



**Investigating the Effectiveness of Using Blended Learning
on Grade Ten (16-year-old) ESL Learners' Lexical Range
and Accuracy**

التحقق من فعالية وتأثير استخدام التعلم المدمج على الحصيلة والدقة اللغوية لطلاب
الصف العاشر (عمر 16 سنة)

by

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of the requirements for the degree of
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Abstract

The digital age has revolutionised the landscape of education, prompting a shift from traditional teaching methods to innovative approaches. This dissertation delves into the transformative potential of blended learning, focusing on its impact on the vocabulary range and accuracy of grade 10 students. The central objective of this study was to meticulously explore how blended learning influences students' vocabulary skills and their perceptions towards this blended educational model. Employing a comprehensive mixed-methods approach, this research integrated quantitative and qualitative data collection methods. Two sets of pre- and post-tests were administered, allowing for a quantitative assessment of the students' vocabulary acquisition. Furthermore, qualitative insights were gathered through in-depth interviews, providing a nuanced understanding of the students' attitudes and experiences with blended learning. The outcomes of this study revealed compelling evidence in favour of blended learning. The students engaged in blended learning activities exhibited a substantial improvement in their vocabulary range and accuracy compared to their counterparts exposed to traditional teaching methods. Moreover, the qualitative findings illuminated the positive attitudes students held towards blended learning, emphasising its interactive and engaging nature. This research has significant implications for both educators and curriculum designers. For educators, the study serves as a valuable guidepost, showcasing the effectiveness of blended learning in enhancing students' vocabulary skills. By integrating blended learning strategies, educators can create dynamic learning environments that cater to diverse learning styles, fostering improved vocabulary acquisition among students. Curriculum designers can draw upon these findings to develop innovative and adaptive curricula, aligning educational objectives with the interactive potential of blended learning. In essence, this dissertation not only contributes empirical evidence to the discourse on blended learning, but also underscores

its potential as a catalyst for educational advancement. By embracing the insights presented in this study, educators and curriculum designers are empowered to reshape the educational landscape, ensuring a more engaging and effective learning experience for students.

Keywords: blended learning, vocabulary range and accuracy, blended learning models, self-based learning

ملخص

لقد أحدث العصر الرقمي ثورة في مشهد التعليم، مما أدى إلى التحول من أساليب التدريس التقليدية إلى الأساليب المبتكرة. تتعمق هذه الأطروحة في الإمكانيات التحويلية للتعليم المدمج، مع التركيز على تأثيره على الحصيلة اللغوية ودقة استخدام الكلمات لطلاب الصف العاشر. كان الهدف الرئيسي من هذه الدراسة هو الاستكشاف الدقيق لكيفية تأثير التعلم المدمج على مهارات الطلاب في المفردات وتصوراتهم تجاه هذا النموذج التعليمي المدمج. باستخدام نهج شامل مختلط الأساليب، دمج هذا البحث أساليب جمع البيانات الكمية والنوعية. تم إجراء مجموعتين من الاختبارات القبليّة والبعدية، مما يسمح بإجراء تقييم كمي لاكتساب الطلاب للمفردات. علاوة على ذلك، تم جمع رؤى نوعية من خلال مقابلات متعمقة، مما يوفر فهمًا دقيقًا لمواقف الطلاب وتجاربهم مع التعلم المدمج. كشفت نتائج هذه الدراسة عن أدلة دامغة لصالح التعلم المدمج. أظهر الطلاب المشاركون في أنشطة التعلم المدمج تحسنًا كبيرًا في نطاق مفرداتهم ودقتها مقارنة بنظرائهم الذين تعرضوا لأساليب التدريس التقليدية. علاوة على ذلك، سلطت النتائج النوعية الضوء على المواقف الإيجابية التي يتخذها الطلاب تجاه التعلم المدمج، مؤكدة على طبيعته التفاعلية والجاذبة. هذا البحث له آثار كبيرة على كل من المعلمين ومصممي المناهج الدراسية. بالنسبة للمعلمين، تعد الدراسة بمثابة دليل إرشادي قيم، حيث تعرض فعالية التعلم المدمج في تعزيز مهارات المفردات لدى الطلاب. من خلال دمج استراتيجيات التعلم المدمج، يمكن للمعلمين إنشاء بيئات تعليمية ديناميكية تلبي أنماط التعلم المتنوعة، وتعزز اكتساب المفردات المحسنة بين الطلاب. ويمكن لمصممي المناهج الاستفادة من هذه النتائج لتطوير مناهج مبتكرة وقابلة للتكيف، ومواءمة الأهداف التعليمية مع الإمكانيات التفاعلية للتعلم المدمج. في جوهرها، لا تساهم هذه الأطروحة بالأدلة التجريبية في الخطاب حول التعلم المدمج فحسب، بل تؤكد أيضًا على إمكانياته كمحفز للتقدم التعليمي. ومن خلال تبني الأفكار المقدمة في هذه الدراسة، يتم تمكين المعلمين ومصممي المناهج الدراسية من إعادة تشكيل المشهد التعليمي، مما يضمن تجربة تعليمية أكثر جاذبية وفعالية للطلاب.

الكلمات المفتاحية: التعلم المدمج، مدى ودقة المفردات، نماذج التعلم المدمج، التعلم الذاتي.

Dedication

To my beloved wife, Fawzia Mohamed, and my cherished children, Yassin and Yara, your unwavering support, patience, and understanding have been the cornerstones of my academic journey. Throughout the countless hours spent researching, writing, and navigating the complexities of this dissertation, your love and encouragement have been my greatest source of strength. I am deeply grateful for the sacrifices you have made and the moments we've shared, which have enriched this challenging pursuit. Your presence in my life is a constant reminder of what truly matters, and for that, I dedicate this work to you.

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Chapter 1: Introduction

1.1 Background and Overview

More research has been done on blended learning, or the blending of traditional and online learning, with a focus on how it can be used to teach English to non-native speakers. Numerous research studies (Akbarov, Gönen, & Aydoğan, 2018; Adas & Bakir, 2013; Grgurovic, 2011) have explored the utilisation and efficacy of blended learning in the context of English as a second or foreign language (ESL/EFL). Educators have been endeavouring to ascertain the superior learning modality between traditional onsite teaching and online learning, acknowledging that each approach has its own merits and limitations. According to Zhang and Zhu (2018), discovering an appropriate setting that accommodates all students can be challenging. The blended learning approach creates an educational setting that is not only accessible and flexible, but also fosters active participation, interactivity, encouragement, and inspiration among both educators and learners. This method allows for a dynamic and engaging learning experience, encouraging students to interact with the content and each other, thus promoting a stimulating and motivating atmosphere for learning (Khazaei & Dastjerdi, 2011; Neumeier, 2005; Picciano, Dziuban, & Graham, 2013).

Blended learning has emerged as a proposed solution to address this issue by incorporating the strengths of both learning modalities. It aims to integrate efficient and effective teaching methods, intelligent learning tools, and interactive patterns of student–teacher engagement. However, the process of implementing blended learning is not straightforward, as it involves various distinct methodologies and complex terminology. Over time, the term "blended learning" has undergone changes, resulting in multiple variations that have made it difficult to comprehend the concept both in terms of meaning and practical implementation. Over the past two decades, with the extensive integration of technology in

education, blended learning has experienced significant growth and has emerged as a crucial and prominent trend in the field of education (Tayebinik & Puteh, 2013; Yoon & Lee, 2010). Within the realm of education, the idea of blended learning is far from new, and it is intricately connected to diverse educational fields including distance learning, educational technology, inventive ESL teaching techniques, and computer-assisted language learning (CALL), as indicated by Graham (2006). This approach has deep roots in these areas, illustrating its relevance and applicability across multiple domains in the educational landscape. As described by Garrison and Vaughan (2008), blended learning is a pedagogical approach that leverages the advantages of in-person and online learning, offering the potential for creating innovative instructional methods. Consequently, blended learning has the capacity to serve as a replacement for conventional in-person lectures or entirely online instruction. Moreover, the incorporation of various learning techniques, digital platforms, and educational tools within the blended learning framework promotes collaboration, active engagement, and cooperative learning among students, whether in traditional classroom settings or while learning remotely (Zhang & Zhu, 2018; Zhang, Song, & Burston, 2011).

The flexibility of online learning components in blended learning allows learners to select the most suitable time and location for their learning activities, without the obligation of being confined to specific groups or individuals to collaborate with. Furthermore, Zhang and Zhu (2018) emphasised that although it can be difficult to establish an environment that caters to the needs of every student, the utilisation of a blended learning strategy facilitates the creation of an environment where students can engage in interactions with both their peers and teachers. Moreover, blended learning ensures convenient accessibility, enabling students to engage in learning activities at any time and from any location. Additionally, blended learning serves as a source of inspiration for teachers, providing them with increased opportunities to

assist and support their students (Sharma & Barrett, 2007). Importantly, numerous research studies examining the implementation of blended learning in ESL/EFL classrooms (Adas & Bakir, 2013; Shih, 2010; Ghazizadeh & Fatemipour, 2017; Grgurovic, 2011) have demonstrated its ability to enhance various English language skills, improve the learning atmosphere (Yoon & Lee, 2010; Liu, 2013; Banditvilai, 2016), and boost student engagement and participation (Ja'ashan, 2015; Shih, 2010; Grgurovic, 2011). Several research studies have indicated that blended learning allows students to improve their language abilities, such as speaking, listening, writing, and reading, more efficiently than traditional in-person teaching or solely online methods (Shih, 2010; Grgurovic, 2011; Shih, 2010).

Having a broad range of vocabulary is incredibly significant for ESL students. A varied collection of words is essential for effective communication, comprehension, and skilled expression in the language they are learning (Ahamed & Othman, 2019; Abbdulqader & Murad, 2017; Khazaei & Dastjerdi, 2011). Having a wide vocabulary range empowers ESL students to effectively articulate their thoughts and ideas, comprehend spoken and written texts with greater depth, and actively participate in meaningful dialogues with both native speakers and fellow language learners (Sokmen, 1997; Pazio, 2010; Lightbown & Spada, 2013). Developing a varied vocabulary not only improves the overall language proficiency but also aids in the acquisition of the language itself. It serves as a gateway to numerous prospects, including academic achievements, professional advancement, and cultural assimilation (Khazaei & Dastjerdi, 2011). Thus, nurturing and expanding vocabulary holds the utmost importance in the language learning journey of ESL students. Similarly, accurate vocabulary usage is of the utmost significance for ESL students as they embark on their language learning journey (Khazaei & Dastjerdi, 2011; Schmidt & Hegelheimer, 2004; Lightbown & Spada,

2013). It pertains to the skill of utilising words and phrases with precision, ensuring their appropriate meaning, context, and grammatical correctness.

The precise utilisation of vocabulary empowers ESL students to effectively articulate their thoughts and ideas, facilitating clear and effective communication with others. It serves to prevent misunderstandings and fosters improved comprehension and mutual understanding between the speaker and the listener (Pazio, 2013). Possessing a solid command of precise vocabulary exemplifies an elevated level of language proficiency, showcasing the ability of students to adeptly choose and employ words and phrases to effectively convey their intended message. It serves as evidence of their linguistic competence and mastery. Within academic environments, the accuracy of vocabulary holds paramount importance for various tasks, including essay writing, delivering presentations, and engaging in discussions. ESL students who possess precise vocabulary are better prepared to comprehend and actively engage with academic texts, eloquently articulate their arguments, and excel in their academic pursuits. The precise utilisation of vocabulary aids ESL students in comprehending and navigating cultural intricacies within their target language. It empowers them to express themselves appropriately in specific cultural contexts, promoting their integration into the community and facilitating a deeper understanding of the cultural nuances.

The foundation of any language lies in its vocabulary, and even individuals who exhibit proficiency in grammar may face challenges in communication if they do not possess a diverse range of vocabulary. ESL students often encounter the frustration of struggling to recall the correct term during a conversation, primarily attributed to their limited vocabulary range and lack of accuracy. Recent research has highlighted several benefits of utilising technology-based educational materials for effective verbal and written communication, including vocabulary acquisition and retention. Consequently, numerous higher education

institutions have incorporated blended learning as an additional tool to enhance students' vocabulary. The practice of utilising online resources for teaching vocabulary is not entirely novel. Pazio (2013) concurs that educators can have a pivotal role in helping students broaden their array of study methods and become more adaptable in their language learning strategies. Consequently, students can enhance their language skills outside the classroom by actively participating in a wide spectrum of educational resources, including online assignments, projects, independent research, discussion forums, video clips, and blogs.

1.2 Statement of the Problem

In the last twenty years, blended learning has become a significant educational approach, especially in the field of second language acquisition. Additionally, governmental bodies such as The Ministry of Education, the Emirates Schools Establishment (ESE), Abu Dhabi Education Council (ADEC), and the Knowledge and Human Development Authority (KHDA) acknowledge the importance of educators adopting innovative teaching methods that align with smart learning and educational technology. This recognition includes the integration of blended learning, emphasising its relevance in modern educational practices. The traditional face-to-face learning model typically adheres to a fixed schedule, limiting flexibility for students who desire personalised learning at their own preferred pace (Alqahtani, 2010; Khazaei and Dastjerdi, 2011; Liu, 2013). Within large classroom environments, teachers face difficulties in providing individualised attention to every student, which can result in the neglect of specific learning needs and requirements (Anderson, 2000; Zhang, Song, and Burston, 2011; Zhang and Zhu, 2018). Conventional classrooms often face limitations in terms of the available resources and teaching materials, which restricts the range and depth of educational content accessible to students. Because of time limitations, teachers may encounter challenges in delivering comprehensive and prompt feedback on student

assignments, impeding students' capacity to monitor their progress and make essential enhancements (Anderson, 2000; Rhem, 2012; Marsh, 2012). Furthermore, ESL learners often encounter difficulties with a limited vocabulary range and lack of accuracy, primarily stemming from the fact that many students do not engage in regular reading practices (Adas & Bakir, 2013; Ahamed and Othman, 2019; Conklin and Schmitt, 2008; Khazaei and Dastjerdi, 2011; Lightbown and Spada, 2013; Laufer, 1998). Furthermore, due to the constraints of limited class time, students often find themselves unable to practise and apply the target vocabulary in meaningful sentences and paragraphs. Additionally, the tediousness and time-consuming nature of memorising word lists can often lead to student frustration and disengagement, causing them to lose motivation and cease their studies (Sokmen, 1997; Wang, Zou, and Xing, 2014).

1.3 Study Purpose and Research Questions

The objective of this research is to examine the impact of incorporating blended learning techniques into the instruction of English vocabulary on the academic achievements of grade 10 students attending a secondary school in the United Arab Emirates. The study intends to explore how the integration of blended learning methods influences the students' learning outcomes and overall performance in the specific context of teaching English vocabulary at the secondary level. To refine the research aim, the researcher formulated the following questions:

1. What is the effect of incorporating blended learning on the vocabulary range among grade 10 students (aged 16) in a secondary school in the UAE?
2. What is the effect of incorporating blended learning on the vocabulary accuracy among grade 10 students (aged 16) in a secondary school in the UAE?
3. What are the students' perceptions and attitude towards blended learning?

1.4 Significance of the Study

In recent years, rapid technological advancements have led to significant changes in the world (Weiser, 2015). Recognising the significance of technological progress is crucial for society, as it can profoundly influence people's lives (Dalloway et al., 2014). Similar to numerous other nations, Arab countries place a strong emphasis on the importance of ICTs within their development goals. They are seen as vital components in the realms of education, communication, and technology transfer (Hallouda & Ghonaimy, 1998). Acknowledging the pivotal role of information and communication technology (ICT) and significant investments made towards its development, the United Arab Emirates (UAE) achieved remarkable success in the Network Readiness Index (NRI) as reported in the Global Information Technology Report 2010–2011 by Dutta and Mia (2011). The UAE not only secured the first position regionally, but also ranked 24th globally. This achievement solidifies the UAE's standing as one of the most technologically advanced nations in the Middle East. Notably, the UAE's information technology sector, positioned at the core of the rapidly expanding global market, experienced substantial growth, soaring from USD 6.9 billion in 2003 to USD 9.5 billion in 2005, and further surpassing USD 11.4 billion in 2008 according to ESCWA (2011) reports. This significant progress underscores the country's commitment to technological innovation and advancement.

The motivation for this research arose from various reasons. Most notably, there has been a significant gap in recent studies examining vocabulary acquisition through blended learning, especially concerning grade 10 students (aged 16) in the UAE. While a study focused on grade 12 students explored the impact of blended learning on their language proficiency (Al Noursi, 2020), a distinct research endeavour was conducted at Ajman University to evaluate the influence of blended learning on academic performance (Alsalhi et al., 2021).

This scarcity of research for the specific grade level and context in the UAE underscored the need for this study. In addition to this, there is a scarcity of research exploring the relationship between blended learning and the acquisition of vocabulary skills. Additionally, this method offers English teachers a contemporary framework for language education, encouraging the evolution of strategies and teaching techniques for English as a second language (ESL) that can replace conventional in-person learning with blended approaches (Abdulqader, Murad, & Abdulghani, 2017; Ahamed & Othman, 2019; Khazaei and Dastjerdi, 2011; Bielawski & Metcalf, 2003; Besser, Flett, & Zeigler-Hill, 2000). Not only does this approach broaden the learning horizons for students, but it also provides significant insights for curriculum designers, educators, and policymakers in the ESL education sector. It urges them to embrace progressive technologies and push the boundaries of teaching methodologies, fostering a dynamic and innovative educational landscape (Baster & Bran, 2013; Chou, Block, & Jesness, 2012). In essence, this approach not only benefits ESL learners, but also acts as a catalyst for positive transformations in the broader realm of language education. Blended learning research plays a critical role in propelling educational practices forward by delving into, refining, and enhancing the application of blended learning models and strategies (Hewett, 2016; Liu, 2013; Marsh, 2012; Pizo, 2010; Poon, 2013). Through research in this domain, educators and researchers gain insights into successful instructional methods, pedagogical approaches, and strategies for integrating technology effectively, all of which foster learner-centred education (Shih, 2010; Yoon & Lee, 2010).

1.5 Structure of the Dissertation

This dissertation is structured into six main sections. The initial chapter provides an overview of the study, detailing the problem statement, study purpose and objectives, research inquiries, study significance, and the dissertation's structure. Moving to the second chapter, it

conducts an in-depth exploration of pertinent literature on blended learning and fundamental educational theories. This involves a conceptual analysis, a comprehensive examination of the theoretical framework, and a review of related studies. The third chapter outlines the research methodology employed. In the fourth chapter, a thorough analysis of both the quantitative and qualitative data takes place, with the subsequent presentation of findings. Chapter five serves as the conclusion, discussing the findings' implications and providing practical application recommendations. Additionally, it acknowledges the study's limitations and proposes potential areas for future research.

Chapter 2: Literature Review

2.1 Overview of the Chapter

The second chapter digs deeply into a thorough investigation of the theoretical foundations and conceptual frameworks that support this research study. This chapter explores important ideas including Graham's Blended Learning Model, the Substitution, Augmentation, Modification, Redefinition (SAMR) Model, and the Technology Acceptance Model by drawing on a rich tapestry of educational theories. It also explores the history of the Lexical Approach, which emphasises the value of teaching vocabulary in chunks and how it fits into the process of learning languages. A substantial portion of this chapter explores constructivism, a tenet of modern educational theory, and how it shapes meaningful learning experiences. Additionally, the chapter dives into the subtleties of student motivation and attitudes, critical factors that affect how successful any educational attempt is. Together, these theoretical frameworks offer a solid framework for comprehending the intricate interaction between technology, pedagogy, and student involvement, laying the groundwork for a careful examination and synthesis of the study findings in the following chapters.

2.2 Conceptual Framework

It is crucial to establish clarity for the reader regarding the various terms utilised throughout the dissertation. Below, you will find definitions of essential terminology employed in this study, providing readers with a comprehensive grasp of the specific language and concepts used in the research.

2.2.1 Blended Learning

Blended Learning involves the seamless incorporation of various delivery methods, instructional models, and learning approaches, all facilitated by open communication (Heinze and Procter, 2004). Additionally, it combines conventional in-person learning with online

education, merging these two distinct educational paradigms (Bonk and Graham, 2006; Ahamed & Othman, 2019; Abbdulqader & Murad, 2017; Khazaei & Dastjerdi, 2011).

2.2.2 Blended Learning Models

Staker and Horn (2012) introduced four blended learning models that are widely used in K-12 education. One of these models, as described by Staker and Horn (2012), is **the rotation model**, where students transition between various learning methods, including online learning. This approach includes whole-class instruction, group projects, and individual tutoring. Another model is **the flex model**, where the majority of content is delivered online, and students follow personalised schedules. In this setup, teachers or other adults provide in-person support when needed, through activities like small-group instruction, group projects, and individual coaching. **The self-blend model** allows students to integrate one or more online courses with their traditional classes to enhance their learning. Lastly, the **enriched-virtual model** requires students to divide their time between physical attendance at a campus and engaging in remote learning through an online platform (Graham, 2006; Graham, Henrie, & Gibbons, 2014).

2.2.3 English as a Second Language (ESL)

ESL pertains to individuals who acquire English after learning their primary language during infancy within their home environment (Richards and Schmidt, 2010).

2.2.4 English as a Foreign Language (EFL)

EFL denotes the process of learning English in a structured classroom environment, typically without frequent opportunities for practical application outside of the classroom setting (Richards and Schmidt, 2010).

2.2.5 Synchronous Learning

Synchronous learning encompasses a range of educational methods and learning experiences that occur concurrently, extending beyond the constraints of a specific physical setting. It commonly pertains to diverse forms of real-time, non-face-to-face learning, such as televisual, digital, and online instruction, where students actively participate in immediate learning interactions with instructors, peers, or colleagues despite their physical absence. Examples of synchronous learning encompass activities like educational video conferences, interactive webinars, live discussions conducted through chat platforms, and real-time broadcasted lectures (Richards and Schmidt, 2010; Graham, 2006; Alqahtani, 2010; Khazaei and Dastjerdi, 2011; Liu, 2013).

2.2.6 Asynchronous Learning

Asynchronous learning denotes diverse educational methods and learning processes that occur at varying times and locations. This term is predominantly employed to characterise various forms of digital and online education, wherein students partake in self-paced learning through resources like pre-recorded video lessons or gamified learning activities, free from the necessity of in-person or immediate engagement. Nevertheless, asynchronous learning encompasses a wide array of instructional interactions, including teacher–student email correspondence, virtual discussion boards, and course-management systems designed to streamline instructional content and communication, among numerous other potential manifestations (Richards and Schmidt, 2010; Graham, 2006; Alqahtani, 2010; Khazaei and Dastjerdi, 2011; Liu, 2013)

2.2.7 A Learning Management System (LMS)

LMS is a type of computer program or web-based technology used to design, carry out, and evaluate a particular learning program. An LMS often gives teachers the resources they

need to produce and distribute content, track student involvement, and evaluate student growth. Additionally, it can give students access to interactive tools including online forums, video conferencing, and threaded discussions (Abdulqader, Murad, and Abdulghani, 2017; Ahamed & Othman, 2019).

2.2.8 Self-Paced Learning

Self-paced learning allows individuals to learn at their own convenience and according to their own schedule. It eliminates the requirement to complete assignments or learn simultaneously with others. Instead, learners can progress through topics or segments at their own pace, moving on to the next one when they are ready. Traditional classroom environments have traditionally been more prevalent compared to self-paced learning, which allows learners to study independently. In recent times, self-paced instruction has gained increasing popularity, driven by the shift in education from traditional models to the internet (Alqahtani, 2010; Khazaei and Dastjerdi, 2011; Liu, 2013; Abdulqader, Murad, & Abdulghani, 2017; Ahamed & Othman, 2019).

2.3 Theoretical Framework

Incorporating technology into our daily lives has become unavoidable, making it imperative to integrate it into teacher training programmes. This is essential for developing the necessary teaching skills that enhance learning and instruction in the 21st century (Finger, Proctor, & Albion, 2010). In the past, students were limited to outdated books due to the high costs associated with updating them. However, technology has simplified the process of updating software and educational materials, making it more accessible (Slykhuis and Lee, 2016). With internet-enabled devices, students and teachers can now connect globally. This interconnectedness allows learners to communicate across the world, sharing crucial information and learning experiences.

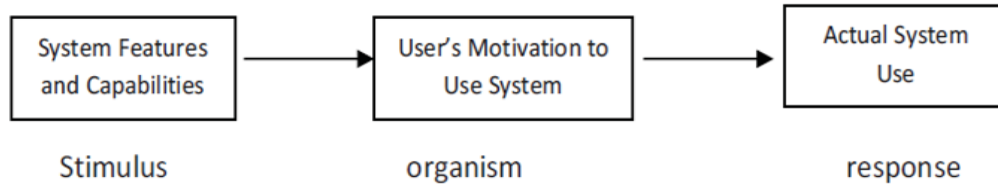
2.3.1 Models

Different models and ideas have been applied over the past few decades to investigate the use of technology in the classroom, concentrating on the roles, readiness, and skills of instructors. In essence, these ideas and models act as tools to support instructors' integration efforts. According to research, there are many different learning theories, with constructivism, behaviourism, and cognitivism being the three main subcategories (Mahini, Forushan, & Haghani, 2012). The most important models and theories for integrating technology into classrooms will be briefly discussed in this section, along with how they affect students' learning and provide teachers with the essential expertise.

2.3.1.1 Technology Acceptance Model. As technology demands grew in the 1970s and organisations encountered more difficulties in adopting systems, the prediction of system usage became a topic of interest for numerous researchers. However, the majority of studies conducted during that period were unable to establish dependable measures that could effectively explain the acceptance or rejection of systems (Davis, 1989). In 1985, Fed Davis introduced the Technology Acceptance Model (TAM) during his doctoral thesis at the MIT Sloan School of Management (Davis, 1985). According to Davis's proposal, the usage of a system can be understood or predicted by examining the user motivation, which is influenced by an external stimulus comprising the features and capabilities of the actual system (Figure 1).

Figure 1

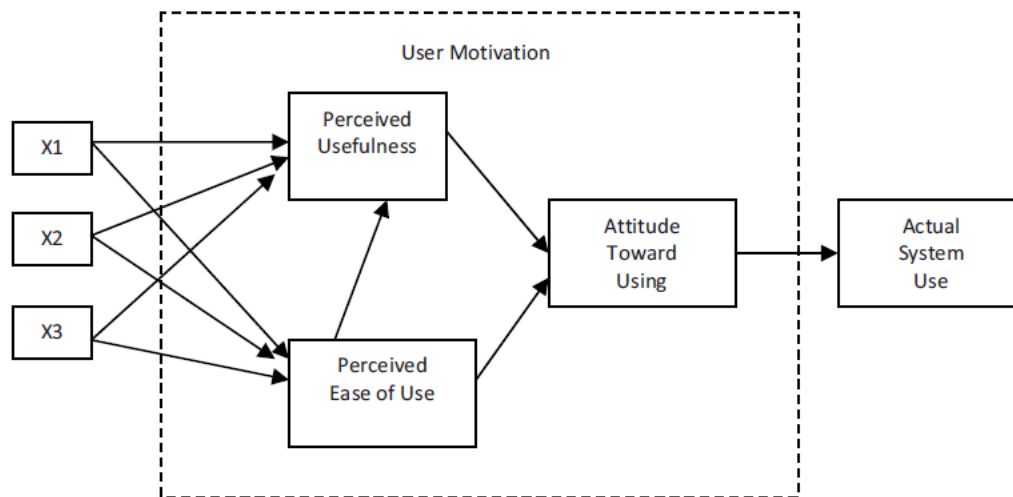
Conceptual Model for Technology Acceptance (Davis, 1985, p. 10)



Davis further enhanced his conceptual framework and presented the Technological Acceptance Model, as illustrated in Figure 2.

Figure 2

Original TAM Proposed by Fred Davis (Davis, 1986, p. 24)



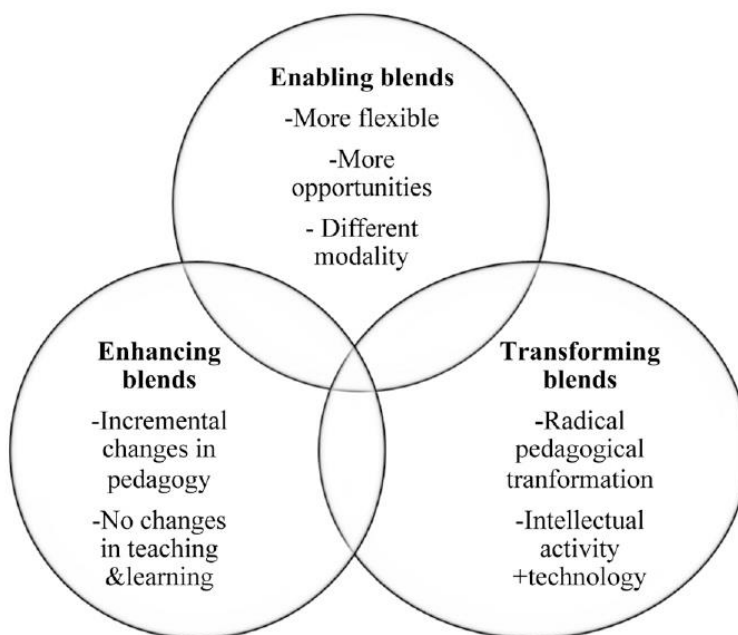
According to Davis (1985), users' motivation is influenced by factors such as their perception of the system's ease of use, perceived usefulness, and attitude towards using the system. Davis proposed that the user's attitude towards a system played a crucial role in determining their actual utilisation or rejection of the system. The user's attitude, in turn, was believed to be influenced by two significant beliefs: the perceived usefulness and perceived ease of use. Perceived ease of use directly affected perceived usefulness. Lastly, it was

hypothesised that both of these beliefs were directly influenced by the characteristics of the system design.

2.3.1.2 Graham's Blended Learning Model. According to Graham (2006), it was proposed to categorise blended learning models based on four dimensions, four levels, and three types. Graham introduced four dimensions for classifying blended learning models, which include spatial characteristics (face-to-face or virtual), temporal characteristics (synchronous or asynchronous), sensory richness (ranging from high with all senses engaged, to low with text-only), and humanness (ranging from high human interaction to low human interaction with more reliance on technology). Another aspect of classification, distinct from the previous one, is brought forth by Graham through the consideration of levels. These levels encompass the activity, course, programme, and institution. The utilisation of blended methods for specific learning activities differs significantly from the implementation of blended learning as a comprehensive approach at the institutional level. Lastly, Graham introduced three distinct categories of blends based on their purpose. These categories include enabling blends, which prioritise accessibility and flexibility; enhancing blends, which aim to supplement traditional pedagogy; and transformative blends, which strive to bring about pedagogical changes. As an example, Graham envisioned transformative blends as a means for learners to actively participate in constructing their own knowledge (Figure 3).

Figure 3*Blended Learning System Model (modified from Graham, 2006, 2007)*

Machumu, H., Almasi, M. & Zhu, C. (2018). Context-based blended learning models and implementation in Sub-Saharan Africa: A literature review. *New Trends and Issues Proceedings on Humanities and Social Sciences* [Online]. 5(1), 190-199. Available from: www.prosoc.eu



Source: <https://www.researchgate.net/publication/325573618>

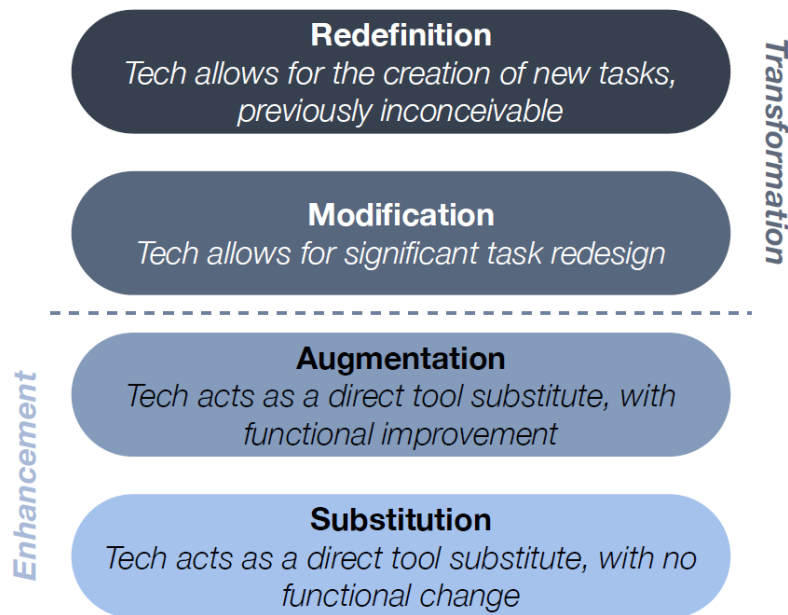
2.3.1.3 Substitution Augmentation Modification Redefinition Model. A

fundamental framework for incorporating technology into modern educational settings is the Substitution Augmentation Modification Redefinition (SAMR) model, developed by Ruben Puentedura. Utilising suitable technology enhances teachers' effectiveness, transitioning them from basic to advanced proficiency levels. In today's rapidly evolving, technology-driven world, every student becomes a catalyst for technological interventions, replacing and enhancing conventional teaching methods. The usage and integration of technical tools like cell phones, iPads, Kindles, smart tabs, etc., with traditional teaching methods is covered in SAMR in order to combine both of these streams and increase the efficacy of the teaching techniques. According to Chou, Block, and Jesness (2012), SAMR is a way to make it easier

for staff members and students to become proficient in cutting-edge software and consumer technologies in order to advance 21st century abilities. SAMR proposes a structural model that outlines the phases of these transitions and seeks to introduce each technological intervention as a new task in and of itself. Generally divided into "Enhancing" and "Transforming", SAMR falls into the following four stages within these two broad categories:

Figure 4

SAMAR's Four Stages



Note: (Ruben R. Puentedura, As We May Teach: Educational Technology, From Theory into Practice, 2009)

The term "substitution" refers to the integration of technology into the traditional classroom system in which the technology (digital) functions as a superior replacement for the analogue teaching methods and procedures already in use. The framework's realisation component is this. For instance, students can utilise the voice thread app to make a presentation that invites audience participation and annotations.

The term "augmentation" refers to the various technology modalities that can be utilised directly or indirectly to support and aid the overall educational process. It is thought to be a practical enhancement. For instance, students can engage with others using the Google Doc comment tool, or they can utilise Google Earth to "visualise" geography and tag certain spots.

Modification is necessary in order for the technology to play its part, necessitating a change in the procedures and methods already in place. The technology utilised influences how tasks are designed. In order to add audio to stories, for instance, students can utilise e-audiobooks.

Redefinition enables educators to design new paths, streams, and activities while taking advantage of the technological advancements that were before unimaginable. Use a word processing program rather than paper and a pencil, for instance (SFUSD, 2016). In the initial two stages, technology enhances the learning process, whereas in the top two stages, it transforms learning activities and experiences by modifying and redefining them (Chou, Block, & Jesness, 2012). According to SAMR (Puentedura, 2015), the utilisation of technology can influence student outcomes. A research study conducted by Angelo (2017) investigated the opinions of six teachers and three administrators regarding the SAMR model's implementation in classrooms. The study revealed that educators following the SAMR model consistently chose a specific level for technology integration and had a preferred level. It also concluded that the SAMR model prompted teachers to enhance their practices by encouraging them to integrate technology at a more advanced level.

2.3.2 Background of the Lexical Approaches in Language Learning

The lexical approach in language teaching is based on the belief that the fundamental elements of language learning and communication are not grammar, functions, notions, or

other instructional units, but rather lexis, which encompasses individual words and their combinations. Lexical approaches in language teaching are rooted in the recognition of the crucial role played by the lexicon in language structure, second language acquisition, and language usage. Specifically, these approaches emphasise the significance of acquiring and employing multiword lexical units or "chunks" as integrated and indivisible entities. Linguistic theory has also acknowledged the increased significance of vocabulary in the realm of linguistic description. The emphasis in formal transformational/generative linguistics has shifted from typically placing more emphasis on syntax to placing more emphasis on the lexicon and its organisation, coding, and structure. The significance of lexical units has been emphasised in research on both first and second language acquisition. These units have been referred to by various terms, such as "holophrase" (Corder, 1973), "prefabricated pattern" (Hakuta, 1974), "gambits" (Keller, 1979), "speech formulae" (Peters, 1983), and "lexicalised stems" (Pawley and Syder, 1983). Various language learning approaches have been put forth, highlighting the pivotal role of vocabulary and lexical units in the process of learning and teaching. These approaches include *The Lexical Syllabus* (Willis, 1990), *Lexical Phrases and Language Teaching* (Nattinger and DeCarrico, 1992), and *The Lexical Approach* (Lewis, 1993). The progress made in computer-based language studies, commonly known as corpus linguistics, has resulted in the creation of extensive databases of lexically focused texts that are easily accessible in educational settings. Moreover, the emergence of computer resources has facilitated the organisation and instruction of the lexicon.

2.3.2.1 The Lexical Approach by Michael Lewis. The lexical approach was primarily introduced as a method of language instruction that focuses on teaching language through vocabulary and lexical elements. According to Michael Lewis (2008), the creator of the lexical approach, the underlying principle of this approach is based on the recognition that a

significant portion of the vocabulary comprises various types of multi-word expressions. The central focus of the Lexical Approach is to prioritise communication based on meaning in language learning. Consequently, there is a strong emphasis on vocabulary as the primary conveyer of meaning. The concept of a broad vocabulary extends beyond individual words to encompass lexical units. The core idea is that fluency is built upon the acquisition of an extensive repertoire of pre-established and partially established lexical chunks, which serve as the foundation for linguistic distinctiveness and creativity (Conklin & Schmitt, 2008; Abdulqadir, Murad, and Abdulghani, 2017; Ahamed and Othman, 2019). According to the lexical method, learners should put more effort into learning and applying meaningful language chunks like collocations, fixed phrases, and multi-word expressions than only concentrating on specific words or grammar rules. Learners can improve their fluency and usage of natural language by memorising and applying these lexical blocks. Lexis, which represents the essence or central component of language, has historically been overlooked in language teaching, playing a secondary role (Laufer, 1998; Khazaei and Dastjerdi, 2011). However, contemporary linguistic analysis proposes that language is not merely a combination of structure and vocabulary, but is primarily composed of diverse forms of lexical phrases (Lightbown and Spada, 2013; Ilyas and Salih, 2011; Khazaei and Dastjerdi, 2011). The lexical approach is to assist students in building a wide range of flexible vocabulary that will enable them to converse effectively and assuredly in everyday situations.

Abdulqadir, Murad, and Abdulghani (2017) investigated the incorporation of lexical chunks in university classroom instruction and textbooks. He asserted that these chunks are stored as unexamined units in the mental lexicon and are fundamental elements for creating meaningful discourse. Other research has demonstrated that formulaic expressions are processed more rapidly compared to non-formulaic ones (Conklin & Schmitt, 2008; Jiang &

Nekrasova, 2007; Ahamed and Othman, 2019). This suggests that these expressions are likely stored in the mind as indivisible lexical units. Ying (2006) conducted research to find a more practical method for enhancing fluency in English by teaching lexical chunks. His conclusion was that this teaching approach aids students in grasping authentic English usage, potentially transforming current language education and propelling students towards English fluency. Another study by Ilyas and Salih (2011) experimentally examined the impact of the lexical approach on second-year university students' achievement in English composition writing. They discovered that this method proved advantageous for these students.

2.3.3 Constructivism

The constructivist revolution in education has a strong foundation in the works of Piaget and Vygotsky, renowned educational theorists. Both Piaget and Vygotsky highlighted the importance of cognitive transformation, stating that meaningful learning occurs when existing understandings are challenged and restructured in response to new information (Piaget and Inhelder, 1969; Vygotsky, 1978). The constructivist theory places learners in a central role, granting them autonomy to construct their own understanding rather than passively receiving information from the teacher. Learners acquire knowledge through personalised observation, cognitive processing, and interpretation, reflecting their individual perspectives (Smith, 2010; Slavin, 2014). Contemporary constructivist thinking strongly relies on the theories of Vygotsky, which have been utilised to endorse instructional approaches in the classroom that prioritise cooperative learning, project-based learning, and discovery-based methods (Smith, 2010; Christie, 2005; Mvududu and Burgess, 2012; Mahn & John-Steiner, 2013). Vygotsky's theories have had a substantial impact on educational methods thanks to four essential principles: *social learning*, *the zone of proximal development*, *cognitive apprenticeship*, and *mediated learning*.

2.3.3.1 Social Learning Theory. Vygotsky, a renowned psychologist and educational thinker, emphasised that learning is a social activity. He advocated for children's learning to occur through interaction with adults and older, wiser peers (Smith, 2010; Slavin, 2014; Trawick-Smith, 2014; Mahn & John-Steiner, 2013; Seifert, 2013). Albert Bandura is the developer of the social learning theory, a psychology concept that places a strong emphasis on how social contact and observation play a part in the formation of knowledge and behaviour. According to the social learning hypothesis, people learn not only through their own direct experiences, but also from watching and copying the actions, behaviours, and results of others (Hall & Greeno, 2008; Daniels, Cole, & Wertsch, 2007; Gredler & Shields, 2008). According to the theory, learning happens as a result of a cognitive process called modelling, in which people watch how others behave, remember it, and then mimic or replicate it as needed in the future.

2.3.3.2 Zone of Proximal Development (ZPD). Lev Vygotsky developed the idea of the zone of proximal development (ZPD). It describes the discrepancy between a learner's present level of skill or knowledge and their potential level of development under the direction and assistance of a more experienced person, such as a teacher or peer. The ZPD acknowledges that students can do more with help than they can on their own (Smith, 2010; Slavin, 2014; Daniels, Cole, & Wertsch, 2007). It highlights the significance of offering learners the right amount of challenge and scaffolding to aid in their cognitive development. The ZPD places a stronger emphasis on what students can accomplish with support and social engagement than what they can just do on their own (Vygotsky, 1978; Hall & Greeno; Salvin, 2014). The activities or tasks that learners perform in the zone of proximal development are just slightly above their current level of competence but are manageable with help from others. Support in this area could come in the form of instructional techniques, cues, modelling,

criticism, or group learning activities. As a result of this supervised contact, students can eventually achieve a greater degree of independent functioning by gradually internalising and mastering new knowledge or skills (Salvin, 2014).

2.3.3.3 Cognitive Apprenticeship. Cognitive apprenticeship is an approach where a student gradually acquires knowledge by interacting with an expert, who can be an adult or a more knowledgeable peer. In various fields, individuals entering a profession often undergo an apprenticeship process, where they work closely with seasoned professionals who serve as mentors, providing guidance, advice, and gradually familiarising the newcomers with the standards and practices of the profession. Cognitive apprenticeship attempts to acquire in-depth comprehension, problem-solving abilities, and domain-specific competence. Cognitive apprenticeship helps the transmission of information and abilities from experts to novices by giving learners the chance to watch and participate in real-world activities while being guided by professionals (Slavin, 2014).

2.3.3.4 Mediated Learning. Vygotsky's focus on scaffolding, which involves mediated learning, holds significant importance within present-day constructivist philosophy. Contemporary interpretations of Vygotsky's theories emphasise the notion that students should be presented with demanding and authentic tasks, accompanied by adequate support, rather than being instructed in isolated pieces of information that are expected to eventually lead to complex tasks. In mediated learning, the mediator involves the learner in intentional and meaningful interactions that foster higher-order thinking abilities like problem-solving, critical thinking, and metacognition. To enhance the learner's comprehension and promote cognitive development, the mediator may ask questions, give explanations, offer prompts, and encourage reflection (Slavin, 2014; Mahn & John-Steiner, 2013; Berger, 2012).

2.4 Previous Studies

2.4.1 *Blended Learning and Language Skills*

A significant number of advantages have been observed by the majority of researchers who have investigated the blended learning approach and its impact on enhancing language skills (Vernadakis, Giannousi, Derri, Michalopoulos, & Kioumourtzoglou, 2012; Adas & Bakir, 2013; Ahamed and Othman, 2019; Conklin and Schmitt, 2008; Khazaei and Dastjerdi, 2011; Lightbown and Spada, 2013; Akbarov, Gönen, & Aydoğan, 2018; Ahamed & Othman, 2019; Al Noursi, 2020; Liu, 2013). Zhang, Song, and Burston (2011) conducted a comparative study involving two student groups at a Chinese university to explore the effectiveness of vocabulary acquisition using mobile phones. Through a comparison of exam results, it was found that students who utilised mobile phones for studying a selected vocabulary list showed greater efficiency in language learning compared to those who relied on traditional written materials. In a similar vein, Khazaei and Dastjerdi (2011) carried out a study comparing the impacts of conventional teaching methods and blended instruction on the acquisition of vocabulary in English as a foreign language (EFL) learners. The primary objective of the study was to explore the potential utilisation of SMS (Short Message Service) in conjunction with the blended teaching approach for enhancing second language (L2) vocabulary instruction. The evaluation focused on assessing the students' capacity to recognise and recall vocabulary words. The findings indicated that the group of students who received instruction through a blended teaching method demonstrated superior performance on tests compared to the group of students who received instruction using a conventional approach.

Additionally, the impact of blended learning on the enhancement of English language learners' reading abilities was investigated by Ghazizadeh and Fatemipour (2017). The primary objective of the study was to explore the potential of blended learning in enhancing

the reading proficiency of sixty intermediate-level Iranian English as a foreign language (EFL) learners. The participants were divided into two groups through a random assignment process. The experimental group underwent a combination of classroom instruction and blended learning that specifically targeted the development of their reading skills. In contrast, the control group followed a more conventional approach to English teaching. Prior to and following the intervention, both groups were assessed to evaluate the reading proficiency of the learners. Through the utilisation of a t-test for comparison between the two groups, the researchers discovered a statistically significant improvement in the reading proficiency of the EFL learners who were exposed to blended learning. In essence, Ghazizadeh and Fatemipour (2017) concluded that the implementation of blended learning directly contributes to the enhancement of language learners' reading skills. The findings of the study also led the researchers to assert that blended learning not only facilitates the process of learning, but can also be effectively implemented in English reading classes. Many research papers have consistently found that blended learning has been associated with favourable effects on students' academic performance (Zhang & Zhu, 2018; Zhang, Song, & Burston, 2011; Vernadakis, Giannousi, Derri, Michalopoulos, & Kioumourtzoglou, 2012; Yigit, Koyun, Yuksel, & Cankaya, 2013; Tayebinik & Puteh, 2013; Shih, 2010; Khazaei & Dastjerdi, 2011; Hewett, 2016; Ahamed & Othman, 2019; Akbarov, Gönen & Aydoğan, 2018).

In the literature, there is a limited number of empirical studies that have reported no impact of blended learning instruction on students' academic performance (Chang et al., 2014; Alshwiah, 2009; Tosun, 2015). At Arabian Gulf University, Alshwiah (2009) evaluated the outcomes of a blended learning method that had been suggested and evaluated students' attitudes towards the English language. A control group and an experimental group were created from the participants. The findings revealed no statistically significant difference

between the two groups in terms of academic performance or attitudes towards the English language. Similar to this, Tosun (2015) looked into the effects of using a mixed learning method when teaching English vocabulary. The study also delved into the perspectives of English language learners regarding the use of blended learning for acquiring English vocabulary. The research involved a total of 40 students who were enrolled in two classes within an intensive English programme located in Turkey. The participants were split into two separate groups: an experimental group that learned the target language using a blended learning strategy, and a control group that learned the same vocabulary through the conventional face-to-face teaching methodology. Following the lesson, both groups participated in vocabulary tests to gauge their understanding of the intended terminology. The results revealed that, despite the fact that students expressed satisfaction with blended learning as a method of instruction, using this strategy had no beneficial effects on the students' vocabulary knowledge. Tosun (2015) noted that their results were at odds with those of numerous other research that had connected the use of blended learning to the growth of linguistic skills. Tosun went on to say that the results could be explained by the study's brief duration.

As a result, research demonstrates that blended learning can be used to enhance language proficiency among English language learners in the contexts of English as a second language (ESL) and English as a foreign language (EFL). The research under consideration shows that language instructors can use blended learning as a framework for education to support the growth of a variety of abilities, including reading, writing, speaking, and vocabulary knowledge.

2.4.2 Students' Motivation, Engagement, Attitude, and Behaviours

Undoubtedly, among the frequently mentioned advantages of blended learning in the ESL/EFL context is its positive impact on students' motivation, satisfaction, and engagement (Yigit, Koyun, Yuksel, & Cankaya, 2013; Seffner & Kepler, 2015; Khazaei & Dastjerdi, 2011; Khan, 2014; Hewett, 2016; Heinze and Procter, 2004; Ghazizadeh & Fatemipour, 2017). Typically, language learners demonstrated high levels of satisfaction when a combination of traditional face-to-face instruction and online learning approaches were employed (Adas & Bakir, 2013; Ahamed & Othman, 2019; Akbarov, Gönen, & Aydoğan, 2018; Ali, 2012; Al Noursi, 2020; Alqahtani, 2010). The effectiveness of blended learning lies in the skilful integration of both teaching approaches, which in turn inspires students to actively participate and immerse themselves in the language learning process (Seffner & Kepler, 2015; Khazaei & Dastjerdi, 2011). In order to better understand how blended learning might help English learners develop their language abilities and create learning autonomy, Banditvilai (2016) conducted a study in an Asian institution. A total of 60 undergraduate students who were pursuing an English major participated in the study in an ESP (English for Specific Purposes) class. The study's main goal was to examine how students felt about blended learning in the context of learning the English language. The researcher used a variety of tools, including e-lessons, a questionnaire, and achievement exams, to gather data. These resources were used to compile pertinent data for the study. The study's findings revealed that integrating an online approach alongside traditional classroom instruction enhances the language skills of language learners. Furthermore, the study discovered that blended learning can be effectively utilised to promote autonomous learning and enhance learners' motivation. Banditvilai noted that one of the appealing aspects of the blended learning approach for language learners is the flexibility it offers, allowing students to learn and practise the language at their convenience and in any

location they desire. In conclusion, the research asserted that blended learning is a valuable concept that can be effectively employed to achieve teaching goals with greater success (Banditvilai, 2016, p. 227). Comparable findings have been demonstrated in various other scholarly articles (Yigit, Koyun, Yuksel, & Cankaya, 2013; Seffner & Kepler, 2015; Khazaei & Dastjerdi, 2011; Khan, 2014; Hewett, 2016; Heinze and Procter, 2004; Ghazizadeh & Fatemipour, 2017).

Research in the field indicates that technology holds the promise of boosting students' self-esteem. Hurd's study in 2006 suggested that students exposed to technology tend to exhibit higher self-esteem compared to their peers who do not have access to technology in their learning environments. Technology appears to have a favourable effect on students' self-confidence, self-esteem, and attitude towards learning, according to a study by Bester and Brand (2013). Studies have also demonstrated that technology can boost student attendance and lower the dropout rate (Apple, 2002). Technology is crucial for involving and encouraging students, according to a number of studies. The usage of technology by pupils, according to Hurd (2006), improves their enthusiasm in learning. The use of technology, according to Pollak (2009), boosts students' intrinsic motivation. It supports student motivation and attention, helps them work more successfully and independently, helps them take greater ownership of their own learning, and it promotes collaborative learning. Additionally, interactive materials better attracted students' attention (Balanskat, Blamire, & Kefala, 2006). Similar to this, Richardson (2000) claimed that the use of information and communications technology in schools improved student conduct, attitudes, and abilities in ICT-rich classrooms, as well as increased levels of autonomy, teamwork, perseverance, and individualised instruction. Korte and Hüsing (2006) found that 86% of European teachers agreed that utilising computers and the internet in the classroom improves students'

enthusiasm and focus. When students use ICT, they often work more productively and independently, taking more ownership of their own education. Students, teachers, and parents agree that ICT has a positive impact on students' learning, subject-related performance, and foundational skills (including reading, writing, and maths), according to Balanskat, Blamire, and Kefala (2006). The Middle East as a whole has parallels, according to research.

The study conducted in 2006 by Tubaishat, Bhatti, and El-Qawasmeh focused on university students from Jordan and the United Arab Emirates. The results showed that embracing technology has increased students' drive and self-assurance, enhanced their technical and communication skills, encouraged them to collaborate using ICT tools, and given them the freedom to be more independent and get over their shyness. Bester and Bran (2013) looked into how technology affects concentration, the degree of success, and motivation in a classroom context. When the average levels of attention of a group of individuals using technology were compared to a group that did not use technology, remarkable levels of disparities were observed. Furthermore, a strong correlation between motivation and concentration was discovered, as well as one between concentration, attention, and motivation when considered as independent factors with achievement as the dependent variable (Bester & Bran, 2013).

The integration of technology in education has played a crucial role in ensuring equal opportunities for all learners. Educational institutions vary widely in resources due to regional economic disparities. However, technology use has bridged this gap, particularly for students in low-income areas. By incorporating technology, students from economically disadvantaged regions acquire essential skills and advantages in the learning process. According to Loucky and Ware (2016), the adoption of technology levels the playing field between schools in affluent and less affluent areas. Technology has also motivated students by providing

immediate feedback during the learning process. Moreover, it has proven beneficial for students with special needs. For instance, it enhances reading and writing skills, and activates specific brain areas for students with dyslexia, as demonstrated in research by Pollak (2009). Additionally, technology aids in managing students with behavioural issues by promoting better classroom cooperation.

2.4.3 The UAE Educational Context

When examining studies within the UAE context, it became evident that there is a lack of comprehensive formal research concerning the technological preparedness of teachers in the UAE. But there were several reports that brought up this issue, including newspaper articles and materials from the Abu Dhabi Education Council and the Knowledge and Human Development Authority (KHDA) in Dubai. For instance, The National (2014) reported that the Mohammed bin Rashid Smart Learning Program was launched in April 2012 by His Highness Sheikh Mohammed bin Rashid Al Maktoum, Vice President and Prime Minister of the United Arab Emirates and Ruler of Dubai. Significant investments were made as part of his UAE Vision 2021 plan, which aimed to transform the country into a knowledge-based economy by integrating technology into the educational system. By 2019, pupils will have access to high-speed 4G networks and smart tablets thanks to a budget of AED 1 billion. Initially, 11,000 students were fully integrated into the programme's use of Smart Learning methodologies while it was being deployed in 123 schools for the 2013–2014 academic year (Pennington, 2014). By 2019, all public schools are to be included in the initiative's coverage. According to the official Smart Learning website, this programme's goal is to give Emirati students the knowledge and abilities that will improve their academic performance and competitiveness, and position them for future leadership roles (The Mohammed Bin Rashid Smart Learning Program, 2015). The programme's director general, Mr Mohammed Gheyath, declared that the

main objective is to transform education in the UAE, with the hope of achieving one of the top educational systems in the world (Pennington, 2014).

This research on how blended learning affects students' vocabulary development is highly relevant to the subject of education. It is critical to comprehend how blended learning affects students' vocabulary development as technology continues to change the face of education. This research will significantly advance the body of knowledge by examining this particular issue, among other things. It first tries to fill a significant gap in the existing research by offering empirical evidence on the efficiency of blended learning techniques in improving vocabulary skills. This study will identify the blended learning environments' most effective tactics through a thorough analysis and comparison, providing useful information for educators looking for evidence-based practices. Furthermore, this study hopes to deepen our understanding of how traditional teaching techniques and digital tools might work together to improve language learning outcomes by examining the subtle interaction between technology-mediated learning and vocabulary acquisition. The study's findings may ultimately influence curriculum development, teaching strategies, and the integration of educational technology, resulting in more effective vocabulary instruction and a richer learning environment for students in the digital age.

In conclusion, the integration of language-focused tactics within a blended learning environment has the potential to revolutionise student outcomes. This potential is highlighted by the synthesis of ideas on technology, blended learning, vocabulary acquisition, and constructivism. Using constructivist pedagogy and digital resources, instructors can design engaging lessons that accommodate a range of learning preferences. The significance of acknowledging vocabulary as a key building element in language development has been underscored by this assessment of the literature. Through the use of technology and linguistic

immersion, blended learning methods immerse students in a rich language environment where vocabulary development goes beyond memorisation to become an essential component of their communicative skill.

This study contributes significantly to the existing body of literature on language education, technology integration, and blended learning by offering a nuanced exploration of the impact of vocabulary instruction in the digital age. By focusing on the intersection of technology, blended learning methodologies, and vocabulary acquisition, this research addresses a critical gap in the literature. The findings of this study are expected to provide valuable insights for educators, curriculum developers, and policymakers. Firstly, the study aims to offer practical guidelines and evidence-based recommendations for effectively integrating vocabulary instruction within blended learning environments, equipping educators with innovative strategies to enhance language acquisition. Secondly, the research outcomes are anticipated to shed light on the cognitive processes involved in vocabulary acquisition in technologically augmented settings, thereby deepening our understanding of how learners engage with and internalise vocabulary knowledge in digital contexts. Moreover, this study is poised to inform future research endeavours, serving as a foundational framework for scholars interested in exploring the intricate dynamics of technology-mediated language learning. By delving into these intersections, this study aspires to enhance the quality of language education and contribute meaningfully to the ongoing discourse surrounding effective pedagogical practices in the digital era.

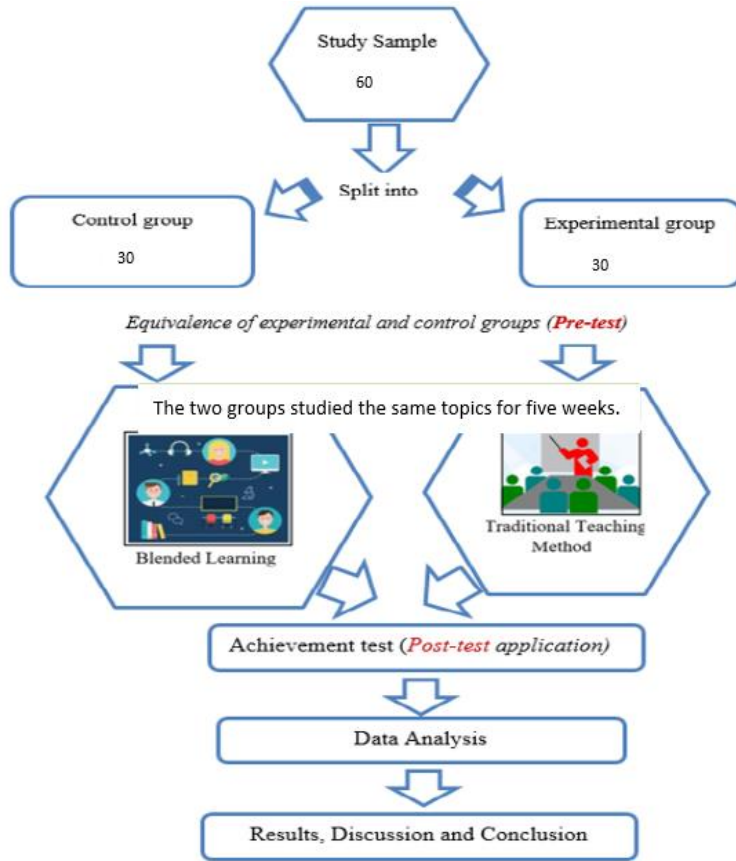
Chapter 3: Methodology

3.1 Research Approach

This research had a specific focus on assessing how the blended learning approach affected students' vocabulary range and accuracy. Additionally, it aimed to explore students' attitudes and perceptions regarding this teaching method. Given the complexity of the research questions and the necessary data, the researchers opted for a mixed-method approach, incorporating both pre- and post-achievement tests along with semi-structured interviews. Figure 4 depicts the experimental design of the study. In the control group, the vocabulary is taught through direct teaching, following a traditional teaching approach. On the other hand, the experimental group was instructed using blended learning. The teaching of the material took place in August and September 2023/2024. The teaching topics and vocabulary utilised in the study are sourced from the students' English textbooks and <http://www.englishprofile.org/> to effectively enhance their vocabulary range and accuracy.

Figure 5

Study Procedures Prepared by the Researcher



Furthermore, a significant advantage of semi-structured interviews lies in their flexibility, permitting both the interviewer and interviewee to modify questions by deleting, editing, or rephrasing them if they are deemed inappropriate (Creswell, 2012). This allowed the study participants to share their opinions openly and bypass questions they preferred not to answer.

3.2 Study Variables

3.2.1 Independent variables

The two teaching methods serve as the independent variables in this context:

- a) Blended learning strategy

- b) Traditional method (face-to-face teaching and learning)
- c) Pre-test (before intervention)
- d) Post-test (after intervention)
- e) Variables of students (their academic performance in English)

3.2.2 Dependent variables

The study measured the English vocabulary achievement scores of the students in study groups at two different times (pre-test and post-test). It also examined the experimental group's attitudes towards learning English through blended learning.

3.3 Educational Materials

The researcher actively worked on creating educational computer software for the experimental group with an emphasis on integrating blended learning techniques into the curriculum. The goal of this program was to smoothly incorporate technologically improved learning opportunities into the framework of education. Several trustworthy online platforms, including <https://lms.moe.gov.ae/>, <https://moe.alefed.com/>, and <https://www.myon.com/>, were used to support online English learning. These platforms offered a solid digital foundation for engaging and interactive learning. The Learning Management System (LMS) platform was rigorously updated with PowerPoint presentations and relevant video clips for usage in class. Students were given specific activities according to the learning objectives and were instructed to access these materials on the LMS. Additionally, in order to build a deeper comprehension of the language, students were encouraged to write sentences and paragraphs using the newly learned vocabulary. Additionally, the discussion forum on the platform offered students a digital place for the expression of their ideas and opinions, as well as for meaningful interaction. Through this strategy, students showed independence in their learning process as they independently carried out academic assignments using blended learning approaches,

improving their overall learning experience and language ability. Regular assessments were incorporated into the research design, in addition to active engagement in the creation of the computerised educational program and the use of online platforms to conduct the study. These assessments, which included quizzes, interactive activities, and group projects, were varied in nature and were meant to gauge students' comprehension, capacity for critical thought, and teamwork. Both on the online platform and during class discussions, students received thorough feedback on their performance, generating a continual feedback loop that aided them in their learning process.

3.4 Creating a Blended Learning Course

In order to teach online successfully, the English teacher and the researcher used the following steps to prepare the online course:

3.5 Identify the Lessons That Will Be Delivered Online

The researcher and the English teacher looked through the course to determine the parts that could be effectively conveyed and explored using online resources, such as videos, discussion forums, and collaborative projects. In addition, they also evaluated the availability of the online resources that aligned with the lessons content and identified suitable websites, educational platforms, and digital material that could support the online delivery. Moreover, the English teacher prepared the timetable in a way that allowed him to use the flipped classroom teaching with blended learning (Table 1).

Table 1*Blended Learning Class Weekly Timetable*

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	Online	In-class	Online	In-class	In-class		
Week 2	Online	In-class	Online	In-class	In-class		
Week 3	Online	In-class	Online	In-class	In-class		
Week 4	Online	In-class	Online	In-class	In-class		
Week 5	Online	In-class	Online	In-class	In-class		

3.5.1 Write a Detailed Lesson Plan for Each Online Lesson

The lesson plan included the stages, time, procedures, interaction, teaching strategies, and the technology needed for achieving the lessons' objectives in order to enhance the effectiveness of online instruction and promote a meaningful and engaging learning experience. It also ensured that the teacher had a clear roadmap to follow and helped him maintain a logical flow throughout the lesson. Moreover, the online lesson plans considered strategies to keep students engaged and actively participating. It allowed the teacher to incorporate a variety of interactive activities, multimedia resources, and opportunities for collaboration, promoting a dynamic and engaging learning experience (Appendix E).

3.5.2 Prepare the Online Content

Asynchronous and synchronous online classes were prepared to allow students to attend classes from anywhere, communicate regularly with their teacher, and make connections with their classmates. Pre-recorded videos were prepared, which students could watch at their own pace. Embedded questions were added to these videos to make sure that students paid attention and answered the questions. Synchronous online lessons were delivered

via Microsoft TEAMS and students were encouraged to work in groups by using the breakout rooms.

3.5.3 Design Engaging Tasks and Activities

Student-focused tasks were carefully designed to actively involve students in the lessons and boost their motivation. Furthermore, these activities fostered more constructive interactions between the students and their teacher, leading to improved proficiency in learning the second language and maintaining ongoing learning prospects such as research projects and creating videos.

3.5.4 Creating Formative and Summative Assessment Tests

To ensure students' attentiveness and comprehension during both in-person lectures and online videos, the teacher implemented regular quizzes and distributed handouts. Recognising the potential challenges of online learning, where distractions and internet issues may lead to dropout rates and reduced focus, the teacher incorporated continuous concept checking questions to verify the students' understanding of the material presented.

3.5.5 Organising the Learning and Management System (LMS)

The teacher provided clear instructions to the students about how the learning and management system works, what was expected from them, and how they could achieve their goals. Additionally, the learning content was divided into well-structured modules in order to make it easy for the learners to progress from one topic to another.

3.6 Instrumentation

3.6.1 The Placement Tests and the Achievement Tests

The objective of this study is to investigate the influence of blended learning on the vocabulary range and accuracy of 16-year-old grade ten students. To address the research questions, the researcher modified the pre-test and post-test from the vocabulary section of the

EmSAT exam to assess the effectiveness of blended learning in enhancing students' vocabulary outcomes. The items focused on vocabulary evaluation to gauge students' proficiency in comprehending and appropriately employing high-frequency words necessary for effective communication in an English-speaking environment. The main reference for the vocabulary content is predominantly the English Vocabulary Profile, available at www.englishprofile.org. The word list has been carefully reviewed to ensure that the selected vocabulary is culturally appropriate and relevant within an academic context. Each test comprises 25 multiple-choice questions, with one mark awarded for each correct answer. The computer will monitor and allocate time for each section and subsection of the test. Test-takers will be able to view the remaining time available during the examination.

3.6.1.1 Validity and Reliability of the Tests. As the fundamental conceptual framework, the researcher used the vocabulary part from earlier EmSat Achieve English Proficiency examinations, which are based on the Common European Framework of Reference for Languages (CEFR). Despite the EmSAT exam's widespread acceptance and recognition in the UAE, little is known about its reliability and validity. Consequently, the researcher made an effort to determine the reliability and validity of the tests used in this study:

- **Content Validity:** The researcher established a clear definition of the construct to be measured by the test, ensuring that the test items align with the intended construct and comprehensively cover the content domain. Furthermore, a meticulous review of the test items was conducted to ensure their relevance, representativeness, and comprehensiveness.

- **Face Validity:** The researcher effectively communicated the test's purpose and objectives to the intended test-takers, providing a clear and transparent explanation of what the test intends to measure and its significance. The test instructions, items, and response options were carefully formulated in clear and understandable language, avoiding the use of technical jargon or complex terminology to prevent confusion among test-takers.
- **Test Reliability:** Reliability pertains to the level of consistency or dependability with which a test evaluates a particular trait. To qualify as reliable, an exam or assessment should yield consistent outcomes. It means that a test taker should obtain a similar score regardless of the circumstances, such as the method, location, or timing of the test, within reasonable limits. Therefore, in order to verify the reliability of the tests and their ability to produce consistent results, both tests were administered to a group of 30 tenth-grade students from a different school. Subsequently, the scores obtained from both tests were compared to ensure that they align closely with each other, indicating their reliability.

To enhance the validity and reliability of the tests, they were submitted to a panel consisting of curriculum and assessment specialists, as well as experienced teachers. This step aimed to gather expert opinions and insights regarding the content, structure, and overall quality of the tests. By involving professionals with relevant expertise, it ensured that the tests were evaluated thoroughly, and any potential issues or improvements were identified, ultimately strengthening their validity and reliability (Appendix A).

3.6.2 Interviews

The study's qualitative information came from semi-structured interviews with the experimental group students that also included some free-form inquiries to discover more about their perspectives on blended learning. The semi-structured interview was chosen for this study because it allows for open-endedness, which may be necessary to provide a better explanation on the answers provided by the interviewees (Dornyei, 2007). In order to confirm the conclusions and themes drawn from the gathered data, the researcher also used the member checking technique. This procedure was essential in guaranteeing the accuracy and authenticity of the research by presenting the preliminary findings to the participants and giving them a chance to review the researcher's interpretation (Creswell, 2012). The participants were able to verify through member verification whether their experiences were accurately portrayed and whether the researcher's interpretations were consistent with their own experiences. Any contradictions or incorrect interpretations might be found and fixed through this interactive feedback loop, improving the study's conclusions. Additionally, member checking improved the study's transparency by letting the participants see how their input was transformed into important discoveries.

3.6.3 Sampling

To delve deeply into the effects of utilising a blended learning method on the vocabulary skills of English as a second language (ESL) learners, the researcher employed a mixed-methods approach. This comprehensive strategy combined qualitative and quantitative methods, allowing for a thorough assessment of how this blended approach influenced the range and accuracy of ESL students' vocabulary. By integrating both qualitative insights and quantitative data, the study aimed to provide a holistic understanding of the impact of blended learning on ESL students' language proficiency. This approach ensured a well-rounded

analysis, capturing the nuances and depth of the phenomenon under investigation. This approach allowed for a comprehensive understanding of the subject, aligning with the principles of holistic analysis as emphasised by Creswell (2012). Homogeneous sampling, a form of purposeful sampling, involves selecting individuals who share a distinct characteristic within a specific subgroup to participate in a study (Creswell, 2012).

Table 2

Participant Demographics Table

Number of participants	Age	Grade	Gender	CEFR
60 participants	16 years old	10	Males	A2+ and B1

Given this, the current study utilised a purposive and homogeneous sampling method, specifically targeting a group of 60 students from two grade ten advanced classes, all of whom were 16 years old and actively participated in the research (Table 2). These ESL students share common attributes, such as being of the same age and belonging to the same school stream. They were also taught by the same teacher. Moreover, the researcher took precautions to eliminate any students with special needs (SEN) or high achievers from the study, aiming to ensure that any advancements observed can be directly attributed to the implementation of blended learning. Until applying the study, the researcher conducted a pre-test for the two groups to evaluate the participants' vocabulary range and accuracy.

Table 3*Independent T-Test for Control and Experimental Group on Pre-Test*

t-test	Number	Statistics	df	p	Mean difference	SE difference
Pre-test part 1 (vocabulary range)	30	-0.512	29.0	0.612	-0.167	0.325
Pre-test part 2 (vocabulary accuracy)	30	-1.63	29.0	0.115	-0.533	0.328

Table 3 presents the results of two independent t-tests conducted on two different sets of data. Here is what each part of the table represents: 1) the t-statistics for the first pre-test part (vocabulary range) is (-0.512), which measures the difference between the sample mean and the population mean in terms of standard deviations. In the same row, the degree of freedom (df) for this test is (29.0), which represents the number of values in the final calculation of a statistic that are free to vary. In addition, the probability value (p-value 0.612) associated with the t-statistics indicates the probability of observing a t-statistics as extreme as -0.512, or more extreme, assuming that there is no significant difference between the groups. A p-value of 0.612 suggests that there is a 61.2% that the observed difference occurred by random chance. Furthermore, the mean difference (-0.167) represents the average difference in vocabulary range scores between the groups. A negative value indicates that, on average, the first group scored 0.167 points lower than the second group. Moreover, the standard error of difference (SE difference 0.325) measures the variability of the difference between the two groups, in which smaller values suggest more precise estimates. On the other hand, the

second-row pre-test vocabulary accuracy shows the t-statistics (-1.63). Additionally, the probability value associated with the t-statistic, which is 0.115, suggests that there is an 11.5% chance that the observed difference occurred by random chance. The mean difference that represents the average difference in vocabulary accuracy scores between the groups is -0.533. A negative value indicates that, on average, the second group scored 0.533 points higher than the first group. In summary, the t-statistic value quantifies the distinction between the means of the two groups in terms of standard deviations. In this instance, the negative sign signifies that the control group's means are lower than those of the experimental group. However, it's important to note that these disparities, as indicated by -0.512 and -1.63, are relatively minor. Moreover, the p-value represents the likelihood of observing a t-statistic as extreme as, or more extreme than, the one computed from the sample data, assuming that the null hypothesis holds true. This suggests that no significant distinctions were identified between the two research groups before initiating the experimental study. This assessment was carried out as a prerequisite for implementing the quasi-experimental design to ensure the comparability of the results.

3.6.4 Procedures of the Study

This research employs a mixed-method approach, incorporating both qualitative and quantitative methods, to investigate the varying ways Emirati students learn vocabulary items through different learning models (traditional and blended). The study aims to explore how blended learning influences students' vocabulary range and accuracy. The study was conducted over a span of five weeks at the start of the academic year (2023–2024) in a secondary school situated in Dubai, United Arab Emirates. At the onset of the first term, students took a vocabulary test to evaluate their present language proficiency level. The gathered outcomes were regarded as the pre-test results. The control group studied the

identical two units using the conventional face-to-face teaching approach, while the experimental group used blended learning strategies. The experimental group's pupils were given instructions on how to engage fully in the blended learning activities. This orientation covered a variety of topics, such as how to access their electronic workbook via the Learning Management System (LMS), how to use the class blog, how to use drop boxes for activities, and other LMS features. Additionally, the students were familiarised with the virtual learning environments utilised for collaborative activities. They were introduced to online assessment tools like the Quizlet, Kahoot, and Quizziz applications, and were instructed to register for each program. The teacher established classes on these assessment platforms to monitor the students' online progress. The e-learning activities and tools utilised by the experimental group were designed to motivate the students to practise newly acquired language elements at their own pace. Alongside the textbook, supplementary resources such as videos, relevant websites, a discussion board, an electronic wall (Padlet), Office Forms, and Google Docs for collaborative tasks and unit theme projects were introduced during the five weeks. Conversely, during in-class sessions, the teacher prioritised communicative activities by facilitating pair and group work, fostering a collaborative environment. The students in the experimental group were provided with clear guidelines regarding the expectations for the blended learning component of their course, which included the mandatory completion of all activities on a weekly basis. The duration of time dedicated to blended learning activities varied depending on the individual student's motivation to complete assignments. In both groups, teachers held four ninety-minute sessions with their students each week. At the conclusion of the five-week period, the researcher administered a post-test to both groups. The outcomes were gathered and subsequently analysed. Additionally, the interviews revealed the students' viewpoints regarding the utilisation of the blended method. Five students from the experimental group,

chosen for their high scores in both pre-test and post-test assessments, participated in the study. Those students were provided with a new consent form to obtain their permission for conducting the interview. Moreover, they were informed that the interview recording serves the purpose of research and ensuring an accurate representation of their responses in writing. Their interviews, conducted in English and Arabic, were recorded and transcribed. Each interview, lasting approximately 10 minutes on average, involved follow-up questions to delve deeper into the participants' responses. Qualitative data analysis began with coding, utilising the open coding method outlined by Creswell (2014). This process involved categorising themes by extracting and connecting meanings, leading to explanations and interpretations."

3.7 Ethical Considerations

To conduct the research, the researcher sought authorisation from both the school principal and the cluster manager, obtaining the necessary permissions to proceed with the study. Therefore, consent letters were sent to the cluster manager, the school principal, and the English teacher via email. The consent letters included the purpose of the study, asking for permission to conduct the study and publish the results (Appendix C). The participants were also given hard copies of the consent letters asking for their permission and informing them that they have the right to withdraw from the study at any time without the need to provide any justifications (Appendix B). Additionally, other consent letters were given to the students who participated in the interviews in order to take their permission. They were also told that they had the right to quit at any point and they also had the choice of not responding to any question they found inappropriate or threatening in any way (Appendix D).

This research project is aligned with the 'Motqin' initiative, a newly introduced programme that aims to enhance students' English language abilities in preparation for proficiency exams such as EmSAT and IELTS. Furthermore, the researcher actively

collaborated in the creation of the instructional planner, taking precautions to ensure that the research had no adverse impact on the students' advancement within the school curriculum. Additionally, the research objectives were communicated to both teachers and students to promote awareness and involvement. The researcher also implemented safeguards to prevent the study's workload from interfering with the students' other academic commitments and personal lives. Furthermore, the students were provided with reassurance that the exams conducted as part of the study would not affect their final grades; their sole purpose was to assess the impact of the research.

Chapter 4: Findings

The initial two research questions were addressed by analysing data acquired from both the pre-test and post-test evaluations. A comparison was made between the means and standard deviations of the control and experimental groups on these two tests. The analysis involved utilising Jamovi.org, where an independent sample t-test was employed to assess the pre-test and post-test scores. In essence, this approach involved comparing the students' scores in the pre-test with those in the post-test within the two groups to determine the extent of improvement. Additionally, the study delved into the students' viewpoints and attitudes regarding blended learning through the insights gathered from the interviews.

4.1 Findings Related to Research Question 1

The question was: What is the effect of incorporating blended learning on the vocabulary range among grade 10 students (aged 16) in a secondary school in the UAE? The following null hypothesis was examined in order to address the study's first question: In the post-achievement test, there were no statistically significant differences in vocabulary range between the average scores of the experimental group, which employed blended learning, and those of the control group, which utilised traditional learning. The t-test for two independent samples was utilised to compare the mean vocabulary range post-test scores of the students in both groups, confirming the hypothesis. The detailed results can be found in Table 4 and Figure 6.

Table 4

Independent T-Test for Control and Experimental Group on Vocabulary Range Post-Test

Paired samples T-Test						
		Statistics	df	p	Mean difference	SE difference
Control group and experimental group post-test (vocabulary range)	Students' t	-8.27	29.0	<.001	-2.83	0.343

Figure 6

Participants' Pre- and Post-Tests Score Average

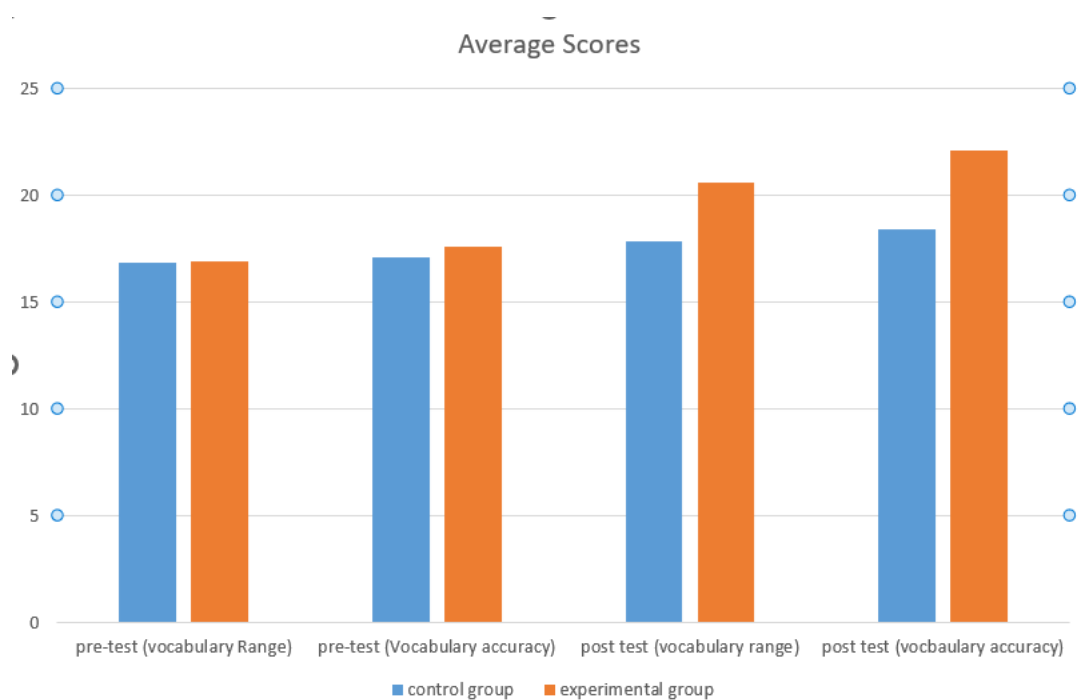


Table 4 illustrates the outcomes of a paired samples t-test that was carried out to compare the control group and the experimental group in the context of the post-test

vocabulary range. The t-statistic, which stands at -8.27, quantifies the distinction between the two groups' means in terms of standard deviations. A negative t-value suggests that the control group's mean is notably lower than that of the experimental group. Additionally, this test has 29.0 degrees of freedom, representing the number of values in the final calculation of a statistic that can vary independently. Furthermore, the p-value is recorded as less than 0.001, or $<.001$, which is an exceedingly low value. This extremely low p-value signifies the significance of the results. In other words, there is an exceptionally small probability (less than 0.1%) that the observed disparity in vocabulary range between the control and experimental groups is due to chance.

Moreover, the mean difference between the two groups is -2.83. This figure signifies the average discrepancy in vocabulary range scores between the control group and the experimental group. The negative sign indicates that, on average, the control group scored 2.83 points lower than the experimental group. Additionally, the standard error of the difference is 0.343, which quantifies the variability in the differences between the control and experimental groups. Smaller values of the standard error indicate more precise estimates. Taken together, these findings underscore a highly significant distinction in vocabulary range between the control and experimental groups following the intervention. The control group's performance was significantly poorer in comparison to the experimental group, with a substantial difference in their average scores. These robust results provide compelling evidence against the null hypothesis, indicating that the intervention had a meaningful impact on the vocabulary range within the experimental group.

4.2 Findings Related to Research Question 2

The question was: 2. What is the effect of incorporating blended learning on the vocabulary accuracy among grade 10 students (aged 16) in a government school in the UAE? To investigate the second question in this study, the subsequent null hypothesis was tested:

In the post-achievement test, there were no statistically significant differences in vocabulary accuracy between the average scores of the experimental group, which employed blended learning, and the average scores of the control group, which utilised traditional learning. To validate this hypothesis, a two-sample t-test was employed to assess the disparity in mean vocabulary accuracy post-test scores between the students in the experimental group and those in the control group. The outcomes are presented in Table 5.

Table 5

Independent T-Test for Control and Experimental Group on Vocabulary

Paired samples T-Test						
		Statistics	df	p	Mean difference	SE difference
Control group and experimental group post-test (vocabulary accuracy)	Students' t	-10.3	29.0	<.001	-3.63	0.354

4.2.1 Accuracy Post-Test

Independent t-test for control and experimental group on vocabulary accuracy post-test.

Table 5 presents the results of a paired samples t-test conducted between the control group and the experimental group in the context of the post-test vocabulary accuracy. The t-statistic is -10.3 , which represents the difference between the means of the two groups in terms of standard deviations. A negative value suggests that the control group's mean is significantly lower than the experimental group's mean. In addition, the degrees of freedom for this test are 29.0 . Degrees of freedom in a t-test represent the number of values in the final calculation of a statistic that are free to vary. Moreover, the p-value is less than 0.001 ($<.001$), which is an extremely low p-value, indicating highly significant results. In practical terms, it means there is a very small probability (less than 0.1%) that the observed difference in vocabulary accuracy between the control and experimental groups occurred by chance. In addition to this, the mean difference is -3.63 . This represents the average difference in vocabulary accuracy scores between the control group and the experimental group. The negative sign indicates that, on average, the control group scored 3.63 points lower than the experimental group. The standard error of the difference (SE difference) is 0.354 , which measures the variability of the differences between the control and experimental groups. Smaller values suggest more precise estimates. These results suggest that there is a highly significant difference in vocabulary accuracy between the control group and the experimental group after the intervention. The control group performed significantly worse compared to the experimental group, with a substantial difference in their average scores. The findings are robust and provide strong evidence against the null hypothesis, indicating that the intervention

had a significant impact on vocabulary accuracy in the experimental group. The results of the pre- and post-tests are shown in Figure 5.

4.3 Findings Related to Research Question 3

Semi-structured interviews were conducted to find the perspectives and attitudes of the students who utilised blended learning to learn vocabulary in order to evaluate the effects of this teaching technique on the students' vocabulary range and accuracy. This was done to address the third research question. Themes, codes, and segments were extracted from the interviewees' comments. Consequently, this study's three main themes were as follows: 1) the participants' justifications for utilising blended learning, which in some way hinted at its advantages; 2) the drawbacks to the blended approach that the participants perceived, which highlighted their disadvantages; and 3) the participants' recommendations for promoting the blended learning approach. Table 6 displays the interview codes, themes, and corresponding segments.

Table 6

Themes, Codes, and Segments Derived from the Interviews

Themes	Codes	Segments
Positive aspects	1. Timing	- Flexibility in scheduling - Learning opportunities anytime, anywhere - Saving time and energy
	2. Personalised learning	- Independence and autonomy in learning - Increased self-confidence

Themes	Codes	Segments
Negative aspects	1. Limited interactions	• Enhanced motivation
		• Active engagement in the learning process
		• Reduced interactions between students
		• Limited communication between students and teachers
Recommendations for making blended learning more efficient	2. Use of ICT tools	• Lack of control over the learning process
		• Technical issues and challenges
		• Utilising online tools to enhance learning experiences
		• Targeting higher education contexts
	1. Diversifying resources	• Addressing future qualification needs

The five interview questions were as follows, and they were utilised in conjunction with follow-up questions that were asked during the interview sessions:

1. What were the primary benefits and drawbacks associated with employing the blended learning approach for vocabulary acquisition?
2. Can you highlight particular challenges you encountered while utilising this blended learning method?
3. How do you perceive the feasibility of implementing this learning method at the secondary education level?
4. What is your general perspective regarding the utilisation of blended learning techniques?
5. What suggestions or advice do you have concerned the implementation of the blended learning method?

Diverse opinions were gathered regarding the students' vocabulary learning encounters through the blended method, encompassing both favourable and unfavourable perspectives. A selection of these viewpoints is provided below:

“I appreciated the flexibility of the schedule. I could study at my own convenience, whether it was during the day, at night, or even during breaks at school. This method allowed me to choose when and where I wanted to learn, making it very accommodating for learners. Using the Learning Management System (LMS) at a time and place that suited me made the blended learning course quite convenient. I believe that with blended learning, I have the ability to take charge of my own learning process by organising my time effectively.”
(Abdullah).

Furthermore, other students shared their thoughts on actively participating in the blended learning approach:

“I believe the blended learning method stood out as distinctive and unique because it encouraged active learning. I actively participated in my learning journey by completing

assignments, watching suggested videos, and engaging with both my peers and teacher through the Learning Management System (LMS). In a traditional classroom setting, learning felt more passive as I simply absorbed knowledge without actively contributing to constructing it. This passivity was partly due to the large class size, which limited our practice opportunities and made it challenging to seek clarification when needed. My progress, however, was notably attributed to my increased engagement in the learning process.” (Fahad)

“I enjoyed getting stars and badges from our teacher whenever I finish the assigned tasks because our teacher told us that we can use these stars to get a free school trip. For me, blended learning was suitable and easy to follow, and learning vocabulary this way helped me a lot.” (Salem)

In addition to highlighting several positive aspects of vocabulary learning through blended learning, the students also identified some drawbacks. Specifically, they pointed out the limited interaction among students as a negative aspect of the method:

“I observed that blended learning mainly took place independently, without the presence of the English teacher, especially when using the Learning Management System (LMS) outside the classroom. Additionally, there was minimal direct engagement between students and teachers. I considered this lack of interaction, both among students and between students and teachers, to be a significant drawback in comparison to traditional classroom training. I was dissatisfied with the reduced opportunities for interaction, as I preferred receiving feedback from my teachers, such as comments after completing a test. The limited interactions led to challenges in retaining what I had learned.” (Hamad)

Two students shared additional challenges and issues associated with the utilisation of ICT tools:

“The blended learning approach was entirely self-paced, extending the learning materials and activities beyond the classroom. However, the reduced oversight, guidance, and monitoring within the blended learning environment made me susceptible to distractions from various available technologies.” (Mohamed)

“I struggled with maintaining my focus and often found myself sidetracked by unrelated online information, leading to decreased efficiency in my online learning efforts.” (Ali)

Finally, here are some recommendations provided by students to enhance the effectiveness of blended learning and the utility of the blended method: "In my view, learners have access to a variety of resources when using the blended learning approach, and it would be very beneficial by giving students opportunity to access online course materials that were rich and simple to understand. Online books, websites, and the numerous data related to the course are some examples of these legitimate resources, in addition to the teacher. To achieve the best scores in my English tests, I'll use all available online tools and make the most of them. These materials, in my opinion, tend to make blended learning a great teaching strategy and can aid in students' learning". Additionally, some students selected a tech tool that was helpful in the blended learning approach: “I preferred utilising my smartphone for vocabulary learning because it allowed me to access online dictionaries and explore various examples of the same word. In my opinion, mobile phones have become more accessible and affordable tools for communication and learning compared to personal computers. They enable learning at any time and from any place. My mobile phone provided me with opportunities to practise vocabulary wherever I was, offering a convenient and useful way to learn. Consequently, I believe that mobile learning holds significant potential, providing students with enriching and authentic experiences both inside and outside the classroom. It's worth noting that student

ownership of internet-connected mobile devices is very common in the United Arab Emirates today” (Hamad and Salem). They also added “Enrolling in this course offers the flexibility to study at my convenience, whether it's in the morning or at night, allowing me to arrange my learning sessions according to my schedule. I strongly advocate for incorporating the blended learning method into all components of the English course, given its exceptional usefulness. I believe that these blended learning courses would be highly beneficial for my current studies, as well as any future endeavours”.

Chapter 5: Discussion

The results obtained regarding the first research question, which focused on the impact of blended learning on students' vocabulary and achievement in English for tenth graders, revealed a significant difference between the experimental and control groups. The experimental group, which utilised blended learning, outperformed the control group. Analysing the data presented in Table 4, it is evident that the average post-test vocabulary range score for the experimental group was 20.6, whereas the control group scored 17.8. This indicates that blended learning positively influences the achievement of students in the experimental group compared to the traditional learning methods of the control group. Moreover, the results, as shown in Table 3, indicated significant differences with a significance level of 0.05 ($p < .001$), underscoring the substantial disparity between the vocabulary range scores of the two groups of learners. The result aligns with numerous prior studies that have also affirmed the enhanced positive impact of blended learning on students' achievements when compared to traditional learning methods (Ahmed, 2011; Al-Hasan, 2013; Ali, 2012; Almasaeid, 2014; AlQahtani, 2015; Bakeer, 2018; Dowling et al., 2003; Kagohara et al., 2010; Khader, 2016; Maccoun, 2016; Okaz, 2015; Pereira et al., 2007; Shahin, 2008; Vernadakis et al., 2012). Nevertheless, the outcomes of this research contradicted those of other studies, indicating that blended learning did not have a substantial impact, as observed in studies conducted by Kazu and Demirkol (2014), Lin et al. (2017), Tosun (2015), and Wei et al. (2017).

The second research question focused on assessing the influence of blended learning on grade ten students' vocabulary accuracy. To address this question, an examination of the null hypothesis was conducted. Firstly, we postulated that there would be no statistically significant differences between the mean scores of the experimental group, and those of the

students in the control group, in the post-achievement test. The results pertaining to the second research question, which investigated the influence of blended learning on the vocabulary accuracy and English achievement of tenth-grade students, demonstrated a significant distinction between the experimental and control groups. The experimental group, employing blended learning techniques, outperformed the control group. Upon examining the data in Table 4, it is clear that the average post-test vocabulary accuracy score for the experimental group was 22.1, while the control group scored 18.4. This indicates that blended learning positively impacted the achievement of students in the experimental group when compared to the traditional teaching methods of the control group. Additionally, the results in Table 5 indicated significant differences with a significance level of 0.05 ($p < .001$), emphasising the substantial gap in vocabulary accuracy scores between the two groups of learners. These findings are consistent with numerous prior studies that have also validated the enhanced positive effects of blended learning on students' achievements when contrasted with traditional learning methods (Ahmed, 2011; Al-Hasan, 2013; Ali, 2012; Almasaeid, 2014; AlQahtani, 2015; Bakeer, 2018; Dowling et al., 2003; Kagohara et al., 2010; Khader, 2016; Maccoun, 2016; Okaz, 2015; Pereira et al., 2007; Shahin, 2008; Vernadakis et al., 2012). Nevertheless, this research's outcomes diverged from those of other studies, suggesting that blended learning did not have a significant impact, as demonstrated in studies conducted by Kazu and Demirkol (2014), Lin et al. (2017), Tosun (2015), and Wei et al. (2017).

The final study question aimed to discover more about how students felt about blended learning. Most opinions on the online components of the blended learning programme were generally good, with the blended method and online platforms receiving the most attention, despite a few poor experiences and certain limits. According to the results, the participants named a number of key advantages of the blended learning environment, including its

adaptability and convenient timing, and its systematic and personalised learning, as well as some recommendations regarding the utility and use of different sources in blended learning. However, they have also noted a few barriers and issues with blended learning, including a lack of direct engagement, issues, and the ineffective use of ICT technologies. In general, the participants in various sections of these interviews expressed varying expectations. The use of a variety of online resources, as proposed by the participants here, has been shown by language teachers to help learners gain more (Lindaman and Nolan, 2015). These results are consistent with Hoang Vu's (2014) study, in which a large number of participants expressed favourable opinions of blended learning in terms of timing, trying out new technologies, course quality, and accreditation. The results of this study are also consistent with those of Malmir et al. (2016), who looked into the impact of social media use on vocabulary learning among Iranian EFL learners and came to the conclusion that Iranian students have more positive attitudes towards using social media in English classes, which agrees with the findings of the current investigation. McCutcheon et al. (2015) assessed the effectiveness of blended learning against the face-to-face learning of clinical skills in undergraduate nurse education. Contrary to what this study found, the data showed that online learning is not more successful than traditional methods for teaching clinical skills.

Certainly, by blending the insights from both the examination results and the student interviews, we gain a more profound understanding of the impact of blended learning on language education. These findings reflect the authentic experiences of students and the tangible benefits of this innovative approach. The exam results reveal a clear trend, suggesting that students engaged in blended learning perform better than those in traditional face-to-face settings. Their mastery of vocabulary and its application in diverse contexts demonstrates the effectiveness of blended learning, with students building a deeper linguistic competence. On

the other hand, the interviews provide a human touch to this narrative. They reveal the vibrant and enthusiastic responses of students towards blended learning. The students express their positive attitudes, highlighting the engaging and interactive nature of digital tools. It's not just about test scores; it's about creating an environment where students are excited to learn and participate actively in the process. Combining these insights, we see a complete picture.

Blended learning doesn't just lead to better academic performance, it also fosters a passion for learning. It encourages students to embrace technology as an ally in their educational journey, making the whole process more dynamic and enjoyable.

This study on blended learning's effect on students' vocabulary range and accuracy offers educators and teachers a number of advantages. Firstly, it can assist educators in tailoring lessons to the requirements and learning preferences of specific pupils, particularly in vocabulary-related subjects. Additionally, educational institutions can include blended learning techniques in their curricula, enhancing the learning experience for students and giving them an opportunity to expand their vocabulary. Furthermore, educational institutions like schools and non-profits might use these findings to create teacher training courses that emphasise the efficient use of blended learning strategies for improving language abilities. Moreover, holding seminars or workshops based on this research can assist teachers in comprehending the intricacies of blended learning and how it can be used in the classroom. Additionally, teachers can incorporate multimedia and interactive components into their classes to increase student engagement and promote vocabulary growth. Additionally, the results of this research might also help teachers use data to decide on effective instructional strategies, assuring the ongoing development of vocabulary teaching techniques. In addition to this, teachers should promote parent–teacher collaboration in order to enhance students' vocabulary development, particularly in blended learning environments, by sharing the

findings from this research with parents. The findings can be used to support arguments for the inclusion of blended learning in educational frameworks and policies, helping to shape the direction of education policy discussions. Based on the research-supported advantages outlined in this study, schools should deploy resources wisely, investing in blended learning technologies and professional development.

Chapter 6: Conclusion and Recommendations

6.1 Summary of the Study

In conclusion, education in the United Arab Emirates is swiftly experiencing positive changes and developments in all areas, reflecting wider life in the UAE." The UAE Ministry of Education tries to teach students in its public and private schools using contemporary educational methods and technology, and it pushes instructors to improve their classroom management techniques to raise students' academic achievement. The purpose of the current study was to investigate the effects of the blended technique on the vocabulary knowledge of ESL learners using exploratory descriptive research, both quantitatively and qualitatively. The participants were a group of 60 students from two grade ten advanced classes, all of whom were 16 years old and actively participated in the research. This research sought to know the impact of using blended learning on students' vocabulary range and accuracy. Pre-test and post-test results, followed by a semi-structured interview, were used to analyse the differences between the two study groups. Consequently, the mixed approach is used to thoroughly investigate how pupils at one of the government schools in Dubai manage their own learning on a blended learning course. This study's objective was to find out how the vocabulary range and accuracy of students in the tenth grade were affected by blended learning.

6.2 Key Findings

The results of this study provide compelling evidence that the incorporation of blended learning methodologies has a positive impact on students' vocabulary range and accuracy. The experimental group, which was exposed to blended learning techniques, exhibited significantly better performance compared to the control group. These findings are consistent with prior research that has consistently highlighted the advantageous effects of blended learning on both students' academic achievements and their positive attitudes towards this

approach (Adas & Bakir, 2013; Ahamed & Othman, 2019; Akbarov, Gönen, & Aydoğan, 2018; Al Noursi, 2020; Bielawski & Metcalf, 2003; Ghazizadeh & Fatemipour, 2017; Khazaei & Dastjerdi, 2011; Zhang & Zhu, 2018; Zhang, Song, & Burston, 2011). This study's findings underscore the effectiveness of blended learning, not only in enhancing students' vocabulary skills, but also in aligning with previous research that has established its positive influence on students' overall academic performance and their receptiveness to this innovative teaching approach. The evidence presented in this study further supports the broader consensus within the academic community regarding the benefits of blended learning strategies in shaping a more engaging and effective learning environment for students.

6.3 Implications and Recommendations

This study is significant because it demonstrates that blended learning, particularly in higher education, is successful in the classroom. Thus, in courses with a greater emphasis on visual aspects, education can be made more effective by combining the benefits of a digital environment with face-to-face interaction. The study offers advice in light of the findings. One suggestion is to motivate instructors to embrace blended learning, which combines technology with direct instruction. The exercises in English textbooks need to be modified and created in accordance with blended learning. This can be accomplished by implementing similar studies that reflect the opinions and experiences of blended learning practitioners into English teaching, and by enhancing teachers' English teaching skills by holding training sessions to encourage the use of cutting-edge and creative approaches like blended learning.

6.4 Strengths of This Study

This study offers a comprehensive grasp of the subject by using a mixed-method approach that mixes qualitative and quantitative methodologies. In-depth investigation of the students' experiences and learning results is made possible by this combination. Furthermore,

it contrasts traditional and blended learning strategies, allowing for a direct comparison of the two strategies. When compared to conventional approaches, this comparison analysis can offer insightful information about how well blended learning can improve vocabulary acquisition. This study is founded on the experiences and viewpoints of the people who were directly touched by the teaching methods, by taking into account Emirati students' perspectives. This research gains depth from this student-centred perspective, which provides a complex understanding of how students' vocabulary learning is impacted by blended learning. The emphasis on vocabulary development has useful ramifications for language teaching. Understanding how blended learning has affected this particular element of language learning, vocabulary, gives educators and curriculum designers practical advice. This study is pertinent to the most recent developments in education since blended learning is a modern educational strategy that mixes conventional classroom instruction with internet resources. This relevance raises the importance of this research in light of contemporary instructional strategies. The study's conclusions might be put to use in actual educational contexts. The results of this research can be used by educators and decision-makers to make wise choices about integrating blended learning into language education programmes, potentially enhancing students' vocabulary acquisition outcomes.

6.5 Limitations of this Study

The limitations of the current study will be covered in more detail below. The study focused only on a select group of tenth-grade male advanced pupils. The majority of the students in this group are self-motivated learners who are motivated by the possibility of losing their places in advanced classes as a result of earning poor exam results and being sent to regular classes. As a result, it is difficult to extrapolate the findings to a larger student population. In addition, the study did not take into account the different initial levels of

linguistic competency of the pupils. As a result, it does not accurately reflect how blended learning affects students with various levels of language proficiency. Additionally, the length of this brief study may have an impact on the level of comprehension. The impacts of blended learning over the long term on vocabulary retention and overall language competency are difficult to measure in a short-term study.

6.6 Scope for Further Study

There is much room for more research because blended learning is a relatively new educational strategy, particularly in examining the impact of age and gender on blended learning results. Furthermore, it is crucial to comprehend the crucial role that teachers play in facilitating efficient language learning through blended learning. Additional research on strategies to improve student engagement in blended learning environments can dramatically lessen learners' anxiety and feelings of isolation. Future research in these areas will help shed light on the complex dynamics of blended learning and how it affects learners of different backgrounds.

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Appendices

Appendix A (Pre- and Post-Tests)

Pre-test (placement test)

A) Choose the correct answer (Part 1):

1. The students the challenging math problems during the competition.
a) solved b) ignored c) created d) doubted
2. The scientist's groundbreaking research new possibilities in the field of renewable energy. Practical
a) eliminated b) opened c) hindered d) avoided
3. The chef the exotic spices to enhance the flavor of the dish.
a) demanded b) experimented c) ignored d) condemned
4. Despite the heavy rain, the volunteers to plant trees in the park.
a) refused b) persisted c) stopped d) complained
5. The curious child every corner of the museum to learn about ancient civilizations.
a) explored b) ignored c) rejected d) avoided
6. The musician's performance captivated the entire audience, leaving them in awe.
a) mediocre b) brilliant c) ordinary d) uninspired
7. A is a musical composition typically consisting of three or four movements.
a) sonata b) symphony c) melody d) chorus
8. My grandmother's recipes are a of traditional flavors and innovative cooking techniques.
a) blend b) mixture c) fusion d) collision
9. To succeed in this competitive world, one must possess a strong, work ethic.
a) diligent b) lethargic c) indifferent d) negligent
10. The artist's painting a deep sense of melancholy, evoking strong emotions in the viewers.
a) conveys b) conceals c) refutes d) confuses
11. The explorer faced numerous during his journey, including harsh weather and limited resources.
a) challenges b) rewards c) pleasures d) achievements
12. The teacher the students to think critically and analyze the historical events from different perspectives.
a) encouraged b) discouraged c) forbade d) disliked
13. His eloquent speech the audience, leaving them inspired and motivated.
a) captivated b) repelled c) annoyed d) ignored
14. The scientist conducted a to determine the effects of the new drug on patients' health.
a) trial b) game c) tournament
15. ConcertOur team's in the next game are very strong. I hope our team can win against them.
a) challenges b) opponents c) access d) benefits

16. Choose the best word from the box to complete the sentences.

benefit – appropriately – domestic – frequently – participant – celebrities – affect – drag –
predicting – express – quality – relationship – intelligent – dependable – comment

- A. When you have a job interview it is important to dress
- B. Many start fashion trends among young people who want to look like them.
- C. The weather can us in many different ways. When it is bright and sunny. Many people feel happy.
- D. It is not always easy to how you feel to your parents. Sometimes it is easy to show your feelings to friends.
- E. I would like to be a in the school activity and take part in the science competition.
- F. The of food at the restaurant is much better than the one we went to last week.
- G. I have a good with my parents. I am comfortable talking to them about anything.
- H. A of being a teacher is that you have two months off for summer vacation.
- I. He is not very He didn't come to work three times last week.
- J. My teacher made a helpful on my first essay draft. It helped me to turn in a better final paper.

B) Choose the correct answer (Part 2):

- 1. I finished reading a of books over the weekend. I read a mystery novel, a science fiction book, and a collection of short stories.
a) lot b) variety c) series
- 2. Learning a new language offers various, including improved communication skills and better cultural understanding.
a) challenges b) benefits c) disadvantages
- 3. The team's performance in the championship match earned them a well-deserved victory.
a) outstanding b) mediocre c) inferior
- 4. She was to the breathtaking scenery during her hike in the mountains.
a) indifferent b) apathetic c) oblivious
- 5. Despite facing obstacles, the scientist persevered and made groundbreaking discoveries in the field of medicine.
a) insurmountable b) manageable c) unimportant
- 6. The actor's performance in the film earned him critical acclaim and several awards.
a) subpar b) stellar c) average
- 7. The new law will stricter penalties for environmental pollution.
a) impose b) lift c) reduce
- 8. His speech was and inspired everyone in the audience to take positive action.
a) forgettable b) memorable c) tedious
- 9. The company's approach to customer service led to a significant increase in customer satisfaction.
a) lackadaisical b) diligent c) careless

10. The artist's style, characterized by vibrant colors and bold strokes, captured the essence of the natural world.

- a) dull b) vivid c) monotonous

11. Use the words in the box to complete the sentences. The suffix is provided before each sentence. Be aware that some answers may require slight changes in the spelling of the root before addition of the suffix.

combine – guilt – active – entertain – stress – import – self – clear – employ –
critic – history – act – happy – social – pharmacy

- A. **(-ant)** Scientists have made a(n) discovery that will help find a cure for cancer.
B. **(-ish)** It is very of him not to think of others. He thinks only of his own needs.
C. **(-ion)** Water is a of two chemicals: hydrogen and oxygen.
D. **(-y)** There is no reason to feel It was just a mistake.
E. **(-ly)** The road was not visible because of all the rain. We could barely see anything.
F. **(-ive)** He was very in the club, helping out in several different areas.
G. **(-al)** I like programs the best. Last week, they showed how the Roman Empire was created, and the next program is about the building of the Pyramids in Egypt.
H. **(-ity)** We need at least 30 minutes of physical a day if we want to lose weight.
I. **(-ment)** They played video games all night for They did not want to be bored.
J. **(-ness)** Her was the most important thing for her parents. They wanted to make sure she had a good life.
K. **(-ize)** He likes to with his co-workers over the weekend. They go out to dinner at least once a week.
L. **(-er)** He had to ask his for the week off of work. He wanted to visit his parents in Canada.
M. **(-ism)** She received a lot of on the article she wrote for the paper. A lot of people were not happy with it.
N. **(-ist)** He asked the about the medication. He wanted to make sure he was taking the best one.
O. **(-ful)** I had a very week. I had two essays and a project all due at the same time.

Post-test (achievement test)

Choose the best answer (Part 1):

1. The weather of the United Arab Emirates is very to that of Kuwait. Both have desert-like climates.

- a) similar b) classic c) aware d) ancient

2. The apartment will be for occupancy on August 26.

- a) specific b) similar c) available d) regular

3. You are constantly late for class and don't do your homework. This to me that you are not a very serious student.

- a) interprets b) factor c) loyal d) indicates

4. Ahmed was very excited about his new job offer. He was looking forward to signing the

- a) element b) contract c) income d) emphasis

5. The age to drive in the UAE is 18, but one may begin taking driving lessons at the age of 17.

- a) legal b) discrete c) entire d) generous

6. The UAE's growth has been consistent for the last ten years, with several new companies being established and offering new jobs.

- a) economic b) equivalent c) impatient d) surrounding

7. Speed was definitely a(n) in the car accident on the 311 last Friday. The police report states that the driver was going too fast and couldn't control the car.

- a) benefit b) factor c) emphasis d) expense

8. My grandparents can't speak English, so I have to him whenever we go to his doctor's appointments.

- a) interpret b) establish c) acquire d) allow

9. The university of Sharjah was in 1997. Since its creation, it has grown to be one of the largest universities in the UAE.

- a) pretend b) removed c) established d) excite

10. When seeing your doctor, you must be about your health problems so they can try to help you. Give them detailed information.

- a) specific b) regular c) personal d) legal

11. His knowledge of ancient civilizations amazed everyone in the history class.

- a) in-depth b) shallow c) superficial d) limited

12. Learning to play a musical instrument requires patience, practice, and dedication.

- a) sincere b) genuine c) wholehearted d) casual

13. The company's approach to environmental conservation has led to several eco-friendly initiatives.

- a) indifferent b) apathetic c) ambivalent d) enthusiastic

14. The professor emphasized the aspects of the research, highlighting its relevance to real-world applications.

- a) theoretical b) abstract c) hypothetical d) imaginary

15. Despite facing challenges, the team managed to complete the project ahead of schedule.

- a) formidable b) trivial c) insignificant d) inconsequential

(16-25). Use words in the box to complete the text. There are extra two words.

consequence – encouraging – harmful – resources – surprising – approximately –

With the population of the world increasing yearly. It is becoming more difficult to find the16....., such as land and water, needed to help to feed everyone. One17..... of this situation is that the increasing price of food. Another result of this is the ...18....., dangerous, and damaging effects that population growth has had on the environment, such as climate change and global warming. Therefore, scientists are19..... people to rethink their daily dietary choices.

One suggestion is that we eat less meat. Most people are20....., or do not know that meat consumption uses more resources than other food products because it uses more natural resources. For example, one pound of meat requires21..... one-fourth more land than grain and rice. This means that almost one-third of the land is used to raise animals. Not only do animals need more land, but they also need more water. Most people find it22.... that animals need more than ten times more water to survive than vegetable-based food.

Scientists are not trying to23..... us from eating meat because they know they cannot stop people from doing it; instead, their goal is to try to24..... the amount of meat eaten. By providing people25.... choices to eating meat, such as increasing fruit and vegetables in their diet, scientists are trying to save the Earth's natural resources.

Choose the correct answer (Part 2):

1. The ancient ruins were to the historians but were a mystery to the tourists visiting for the first time.
a) familiar b) unfamiliar c) known
2. Despite being to help with the project, he declined the opportunity due to his busy schedule.
a) eager b) willing c) unwilling
3. She was after running the marathon, so she decided to take a break and rest for a while.
a) exhausted b) energized c) excited
4. The movie was boring; many people left the theater before it ended.
a) very b) moderately c) not at all
5. Despite his best efforts, he could not a ticket for the sold-out concert.
a) secure b) obtain c) generate
6. In formal events, it is to wear appropriate attire and avoid overly casual clothing.
a) suitable b) acceptable c) inappropriate
7. The mystery novel had such a compelling plot that I couldn't stop reading until I found out the
a) end b) solution c) beginning
8. The students were during the lecture, paying attention to every word the professor said.
a) sleeping b) daydreaming c) engaged
9. The chef prepared a dish, combining flavors and ingredients that were unique and innovative.

- a) traditional b) conventional c) creative
10. I've been trying to fix my car for hours, but I can't find the of the problem.
a) cause b) source c) origin
11. She has a personality, always finding the positive side of every situation.
a) cheerful b) gloomy c) pessimistic
12. The United Arab Emirates **consists of** even emirates. Together they make up one of the GCC countries.
a) contains b) takes c) separate
13. The adventurous explorer decided to the uncharted jungle, despite the warnings from the locals.
a) explore b) ignore c) avoid
14. The artist used a of colors to create a vibrant and lively painting.
a) palette b) brush c) canvas
15. The detective carefully examined the at the crime scene, searching for any clues.
a) evidence b) witnesses c) suspects
16. The new employee showed great by adapting quickly to the company's complex procedures.
a) initiative b) laziness c) indifference
17. The scientist's groundbreaking discovery the way for further research in the field of genetics.
a) paved b) blocked c) obstructed
18. Despite the weather, the athletes continued their intense training session.
a) harsh b) mild c) pleasant
19. The news of his promotion excitement and celebration among his colleagues.
a) ignited b) doused c) extinguished
20. The leader's speech inspired the team to strive for excellence and achieve their goals.
a) motivational b) discouraging c) disheartening
21. The novel's plot twists kept the readers on the edge of their seats until the very last page.
a) intriguing b) predictable c) boring
22. The manager emphasized the of teamwork in achieving the company's goals.
a) collaboration b) collaborative c) collaborator d) collaboratively
23. The of flavors in the new recipe delighted the taste buds, creating a unique culinary experience.
a) fusion b) blend c) union d) mixture
24. The movie was so that many viewers found it difficult to stay awake during the screening.
a) boring b) engaging c) captivating d) exciting
25. The student's attitude towards challenges helped him overcome various obstacles and achieve academic success.
a) positive b) negative c) optimistic d) pessimistic

Appendix B (Participants' Consent Form)

Dear Participant,

I am a postgraduate student pursuing a master's degree in education at The British University in Dubai, and I am currently engaged in research for my master's thesis. Allow me to provide you with a brief overview of my thesis topic:

My research focuses on exploring the impact of blended learning on students' vocabulary range and accuracy. To conduct this experiment, I have divided participants into two distinct groups. The first group will engage in face-to-face learning sessions at school, covering all the study material. Meanwhile, the second group will attend partial lessons at school and complete the remaining portion independently at home. For the latter group, teachers will provide recorded sessions, PowerPoint presentations, and activities through the Learning Management System (LMS). Additionally, a discussion group will be established on the LMS platform to offer assistance and support to these students. Both groups will participate in pre- and post-examinations designed to gauge the experiment's impact. It's important to note that these exams are informal and will not influence their final grades. The assessments will be conducted via the LMS.

Furthermore, participants have the right to withdraw from the study at any point, respecting their autonomy and consent. I assure you that the participant names will remain confidential, not be shared with anyone, and will not be included in the research paper.

Kindly complete the form provided at the bottom of this letter and return it to me. If you require additional information about the study, feel free to reach out to me on 0544363449.

Thank you,

Mohamed Hassan Mohamed Kamel
Master in Education (TESOL)
The British University in Dubai

CONSENT FORM

Participant name:

University/school:

I totally agree to participate in the research being carried out by **Mohamed Kamel** at The British University in Dubai.

I do **NOT** agree to participate in the research being carried out by **Mohamed Kamel** at The British University in Dubai.

Signature(s) of participant:

Date:

**PLEASE RETURN THIS FORM TO YOUR CHILD'S CLASS TEACHER OR
DIRECTLY TO THE RESEARCHER**

Appendix C (Third-Party Consent Form)

Dear Mr. Mohamed,

Subject: Permission Granted for Research Study

I am writing to confirm that our school grants you permission to conduct your research study within our school premises. We appreciate your interest in conducting your research here, and we are pleased to support your academic endeavors.

However, it is essential to emphasize certain conditions that must be strictly adhered to throughout the research process. We kindly request that you respect the confidentiality and privacy of our school, students, and staff. Specifically, you are not permitted to mention our school's name, students' names, display their pictures, or disclose any other sensitive information without our explicit written consent.

We trust that you understand the importance of safeguarding the privacy and anonymity of our school community. Any information obtained during your research activities must be anonymized and aggregated to ensure that individual identities are protected. Additionally, any findings or publications resulting from your research should not contain any identifying information related to our school, its students, or staff members.

Please be aware that violating these confidentiality guidelines will result in the immediate termination of your research activities within our school premises, and legal actions may be pursued if necessary.

We appreciate your cooperation in this matter and trust that you will conduct your research with the utmost integrity and respect for privacy.

Thank you for your understanding and cooperation. We look forward to your valuable contributions to the field of research.

Sincerely,

Appendix D (Interview Consent Form)

Dear Participant,

I am a postgraduate student currently pursuing a master's degree in education at The British University in Dubai, and I am conducting research for my master's thesis. This correspondence serves as an additional consent form, signifying your willingness to participate in an interview with me.

Your input is highly valued, as I invite you to share your insights on the pros and cons of blended learning. Your perspectives are crucial in developing a comprehensive understanding of this educational approach. Furthermore, I welcome your suggestions for enhancing the blended learning experience. The interview, which will be conducted face to face, is expected to last approximately 10 minutes. Throughout our discussion, I will inquire about your experiences with blended learning.

I assure you that your participation in this study is strictly confidential. Your name and any identifying details will be kept confidential and will not be disclosed in any research reports or publications resulting from this study. All data collected will be stored securely and will only be accessible to authorised personnel, including myself.

I want to emphasise your right to withdraw from the study at any stage. Additionally, you have the freedom to choose not to respond to any questions that you may find inappropriate or uncomfortable in any way.

Kindly complete the form provided at the bottom of this letter and return it to me. If you require further details about the study, please feel free to contact me on 0544363449.

Thank you,

Mohamed Hassan Mohamed Kamel
Master in Education (TESOL)
The British University in Dubai

CONSENT FORM

Participant name:

University/school:

I totally agree to participate in the research being carried out by **Mohamed Kamel** at The British University in Dubai.

I do **NOT** agree to participate in the research being carried out by **Mohamed Kamel** at The British University in Dubai.

Signature(s) of participant:

Date:

**PLEASE RETURN THIS FORM TO YOUR CHILD'S CLASS TEACHER OR
DIRECTLY TO THE RESEARCHER**

Appendix E (A Lesson Plan (Sample))

Lesson Plan

English Classroom	Lesson: The culture and traditions of the UAE	Grade & Section: 10	Date: September 6 th 2023
Resources: a video, course book, PowerPoint, Office Forms, and www.quizziz.com		No. of Students in class: (30)	
Key vocabulary: amusement / availability / compassionate / dignity / endurance / heritage Key expressions/structures: I think..... / In my opinion.....			
Link to Emirati culture • Students discuss some information about a traditional job in the UAE • Students discuss the advantages and disadvantages of being a pearl diver		Real-life Connection/Cross-Curricular Links: Learners need to be accustomed to using language appropriately as well as accurately. When they talk in English with their peers in a group, they should use informal language. However, when they give a speech, as in this lesson, they must use formal language. - Discuss some critical thinking questions - Discuss questions related to science - Discuss questions related to social studies <u>21st Century Skills:</u> - Global Awareness: Understand other nations, languages, and cultures	
Standards (G10.3.1.1.2) Read information from multiple print and digital sources (for example, autobiographical and factual recounts, bulletins, brochures, advertisements, narrative reports, explanatory texts, information texts, formal letters and emails) to locate an answer to a question or solve a problem; make straightforward inferences supported by evidence from the text. (G10.2.2.1.1) Present information, claims, findings and supporting evidence using precise language, action verbs, sensory details in ways that enliven oral presentations.		SMART Lesson Objectives: • Discuss some information about pearl diving. • Identify and use some new vocabulary related to UAE traditions. • Skim and scan a reading text related to pearl diving. • Create meaningful sentences using the new vocabulary.	
Teacher's Role (30%)		Students' Role (70%)	

1- Teacher displays a question about jobs that people can do in the sea. 2- Uses some pictures to try to elicit the lesson outcomes. 3- Teacher uses a video to activate students' schemata and get them engaged in the lesson.	1- Students read the lead-in questions and try to answer the questions using their prior knowledge. 2- Students try to guess the lesson objectives from the pictures. 3- Students watch the video and discuss what they have watched.	Warm-Up
Critical thinking questions/Link to Emirati culture: - Teacher displays the questions and gives students some time to think and organise their ideas. Link to science: - Teacher displays the questions and asks students to think, read, and answer the questions. Link to social studies: - Students discuss questions about life in the UAE. Qimma Test integration: - Teacher presents a question related to the Qimma test in week 3 and asks students to think about its answer. Then, teacher gives feedback. New vocabulary (<i>process differentiation</i>): - Teacher tries to elicit the target vocabulary using different ways (eliciting – definitions – pictures – examples – CCQs) to meet all the learners' styles' expectations. Controlled written practice (<i>content differentiation</i>): - Teacher asks students to match the exercise CB on page 43. (stretch) Teacher asks high achievers to answer the questions on the MS Office form in the chat. - Teacher asks students to click on the link in the chat and play a game on www.quizziz.com. The first reading (skimming): - Teacher asks students to skim the text and answer the given question. The second reading (scanning): - Teacher asks students to scan and complete the sentences using the bold words. Flexi stage (semi-controlled practice): - Teacher asks students to answer the questions on the Office Forms.	Critical thinking questions/Link to Emirati culture: 1- Students read and answer the critical thinking questions. Link to science: 1- Students read and answer some questions which are related to science. Qimma test: - Students read and answer the question. New vocabulary (<i>process differentiation</i>): - Learners try to read definitions, look at the pictures, guess the words, and answer the CCQs to express their understanding. Controlled written practice (<i>content differentiation</i>): - Students match Activity 1 vocabulary. - High achievers will answer the questions on the MS Office form when they finish the first activity. - Students click on the link in the chat and play a game on www.quizziz.com to make sure that they can use the new vocabulary and to change the class routine. The first reading (skimming): - Students read and try to understand the general idea of the reading text, and then answer the given question. The second reading (scanning): - Students read and try to complete the sentences using scanning strategy. Flexi stage (semi-controlled practice): - Students answer the questions on the Office Forms in the chat.	Body

Plenary - Teacher displays a question on the PPT and ask students to think, organise their ideas, and speak about their own opinions. - Teacher tries to encourage students to use the new vocabulary.	Plenary - Students try to express their opinions about being pearl divers. - They are also encouraged to use the new vocabulary.	Plenary
Teaching Strategies Used	Differentiation	
Discussion: - Questioning strategies / thinking time Vocabulary: - Eliciting / pictures / definitions / examples / CCQs Formative assessment: Oral concept check – written concept check – self-assessment – CCQs – Office Forms – Quizziz	Allow learners to use a dictionary if they need to check a word in the definitions. Match words to their definitions.	
	Encourage learners to contribute as much as they can. At this point it is the ideas that learners generate that are important, not the way they express them.	
	Learners will use the words in meaningful sentences.	
		SOD