (2019) investigated the effect of direct instruction of vocabulary learning strategies assisted with multimedia on a sample of 40 EFL learners in Iran. After introducing a 15-week intervention for the experimental group, the results revealed the significant outperforming of the experimental group in terms of improved knowledge of vocabulary and enhanced use of vocabulary learning strategies (memory strategies and cognitive strategies) compared to the control group students who studied vocabulary through the usual method.

In a similar vein, within a theoretical framework based on Mayer's (2009) multimedia learning theory, Ramezanali and Faez (2019) adopted an experimental design with an experimental group and three control groups in a study conducted on 132 English language learners in Canada. The authors concluded the effectiveness of using multimedia dictionaries tailored according to the Meyer's theory in improving vocabulary learning and retention.

2.4. *Flipped blended learning*

Blended learning is now one of the most prominent instructional approaches, especially in higher education institutions (Graham & Burke, 2014). Blended learning has several meanings. In the present study, it is viewed as a learning approach that blends traditional instruction based on face-to-face study in the classroom and e-learning, which occurs online at any time and any place chosen by the student according to his or her own pace (Ayalew, 2019; Ebadi & Ghuchi, 2018).

Several studies document the effectiveness and efficiency of blended learning on EFL vocabulary acquisition (Ayalew, 2019; Zhang, 2019; Kim & Kim, 2019; Ibhaz & Said, 2019; Espinal Quispe, Castillo & Rosa, 2019; Ebadi & Ghuchi, 2018). For example, in a quasi-experimental study conducted by Kim and Kim (2019) on a sample of 90 university students in South Korea, the authors integrated traditional teaching and online teaching in a blended learning format through a design involving three groups. One of them was taught through meaning-based-teaching, the second via inputs-augmented teaching, and the third was through outputs-assisted teaching. It was found that blended learning had a positive effect on the development of achievement in grammar and vocabulary among participants.

In Zhang's (2019) study, however, an attempt was made to compare blended learning and the traditional method by applying on a sample of Thai students using an experimental group and control group design with a pre-test-post-test design. The results did not find any significant differences in foreign language vocabulary learning between the two groups.

Amongst the most prominent models that have appeared recently as an application of ideas of blended learning is the concept of flipped classroom (Babintseva, et al., 2023; Nuryadin, et al., 2023). The development of flipped classrooms in the context of blended learning has led to the emergence of the term "Flipped Blended Learning." (Thuy, 2019; van der Zwan & Afonso, 2019; Ishikawa et al., 2019; Unissa, Gopakumar & Rao, 2018). Flipped blended learning refers to a form of blended learning that includes a teaching format in which students learn the content of new learning through e-learning or online learning prior to coming to the campus, while the face-to-face

work during the in-class time is allocated to various learning activities unlike the lecturing-based traditional method used previously (Graham & Burke, 2014). Thus, flipping the classroom involves students' completing what was supposed to be in-class instruction individually outside the classroom walls with the help of teaching videos developed in advance. When they enter the class, however, they tend to engage collaborative learning practices (Freidel, 2019).

The implementation of flipped classroom model takes place through two main phases. In the first stage, learners are asked to watch the videos that replace the lectures, which can be done through video sharing sites such as YouTube and Edmodo. After that, students apply what they have learned through videos in the classroom as an alternative to homework through class activities and practice (Yeşilçınar, 2019).

The flipped classroom approach is based on rigorous theoretical foundations derived from the contemporary educational theories. This approach builds on the notion of priming the active roles of learners in their learning with the purpose of helping them manage their cognitive load in the best possible way, unlike traditional teaching methods (Cornehl, 2019; Namaziandost, et al., 2019). Moreover, the flipped classroom approach draws on constructivism, a learning theory which postulates that learners have to build their own knowledge and create meaning for that knowledge in a social negotiating context (Kawinkoonlasate, 2019).

The main advantage of flipped classrooms lies in that the content of traditional teaching typically delivered through lecture and presentation is completed before students enter the classroom, which allows teachers to allocate the in-class time to facilitate and support students' learning rather than playing the roles of facilitator or presenter (Kawinkoonlasate, 2019). Besides, the flipped classroom model allows students to learn the new content at their own pace and depending on their circumstances as opposed to the traditional lecture, which occurs according to the teacher's pace of presentation. Given that the flipped classroom relies primarily on providing new instructional content in videos students watch on their own, they can re-watch these video clips multiple times until they master new knowledge (Bohota, 2019).

The implementation of the flipped classroom model provides students with the opportunity to acquire and learn 21st century skills, such as innovation, critical thinking, communication, and collaboration via language learning (Havwini & Wu, 2019). Within the flipped classroom, learners are encouraged to develop their critical thinking and evaluate their own learning, while a teacher serves as a facilitator of students' learning rather than being a presenter as in teacher-centered instruction settings. This model, thus, allows students to make maximum use of the in-class time through engaging in active learning strategies such as problem solving and group work. In other words, the flipped classroom model activates face-to-face in-class learning between students and teacher and among students to maximize learning (Yavuz & Ozdemir, 2019).

Furthermore, it is typical in the traditional teaching methods for students to apply what they have learned by means of homework only. Within the flipped classroom, however, students can apply the new learning through student-focused active learning strategies, thus contributing to deepening their learning. Another significant aspect of difference is that if students committed

errors in the homework, they spend a long time until they get the corrective feedback. On the contrary, performing the homework in the classroom within the flipped classroom model helps students in receiving immediate feedback (Bohota, 2019).

The positive effects of the application of the flipped classrooms model on teaching EFL and developing different language skills are documented in several studies (e.g., Kawinkoonlasate, 2019; Yu, 2019; Liu, Sands-Meyer & Audran, 2019). In a mixed methods study that depended on a successive explanatory design, Özkal (2019) examined the effect of flipped classrooms on the acquisition of EFL vocabulary for sample of students in Turkey. Data collection was carried out by means of quantitative and qualitative methods. Quantitative data included analyzing data extracted from a quasi-experimental design based on an experimental group studied through a flipped classroom approach and a control group studied in the usual method. The results revealed the statistically significant superiority of students who studied using flipped classroom over their peers in the acquisition of the EFL vocabulary. It was also observed that the experimental group students have positive attitudes towards the flipped classroom.

In another study, Kırmızı and Kömeç (2019) compared two approaches of vocabulary learning in their investigation of a sample of EFL Turkish learners. The first approach made use of flipped classrooms model by means of providing students with video clips of vocabulary before teaching in the classroom, while the in-class time was allocated to cooperative learning as an alternative to homework. The control group was taught through the traditional method. The results of the study showed a significant outperforming in the acquisition of productive and receptive vocabulary among the experimental group students compared to the control group students, in addition to positive responses perceived the experimental group students towards the flipped classrooms model.

In an experimental study by Retnaningsih, et al. (2022) exploring the impact of flipped learning on EFL learners. Sixty participants were divided into a flipped group (n=30) and a conventional group (n=30). The flipped group engaged in combined learning activities using WhatsApp for pre-class preparation and active in-class vocabulary practices. Data collection included pre- and post-tests on English vocabulary, a self-report survey, and a Technology Acceptance Model (TAM) questionnaire. Results showed that the flipped group outperformed the conventional group in the post-test, demonstrating higher vocabulary acquisition. The self-report survey indicated positive perceptions of the flipped learning environment, while the TAM questionnaire revealed learners' satisfaction with WhatsApp as a digital platform to support English learning activities.

In a mixed-methods study by Yousofi and Bashiri (2023), utilizing a sequential exploratory mixed-methods design, the effects of flipped classrooms on Iranian EFL learners' vocabulary learning were investigated. The study involved thirty Iranian EFL learners enrolled in an upper-intermediate class at a private language school in Iran, who were randomly assigned to two groups: the experimental group (flipped learning) and the control group (traditional learning). Vocabulary levels were assessed using pre-tests and immediate post-tests administered via the DIALANG

online diagnostic test. Qualitative data were gathered through semi-structured interviews and students' weekly journals. The results showed that the experimental group outperformed the control group in the post-test and demonstrated significant improvement compared to their own pre-test. Thematic analysis revealed that the flipped classroom enhanced vocabulary knowledge, class participation, interaction, and engagement among experimental group participants, although some learners preferred traditional teacher-led instruction.

3. Methodological framework

3.1. *Methods and variables of the study*

In order to achieve the aims of this study, two research methods were employed. First, a descriptive analytical approach to explore the foundations of using captions for developing EFL vocabulary for the participating students based on building on principles derived from flipped blended learning, dual coding and multimedia learning theories. Moreover, a quasi-experimental approach was employed to identify the effect of using of authentic videos supplied with captions within a flipped blended learning environment on vocabulary development. This approach involved an experimental group and control group pre-test-post-test design.

The study design included two variables: the adopted teaching approach (i.e., authentic videos supplied with captions within a flipped blended learning environment versus the usual method) as an independent variable, and the levels of EFL vocabulary learning and acquisition as a dependent variable. To ensure experimental control, homogeneity between the experimental and control groups was maintained regarding certain external factors, such as motivation for learning English, interest in learning vocabulary through authentic videos, as well as previous academic achievement in English.

3.2. *Materials and experimental intervention*

As previously mentioned, this study utilizes a flipped blended learning environment as the intervention setting for the experimental group compared to the traditional method used in teaching the control group students. In this study, the material introduced to the experimental group students include a collection of authentic videos extracted from YouTube and presented through Ted Talk community (<https://www.ted.com/about/our-organization>). This community is a non-profit organization aimed at providing short, focused and effective videos (within 18 minutes or less) with the purpose of disseminating diverse ideas in many areas of science, business administration and global issues. These videos are delivered in more than hundred languages including English language. The videos use simple language, with a pace commensurate level to EFL learners, and are supplied with full captions.

The researcher selected six videos presented by this organization on YouTube, which cover a variety of topics related to the content taught to the 7th level students at the Department of English language, Qassim University. These authentic videos, supplied with full captions, were used within a flipped blended learning environment in two phases. First, a pre-class phase that would take place

in any place or time students choose before they come to the campus. In this phase, students watch a short video created by the researcher to highlight key vocabulary, along with a Ted Talk video link to view and answer related questions, encouraging active engagement. Consideration was given in these videos to include the principles of dual coding and multimedia learning theories. Second, the in-class phase focuses on applying student-centered vocabulary learning strategies, including role-playing and discussions, to encourage real communication and support vocabulary acquisition. Several structured activities were incorporated to reinforce student-centered vocabulary learning strategies effectively. Role-playing scenarios were designed to allow students to act out real-life situations. Additionally, vocabulary-based debates were conducted, encouraging students to engage in discussions on topics from the videos, using the newly acquired vocabulary to articulate and defend their viewpoints. Collaborative storytelling activities were also included, where students worked in small groups to create and present short stories or dialogues that incorporated the target words.

3.3. *Population and sampling of the study*

The population of this study is all English language department students at the college of Science and Arts, Qassim university in KSA. Using a convenience sampling method, a sample of students were chosen from seventh level students at the English Department. A total number of 20 students were selected and equally distributed into an experimental group study vocabulary through authentic videos within a flipped blended learning environment, and a control group study vocabulary through the usual method.

3.4. *Instrument of the study*

Data were collected by means of a vocabulary test that examined student' learning and proficiency of EFL vocabulary relevant to their study. The test was pre- and post-administrated to the participants and consisted of 25 items covering the important vocabulary words students have to master. The format of a typical four-level Likert item was followed, where: 1= I have never seen this word; 2= I saw this word before but I have no idea about its meaning; 3= I know this word, ad its meaning; and 4= I can use this word in meaningful sentence.

In order to verify the validity of the test, an internal consistency method was used by applying the initial version of the test on a pilot sample consisting of 15 university students majoring in English language of the nonparticipants of the main study. Pearson Correlation coefficient was calculated between the score of each item and the total score of the test. The results showed that all the items were statistically significant correlated to the overall score of the at the level (0.01) of significance, with correlation coefficients ranging between (0.732) and (0.911), which indicates that all the vocabulary items of the test enjoy internal consistency.

Moreover, the reliability of the instrument was verified by test-retest method that was applied on the pilot sample. The correlation coefficient was calculated between the students' scores in the first and second administrations to the vocabulary test with two weeks interval, using Pearson

simple correlation. The results revealed that all correlation coefficients between students' scores in the first and second administrations to the test were positive and significant at the level (0.01) of significance (0.01); ranging between (0.714) and (0.928). There are high and statistically significant values. This indicates that the test enjoys a high degree of reliability.

3.5. *Procedures of the study*

The study was implemented according to the following steps:

- Defining the problem of the study, stating its questions and aims, and developing a general plan for answering them.
- Reviewing existing literature relevant to the variables of the study, including authentic videos supplied with captions, flipped blended learning environments and their roles in developing vocabulary, dual coding and multimedia learning theories, and vocabulary learning and acquisition.
- Developing the experimental intervention, the learning material, and an initial form of the vocabulary test.
- Conducting a pilot study to identify the validity and reliability of the instrument (i.e., the vocabulary test).
- Pre-administration to the vocabulary test on the two groups of the study prior to introducing the intervention.
- Using authentic videos supplied with captions within a flipped blended learning environment with the experimental group students, along with teaching the same content to the control group through the traditional method.
- Post-administration of the vocabulary test on the two groups of the study.
- Performing statistical analysis of data using descriptive and inferential analysis methods.
- Discussing and interpreting results in light of reviewing literature and previous studies and putting forth recommendations and suggestions for further research.

4. Discussion and interpretation of the results

Question 2 of this study sought to find out if there are statistically significant differences between the mean scores of the experimental and control groups students in the post-administration to the EFL vocabulary test. In order to answer this question, the researcher tested the following hypothesis: there are no statistically significant differences between the mean scores of the experimental and control groups students in the post-administration to the EFL vocabulary test".

Prior to verifying this hypothesis, the researcher examined the equivalence of the experimental and control groups in the pre-testing of vocabulary through the use of inferential statistical methods, including Mann-Whitney test, in order to identify the significance of the

differences between the mean ranks of students' scores in the experimental and control groups in the pre-administration to the EFL vocabulary test. Results are presented in Table 1.

Table 1. Results of Mann-Whitney test for the significance of the differences between average ranks of students' scores in the experimental and control groups in pre-administration to the EFL vocabulary test

groups	Number of participants	Total ranks	Mean ranks	U value	Z value	significance
experimental group	10	92.5	9.25	37.50	-	Non-significant
control group	10	117.50	11.75		0.951	

Results presented in Table (1) reveal that there were no statistically significant differences at the level (0.05) of significance between the average ranks of students' scores in the experimental and control groups in the pre-administration to the EFL vocabulary test, which indicates the equivalence of the two groups before introducing the intervention.

In order to test the hypothesis of the study, an inferential statistics method, i.e., Mann-Whitney test, was used to identify the significance of the differences between the average ranks of students' scores in the experimental and control groups in the post-administration to the EFL vocabulary test. Results are presented in Table 2.

Table 2. Results of Mann-Whitney test on the average ranks of students' scores in the experimental and control groups in post-administration to the EFL vocabulary test

groups	Number of participants	Total ranks	Mean ranks	U value	Z value	significance
experimental group	10	155	15.50	0	3.798	Significant at the (0.01) level
control group	10	55	5.50			

Results presented in Table 2 point out that the average ranks of students' scores in the experimental group amounted (15.500), while the ranks of students' scores in the control group was (5.500). It was also found that there were statistically significant differences at the level (0.01) of significance between average ranks of students' scores in the experimental and control groups in the post-administration to the EFL vocabulary test, in favour of the experimental group students.

To calculate the effect size for using captions in the flipped blended learning environment on developing EFL vocabulary among Saudi university students, the Rank Biserial Correlation was

used to determine the strength of the relationship between the independent and dependent variables. This was calculated using the formula provided by Bouzraq and Om Alkhuyout (2021):

$$r_{rb} = \frac{2(MR_1 - MR_2)}{(n_1 + n_1)}$$

Where:

r_{rb} = Strength of the relationship (Rank Biserial Correlation coefficient).

MR_1 = Mean rank of the first group (experimental group).

MR_2 = Mean rank of the second group (control group).

n_1 = Number of individuals in the first group (experimental group).

n_2 = Number of individuals in the second group (control group).

The value of r_{rb} is interpreted in terms of the strength of the relationship between the independent and dependent variables according to the following criteria:

- If the value of r_{rb} is less than (0.4), it indicates a low effect size.
- If the value of r_{rb} is between (0.4 – less than 0.7), it indicates a moderate effect size.
- If the value of r_{rb} is between (0.7 – less than 0.9), it indicates a large effect size.
- If the value of r_{rb} is greater than (0.9), it indicates a very large effect size.

Table (3) illustrates the results obtained.

Table 3. The results of the Rank Biserial Correlation coefficient and the effect size for using captions in the flipped blended learning environment on developing EFL vocabulary

Groups	Mean ranks	(r_{rb}) values	Effect Size
Experimental group	15.50	1.00	Very large
Control group	5.50		

It is evident from Table (3) that the value of r_{rb} for the overall score was (1.00), which is a high value, indicating a very large effect size for using captions in the flipped blended learning environment on developing EFL vocabulary

The above results indicate that using authentic videos supplied with captions within a flipped blended learning environment had a significant positive impact on participants' acquisition of EFL vocabulary, as evidenced by the very large effect size. These results confirmed the findings of many successive studies regarding the vital role authentic videos supplied with captions can play in developing vocabulary acquisition. The results of this study are consistent with these reached by previous studies that highlighted the positive effect of captioning accompanying the use of authentic videos in the development of vocabulary for undergraduate students (Durbahn, 2019;

Hsieh, 2020; Bensalem, 2018; Umar & Irmayanti, 2017; Soltani & Soori, 2015). These results are also in line with the findings of several previous studies which documented the effectiveness and the positive impact of blended learning and flipped classrooms on developing EFL vocabulary (Zhang, 2019; Özkal, 2019; Kırmızı & Kömeç, 2019; Retnaningsih, et al., 2022; Yousofi & Bashiri, 2023). Another aspect of consistency with previous studies lies in the need to use multimedia and authentic materials in teaching vocabulary building on the basis of dual coding and multimedia learning theories, as well as their significant effect on learners' acquisition of vocabulary (Rahimi & Allahyari, 2019; Ramezanali & Faez, 2019).

The positive effect of using authentic videos supplied with captions within a flipped blended learning environment on the development of participants' EFL vocabulary can be explained by the following elements:

- The use of authentic videos provided a real-world context for learning and using vocabulary, which had an important motivating effect on students given the introduction of a new and interesting educational approach.
- The use of captions helped students connect vocabulary to its spelling as it appears on the screen, in addition to right pronunciation of the vocabulary by imitating the narration. Moreover, recognizing vocabulary words in meaningful sentences via captions helped students in understanding the context of vocabulary, the nature and connotations of its uses, thus, improving and deepening their learning.
- By applying the principles of dual coding and multimedia learning theories, students' cognitive processing of new vocabulary was improved. This was achieved by considering and connecting the verbal and visual channels in vocabulary learning. Additionally, the cognitive load was reduced during learning by adopting multimedia learning principles, which also enhanced the active processing of vocabulary, as Mayer's theory postulates.
- The flipped blended learning environment utilized in vocabulary learning has resulted in several important advantages, including that students were able to watch authentic videos according to their learning rate, and allowed them to pause the video or repeat the same clip several times to learn according to their own pace. Moreover, flipping the classroom allowed students to transfer usual teaching activities outside the classroom, thus allocating the face-to-face in-class time to complete student-centered active learning strategies such as discussion, authentic communication, collaborative learning, role-playing and other strategies that have had significant impact on students' vocabulary learning and acquisition.

Despite the positive results obtained by the study, there are several issues that should be considered. First, the sample size of 20 students is relatively small, which limits the generalizability of the findings. This was due to practical constraints, i.e., the specific availability of participants, as well as the researcher's preference for applying the study to students who had strong motivation to learn and a keen interest in vocabulary acquisition through authentic videos.

A larger, more diverse sample could strengthen the study's validity and provide more robust conclusions. Future research replicating the study should be conducted on larger, more diverse samples to enhance the validity and applicability of the findings.

Second, the study was limited to quantitative results, and it might have been important to include a qualitative component by collecting data through semi-structured interviews, focus groups, and classroom observations to gather in-depth and rich insights into the students' learning experiences with authentic videos and flipped classrooms. This could include exploring their vocabulary learning strategies, engagement, and social interactions.

Third, the paper narrows its focus to vocabulary acquisition only, which, while essential, could have been expanded to explore how other language skills (e.g., listening comprehension or speaking) benefit from captions in a flipped blended environment. Fourth, it might have been useful to explore other aspects besides vocabulary acquisition, such as the cultural and language challenges students may face in using authentic videos. Fifth, the analysis focuses on group-level outcomes, but individual variations within groups were not discussed. It may be useful to study the differences between learning groups in terms of learning from authentic videos in flipped classrooms, based on variables such as the level of social media use.

5. Recommendations of the study

In light of the results reached, the study put forth the following recommendations.

1. Making greater use of authentic videos presented via YouTube in teaching EFL vocabulary, especially videos provided by Ted Talk community.
2. Acting to select some authentic video clips in English language and supplying them with captions according to the foundations derived from dual coding and multimedia learning theory in order to improve the undergraduate students' learning of EFL vocabulary.
3. The need to apply blended learning approaches in general, and flipped blended learning in teaching and learning English language, especially vocabulary.
4. Encouraging students on self-learning of vocabulary using authentic videos by means of providing them with a list of video clips appropriate to their learning levels.
5. Provision of training for English language teachers on the use of flipped blended learning, captions, and authentic videos for English language teaching in general and vocabulary in particular.
6. Allocating face-to-face study time in teaching vocabulary to teaching activities that encourage students on the contextual, authentic, and collaborative uses of vocabulary through problem solving, role playing, and cooperative play activities.
7. Incorporating students-centered face-to-face classroom activities within the context of flipped classroom, such as role-playing, debates, and discussions on the vocabulary presented in the authentic videos.

6. Suggestions for further research

1. Replicating the present study using an experimental design involving four groups in order to compare the effectiveness of the four methods of introducing captions on vocabulary learning: full captions are used with one of them, keyword captions with the second, subtitles with the third, and the fourth group would watch authentic videos without captions or subtitles.
2. Replicating the present study with adding the training variable to the vocabulary learning strategy as accompanying activities to watch the authentic videos.
3. Investigating the effect of a suggested instructional design based on cognitive load and multimedia learning theories on the development of EFL learners' vocabulary.
4. Replicating the present study on another type of vocabulary, such as specialized vocabulary in ESP courses.
5. Examining the effect of authentic videos supplied with captions within a flipped blended learning environment on learning other English language skills, such as reading, writing, listening, speaking and grammar.
6. Conducting a qualitative study to explore the perceptions of students and teachers on the use of captions for teaching vocabulary in a flipped blended learning environment.

References

- Alghamdi, A. K., & Al Ahmed, S. (2018). Effective methods for teaching English vocabulary to Saudi female students. *Journal of Education and Learning*, 12(1), 118-125. <https://doi.org/10.11591/edulearn.v12i1.9125>
- Alshalan, K. (2019). Investigating EFL Saudi students' vocabulary improvement in micro-blogging on twitter at imam university. *International Journal of Linguistics, Literature and Translation*, 2(2), 290245. <https://doi.org/10.32996/ijllt.2019.2.2.18>.
- Altalhab, S. (2019). The vocabulary knowledge of Saudi EFL tertiary students. *English Language Teaching*, 12(5), 55-65. <https://doi.org/10.5539/elt.v12n5p5>
- Alyami, N. A. (2018). Vocabulary learning strategies employed by English and non-English undergraduate Saudi learners: Self-reported uses and perceived usefulness (Doctoral dissertation, University of Central Lancashire).
- Ashari, A., & Rahmati, N. A. (2019). The effect of full video captioning on EFL learners' listening comprehension. *Jurnal Penelitian, Pendidikan, dan Pembelajaran*, 14(11). <https://doi.org/10.1016/j.sbspro.2013.01.112>
- Awaad, S. M. O. E., & Ahmed, M. A. (2018). Using of authentic materials to enhance vocabulary learning strategies of learning vocabulary. *SUST Journal of Linguistic and Literary Studies*, 19(2), 181-199.
- Ayalew, S. (2019). Article review on the impact of blended learning on students' vocabulary enhancement. *Journal of Social Science Research*, 14, 3331-3336. <https://doi.org/10.24297/jssr.v14i0.8424>

- Babintseva, E., Kartseva, E., Spynu, L., & Tavberidze, D. (2023). Flipped classroom as an innovative technology for blended learning of professional English in higher education institutions. *Revista on line de política e gestão educacional*, e023056-e023056.
- Babu, K. S., & Rao, C. S. (2018). Prospects of using authentic material in teaching vocabulary at tertiary level. *IRAR*, 6(1), 604-607.
- Behroozizad, S., & Majidi, S. (2015). The effect of different modes of English captioning on EFL learners' general listening comprehension: Full text vs. keyword captions. *Advances in Language and Literary Studies*, 6(4), 115-121. <https://doi.org/10.7575/aiac.all.v.6n.4p.115>
- Bensalem, E. (2018). The efficacy of captions on students' incidental vocabulary acquisition. *Journal of Teaching and Teacher Education*, 6(1), 1-11.
- Benzidane, W. (2017). The effectiveness of authentic subtitled videos in enhancing students' vocabulary skills. (MA dissertation, Abdelhamid Ibn Badis Mostagnem University). Retrieved from: <http://e-biblio.univ-mosta.dz/handle/123456789/2662>
- Bjork Olivares, C. B. (2018). The impact of the use of authentic materials in the motivation and increased acquisition of business English skills and vocabulary by English for business students at "Universidad San Ignacio de Loyola". Retrieved from: <https://pirhua.udep.edu.pe/handle/11042/3279>
- Bohota, N. I. (2019). Flipped classroom: Teaching and learning of English language in the context of EFL (Doctoral dissertation, Brac University).
- Bouzraq, Y. & Om Alkhuyout, I. (2021). The importance of using practical significance indicators in the results of psychological and educational studies. *Journal of the Researcher in Humanities and Social Sciences*, 13(4), 55-62, pp. 60-61.
- Chen, Y. R., Liu, Y. T., & Todd, A. G. (2018). Transient but effective? Captioning and adolescent EFL learners' spoken vocabulary acquisition. *English Teaching & Learning*, 42(1), 25-56. <https://doi.org/10.1007/s42321-018-0002-8>
- Cornehl, K. (2019). The impacts of a flipped classroom in AP calculus AB (Order No. 13810613). Available from ProQuest Dissertations & Theses Global. (2268337597).
- Crystal, D. (2003). *English as a global language*. Cambridge university press.
- Djiwandono, P. (2018). Using authentic materials and vocabulary profiler to enhance vocabulary learning. *KLAUSA (Kajian Linguistik, Pembelajaran Bahasa, dan Sastra)*, 2(01), 1-13. <https://doi.org/10.1007/s42321-018-0002-8>
- Durbahn, M. (2019). Incidental vocabulary acquisition from documentary viewing: A study on the role of captions. *Arboles y Rizomas. Revista de Estudios Lingüísticos y Literarios*, 1(1), 75-96. <https://doi.org/10.35588/ayr.v1i1.3776>
- Ebadi, S., & Ghuchi, K. D. (2018). Investigating the effects of blended learning approach on vocabulary enhancement from EFL learners' perspectives. *I-Manager's Journal on English Language Teaching*, 8(2), 57-68. <http://dx.doi.org/10.26634/jelt.8.2.13981>
- Espinal Quispe, M., Castillo, A., & Rosa, C. (2019). *Blended learning to support a1 vocabulary and grammar level at the Bolivian Navy Language School* (Doctoral dissertation).

- Freidel, L. (2019). *A mixed methods case study: Understanding teacher preparation through a flipped classroom and reflection* (Order No. 13902680). Available from ProQuest Dissertations & Theses Global. (2279899905).
- Ghanbari, N., Esmaili, F., & Shamsaddini, M. R. (2015). The effect of using authentic materials on Iranian EFL Learners' vocabulary learning. *Theory and Practice in Language Studies*, 5(12), 2459-2468. <http://dx.doi.org/10.17507/tpls.0512.05>
- Graham, K., & Burke, K. (2014). Students' perceptions on a blended and flipped classroom. *International Journal of Process Education*, 6(1), 21-26.
- Havwini, T., & Wu, Y. T. (2019). The implementation of flipped classroom in EFL class: a Taiwan case study. *Journal of digital education, communication, and arts (DECA)*, 2(02), 79-88. <https://doi.org/10.30871/deca.v2i02.1536>
- Hsieh, Y. (2020). Effects of video captioning on EFL vocabulary learning and listening comprehension. *Computer Assisted Language Learning*, 33(5-6), 567-589.
- Ishikawa, Y., Akahane-Yamada, R., Smith, C., Murakami, M., Kondo, M., Kitamura, M., ... & Dantsuji, M. (2019). A flipped learning approach to university EFL courses. In *Advanced Methodologies and Technologies in Modern Education Delivery* (pp. 572-584). IGI Global. DOI: 10.4018/978-1-5225-2255-3.ch334
- Kanellopoulou, C., Kermanidis, K. L., & Giannakouloupoulos, A. (2019). The Dual-Coding and multimedia learning theories: film subtitles as a vocabulary teaching tool. *Education Sciences*, 9(3), 210. <https://doi.org/10.3390/educsci9030210>
- Kawinkoonlasate, P. (2019). Integration in flipped classroom technology approach to develop English language skills of Thai EFL learners. *English Language Teaching*, 12(11), 23-34. <https://doi.org/10.5539/elt.v12n11p23>
- Kim, J. R., & Kim, Y. H. (2019). The effects of input/output enhanced instructions on vocabulary and grammar gains in blended learning. *Linguistic Research* 36(Special Edition), 107-122. DOI: 10.17250/khisli.36..201909.005
- Kim, N. Y. (2019). Captions and Subtitles: Effects of different modes of text aids on EFL learners' vocabulary development and reading comprehension. *Saehan English Literature*, 61(3), 155-178.
- Kırmızı, Ö., & Kömeç, F. (2019). The impact of the flipped classroom on receptive and productive vocabulary learning. *Dil ve Dilbilimi Çalışmaları Dergisi*, 15(2), 437-449. <https://doi.org/10.17263/jlls.586096>
- Kruger, J. L. (2013). Subtitles in the classroom: Balancing the benefits of dual coding with the cost of increased cognitive load. *Journal for Language Teaching* 47(1), 29-53.
- Leveridge, A. N., & Yang, J. C. (2012). Affective states arising from the removal of captioning support in EFL multimedia environments. In *Proceedings of the 20th International Conference on Computers in Education ICCE* (pp. 628-632).
- Liu, C., Sands-Meyer, S., & Audran, J. (2019). The effectiveness of the student response system (SRS) in English grammar learning in a flipped English as a foreign language (EFL) class.

Interactive Learning Environments, 27(8), 1178-1191.
<https://doi.org/10.1080/10494820.2018.1528283>

- Mahdi, H. S. (2017). The use of keyword video captioning on vocabulary learning through mobile-assisted language learning. *International Journal of English Linguistics*, 7(4), 1-7.
<http://doi.org/10.5539/ijel.v7n4p1>
- Mayer, R. E. (2009). *Multimedia learning* (2nd ed.). Cambridge University Press.
- Mohammed, A. A., & Alwadai, M. A. M. (2019). Evaluating Saudi EFL secondary schools students' performance on Paul Nation's standardized vocabulary level tests. *Theory and Practice in Language Studies*, 9(5), 487-493. <http://dx.doi.org/10.17507/tpls.0905.01>
- Namaziandest, E., Neisi, L., & Momtaz, S. (2019). The effectiveness of flipped classroom model on listening comprehension among Iranian upper-intermediate EFL learners. *Journal of Applied Linguistics and Language Research*, 6(4), 129-139. <https://2u.pw/FyhxZF43>
- Nekoui, L. (2018). Investigate effect of video captioning on Iranian intermediate EFL learners' vocabulary acquisition. *International Journal of Informatics, Technology & Computers/International Journal of Zambrut*, 1, 150-160.
- Nuryadin, A., Karlimah, K., Lidinillah, D. A. M., & Apriani, I. F. (2023). Blended Learning after the Pandemic: The Flipped Classroom as an Alternative Learning Model for Elementary Classrooms. *Participatory Educational Research*, 10(3), 209-225.
- Özkal, C. (2019). *Flipped vocabulary learning among Turkish learners of English as a foreign language: A sequential explanatory mixed method study* (Doctoral dissertation, Middle East Technical University).
- Paivio, A. (1971). Imagery and language. In *Imagery* (pp. 7-32). Academic Press.
- Paivio, A. (2007). *Mind and its evolution: A dual coding theoretical approach*. Erlbaum.
- Peters, E., Heynen, E., & Puimege, E. (2016). Learning vocabulary through audiovisual input: The differential effect of L1 subtitles and captions. *System*, 63, 134-148.
<https://doi.org/10.1016/j.system.2016.10.002>
- Pullaguari Cano, N. D. (2019). *Authentic material activities to improve English vocabulary among students of tenth year "B" of basic education, afternoon session at Unidad Educativa Dr. Manuel Agustín Cabrera Lozano, in the city of Loja during the 2018-2019 school year* (Bachelor's thesis).
- Qian, H. A. O. (2018). A study on multimedia college English vocabulary teaching model based on dual-coding theory. *Journal of Lanzhou Institute of Technology*, (1), 28.
- Rahimi, M., & Allahyari, A. (2019). Effects of multimedia learning combined with strategy-based instruction on vocabulary learning and strategy use. *SAGE Open*, 9(2), 2158244019844081.
<https://doi.org/10.1177/2158244019844081>
- Ramezanali, N., & Faez, F. (2019). Vocabulary learning and retention through multimedia glossing. *Language Learning & Technology*, 23(2), 105-124.

- Retnaningsih, W., Nugroho, A., Van, D., & Al Amin, N. H. (2022). Booming the Vocabulary Acquisition by Using Flipped Classroom on EFL Learners' PPA (Performance, Perception and Acceptance). *Voices of English Language Education Society*, 6(2), 325-339.
- Romero Suárez, R. G. (2018). The influence of using authentic materials in vocabulary acquisition for students of third grade in Gabriel Garcia Moreno school (Bachelor's thesis, Guayaquil: ULVR, 2018).
- Shih, H. C. J., & Huang, S. H. C. (2019). College students' metacognitive strategy use in an EFL flipped classroom. *Computer Assisted Language Learning*, 1-30.
- Sinyashina, E. (2019). The effect of repetition on incidental legal vocabulary learning through long-term exposure to authentic videos. Retrieved from: <http://rua.ua.es/dspace/handle/10045/93110>
- Soltani, S., & Soori, A. (2015). The difference between the effectiveness of authentic and pedagogical films in learning vocabulary among Iranian EFL students. *Advances in Language and Literary Studies*, 6(1), 199-202.
- Sweller, J. (2009). What human cognitive architecture tells us about constructivism. In *Constructivist instruction* (pp. 139-155). Routledge.
- Sweller, J. (2011). Cognitive load theory. In *Psychology of learning and motivation* (Vol. 55, pp. 37-76). Academic Press.
- Thuy, K. (2019). Using the flipped classroom model as a vocabulary teaching aid for the new 'Tiếng Anh 11' to enhance EFL learning of students at a high school in Hanoi. In *VietTESOL International Convention 2019*.
- Umar, U., & Irmayanti, I. (2017). Improving students' vocabulary mastery by using authentic materials through communicative approach. *Ethical Lingua: Journal of Language Teaching and Literature*, 4(2), 151-164.
- Unissa, A., Gopakumar, A., & Rao, V. (2018). Exploring blended flipped classroom for syllabus coverage. *Journal of Engineering Education Transformations*, 32(2), 15-18.
- van der Zwan, N., & Afonso, A. (2019). Activating the research methods curriculum: A blended flipped classroom. *PS: Political Science & Politics*, 52(4), 749-753.
- Wong, K. M., & Samudra, P. G. (2019). L2 vocabulary learning from educational media: Extending dual-coding theory to dual-language learners. *Computer Assisted Language Learning*, 1-23.
- Yaacob, A., Shapii, A., Saad Alobaisy, A., Al-Rahmi, W. M., Al-Dheleai, Y. M., Yahaya, N., & Alamri, M. M. (2019). Vocabulary learning strategies through secondary students at Saudi school in Malaysia. *SAGE Open*, 9(1), 2158244019835935.
- Yan, Y. (2014). The effects of captions on learners' listening performance and vocabulary acquisition. *Journal of Jixi University*, (3), 29.
- Yavuz, F., & Ozdemir, S. (2019). Flipped classroom approach in EFL context: Some associated factors. *World Journal on Educational Technology: Current Issues*, 11(4), 238-244.

- Yeşilçınar, S. (2019). Using the flipped classroom to enhance adult EFL learners' speaking skills. *PASAA*, 58, 206-234.
- Yousofi, N., & Bashiri, S. (2023). An Exploration into EFL Learners' Vocabulary Learning in Flipped Classrooms. *Applied Linguistics Inquiry*, 1(1), 95-112.
- Yu, B. B. (2019). EFL students' perceptions of the flipped English language classroom: A case study. *International Journal of Learning and Teaching*, 5(2), 159-163.
- Zhang, G. (2019). Comparing traditional and blended learning methods for teaching Chinese vocabulary to primary 2 Thai students. *RSU International Research Conference*, 759-767.

Biographical Statement

معلومات عن الباحث

Dr. Mohammad Alolayan is an Assistant Professor of TESOL in the Department of English Language and Literature, College of Languages and Humanities, Qassim University. Dr. Alolayan received his PhD degree in Applied Linguistics (2019) from the University of Limerick. His research interests include applied linguistics, with a focus on SLA.

د. محمد العليان، أستاذ مساعد في تدريس اللغة الإنجليزية كلغة أجنبية في قسم اللغة الإنجليزية وآدابها بكلية اللغات والعلوم الانسانية في جامعة القصيم (المملكة العربية السعودية). حاصل على درجة الدكتوراه في اللغويات التطبيقية من جامعة لميرك عام 2019، تدور اهتماماته البحثية حول اللغويات التطبيقية واكتساب اللغة الثانية.

Email: m.alolaiyan@qu.edu.sa