

The Role of Digital Storytelling in Vocabulary Acquisition: Perspectives of Learners of English as a Foreign Language (EFL) in the Kurdistan Region.

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ABSTRACT

This research assesses the impact of digital novels on the vocabulary development of Kurdish EFL learners. Since vocabulary is an essential component of each language and given the increasing use of technology and digital materials in language instruction, the study seeks to address this problem. Using a mixed-methods design, data were collected from 54 English students at Charmo University via online questionnaires and individual semi-structured interviews. The quantitative data suggest a positive relationship between the use of digital novels and perceptions of vocabulary attainment, regardless of students' proficiency levels. The qualitative data suggest that features such as hyperlinks to definitions, annotation tools, and interactive glossaries are most appreciated for facilitating vocabulary development in context and on the spot. Although some students preferred print novels, most respondents reported that digital novels enhanced their motivation, engagement, and ability to learn new vocabulary. The research demonstrates the need to include digital novels in the EFL syllabus while advocating the use of instructor digital pedagogy to enhance educational impact. The study also suggests further research with different populations and objective vocabulary measures to substantiate these claims. In conclusion, digital novels are a promising technology for vocabulary instruction in English as a foreign language in the Kurdistan Region.

Keywords: Vocabulary learning, EFL students, Educational online resources, Digital novels

دور الروايات الرقمية في تعزيز المفردات الإنجليزية: وجهات نظر طلاب كردستان من دراسي اللغة الإنجليزية كلغة أجنبية

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الملخص

تهدف هذه الدراسة إلى تقصي أثر الروايات الرقمية على تنمية المفردات اللغوية لدى متعلمي اللغة الإنجليزية كلغة أجنبية من الطلبة الأكراد. وتُعد المفردات عنصراً أساسياً في اكتساب اللغة، ومع تزايد توظيف الأدوات الرقمية في العملية التعليمية، تسعى هذه الدراسة إلى استكشاف مدى مساهمة الروايات الرقمية في تعلم المفردات. وقد استُخدم في البحث منهجٌ مختلط، حيث جُمعت البيانات من 54 طالباً وطالبة في قسم اللغة الإنجليزية بجامعة شارمو من خلال استبيانات إلكترونية ومقابلات شبه منظمة. أظهرت النتائج الكمية وجود علاقة إيجابية بين استخدام الروايات الرقمية وإدراك الطلبة لتحسن مفرداتهم، بغض النظر عن مستوياتهم اللغوية. أما النتائج النوعية فقد بينت أن الخصائص مثل الروابط التشعبية للتعريفات، وأدوات التوضيح، والمسارد التفاعلية، كانت من أكثر العناصر فاعلية في دعم اكتساب المفردات في السياق اللحظي. وعلى الرغم من أن بعض الطلبة فضلوا الروايات الورقية، إلا أن الغالبية أشاروا إلى أن الروايات الرقمية عززت من دافعيتهم وتفاعلهم وقدرتهم على تعلم مفردات جديدة. وتؤكد نتائج الدراسة على أهمية إدماج الروايات الرقمية ضمن المنهاج التعليمي لمتعلمي اللغة الإنجليزية، كما تسلط الضوء على ضرورة توظيف المعلم لأساليب التربية الرقمية لتحقيق أقصى فائدة تعليمية. وتوصي الدراسة بإجراء بحوث مستقبلية تشمل عينات سكانية مختلفة وقياسات موضوعية لاكتساب المفردات لتعزيز هذه النتائج. وبوجه عام، تمثل الروايات الرقمية وسيلة واعدة لتعليم المفردات في سياق تعلم اللغة الإنجليزية كلغة أجنبية في إقليم كردستان.

الكلمات المفتاحية: تعلم المفردات، طلاب اللغة الإنجليزية كلغة أجنبية، الموارد التعليمية الرقمية، الروايات الرقمية، المتعلمون الأكراد

Introduction

The acquisition of new language might be ensured through the growing vocabulary which is necessary in learning. A reader or writer is able to communicate as well as comprehend the concepts in the language being used if he possesses an expansive vocabulary. As pointed out by Nation in (2013, p. 22), better understanding, clearer expression, and the overall improvement of language skills is the usefulness of vocabularies. Adding vocabulary is essential especially in the case of a learner and the EFL because a learner is not able to interact with an EFL speaker and a sufficient amount of vocabulary is needed. As a result, the identifying of new ways of assisting vocabulary acquisition and retention has become an important endeavor for educators and linguists.

The language education landscape has also been changed by the introduction of language learning platforms which come as a result of the use of technology. They provide digital and engaging resources which assist in the improvement of language learning. According to, (Mangen & Kuiken, 2014, pp. 246-263), learners can use audio and video as well as be provided with information in the forms of charts and graphs. The use of technology has changed the way vocabularies are learned as learners are able to use a digital form of the materials. As technology is being integrated into education, the need for the skills in digital form should also be developed.

Among the various tools designed to aid in the special fields of foreign language acquisition, the most appreciated and widely used are digital novels. According to (Liu, 2018, pp. 45-60), the novels not only having captivating woven stories, but also can provide immersive storytelling experiences, which ultimately increase the willingness to read and extend the period of uninterrupted engagement. This type of materials facilitates the vocabulary acquisition process by offering contextualized definitions and immediate explanations of the terms used. The increasing number of EFL (English as a foreign language) students using digital novels hints to the fact that those students can benefit from the novels as digital devices in EFL vocabulary enhancement.

In the Kurdish regions where English is a foreign language, students are reported to extensively use E-books and digital novels as additional materials. According to the (Kurdish Ministry of Education, 2020), there is an enormous integration of digital tools in education as a response to increasing internet connections and the availability of devices. In spite of these, there is shocking deficiency of research in the literature in regards to the perceptions of Kurdish students learning English as a foreign language concerning the use of digital novels and vocabulary enhancement. In such situations, such construction can lead to the enhancement of pedagogical activities for that particular context.

1.1. Statement of the Problem

Many different sorts of learners can find a reader-friendly digital novel that suits their needs. Nevertheless, there is a dearth of literature that examines both the perspectives of Kurdish EFL students

and the efficacy of these online tools for expanding their English vocabulary. Some other context specific research has recognized the ability of digital reading on vocabulary development. However, the digital context of reading, as well as the culture, technology, and language of the Kurdish EFL students, has yet to be studied (Al-Saadi & Al-Naqbi, 2021). This lack of research puts restraints on educators and policymakers concerning the potential impact of digital novels on vocabulary deficiency issues present in Kurdish universities and schools.

1.2. Purpose of the Study

The purpose of this research is to examine the perceptions held by Kurdish EFL (English as a Foreign Language) learners regarding how reading digital novels affects their English vocabulary acquisition. Furthermore, this research seeks to identify which specific characteristics of digital novels (e.g., interactive glossaries, instant access to dictionaries, or the use of multimedia elements) help students the most in their vocabulary learning process. Finally, this study will explore the relationship between the amount of time spent reading digital novels and the self-reported increase in students' vocabulary knowledge. It is hoped that we can offer practical recommendations to language instructors using the findings of this research, and also provide additional information on how the field of language learning interacts with advances in digital technology.

1.3. Significance of the Study

This study is important as it provides the practical information that educators and curriculum developers desire while exploring new and creative approaches to technology enhanced English vocabulary acquisition, especially the use of digital novels in language teaching. They can help in the development of appropriate teaching methods and the selection of digital instructional materials that match the approach to learner needs and the unique features of digital texts. Also, this study fills a considerable gap in the literature by emphasizing Kurdish EFL learners and adds to the scant literature about digital reading and teaching in the Kurdish context. The study will also encourage evidence-based approaches in the integration of digital materials in English as a foreign language program and will motivate further research in the teaching of language and digital literacy in instruction in the absence of adequate research.

1.4. Research Questions

1. To what extent do Kurdish EFL students perceive reading digital novels as an effective method for enhancing their English vocabulary acquisition?
2. What specific features of digital novels do Kurdish EFL students identify as most beneficial for vocabulary learning compared to traditional print formats?
3. How does the frequency and duration of digital novel engagement correlate with Kurdish EFL students' self-reported vocabulary improvement?

II. Literature Review

2.1. Vocabulary Acquisition and its importance in Language Learning

Knowing enough words to be able to use and understand is absolutely crucial in learning to communicate effectively in the new language (Schmitt, 2000, p. 45; Nation, 2001, p. 123). It is extremely important in learning a second language, especially when it comes to associating meaning with words and using them in different contexts (Laufer & Hulstijn, 2001, pp. 22-26). Vocabulary is dynamic; the more the learner progresses, the more advanced they will be in language and concepts.

180/200

copy-text217 words

A strong vocabulary increases the ability of a language learner to understand and become more competent in understanding and expressing a language and to be more successful in future communications (al-Dalfi, 2019, p. 220).

2.2 Models of Vocabulary Learning

Concepts of vocabulary acquisition have been explained through different models with the distinction of both incidental and intentional learning as the most dominant. Incidental learning happens when vocabulary is acquired as a secondary outcome of dealing with texts that are definitely useful and worthwhile (either sighted, read, listened to or spoken to), whereas intentional learning is the active studying of a given vocabulary items (Rott & Williams, 2003, pp. 547-562). Context is very important in vocabulary acquisition. Webb (2008) argues that meeting new vocabulary items in very rich and meaningful contexts leads to greater appreciation, retention and use of vocabulary items.

2.3 Digital Reading and Language Learning

2.3.1. Digital Reading Platforms and E-books

Digital devices have fostered new advancements in the language learning boundary by enabling access to an abundance of authentic texts such as e-books and digital novels (Mangen & Kuiken, 2014, pp. 150-177). Digital reading platforms present learners with an array of benefits that traditional printed texts do not offer, such as mobility, multimedia capabilities, and the ability to create interactive notes (Liu, 2018, pp. 298-316). These devices have proven to be useful and highly sought after by learners in need of engaging and flexible resources.

2.3.2. Impact of Digital Reading on Vocabulary Development

Digital reading is perceived as an effective approach to enhancing learners' lexical knowledge and vocabulary development, particularly when digital platforms include features designed for active engagement, such as hyperlinks, multimedia, and interactive annotation (Hockly, 2018, p. 239). Digital novels can offer learners a unique opportunity to interact with reading materials in a multimodal manner.

This allows for the integration of vocabulary learning through diverse sensory experiences and context (Djonov & Zhao, 2018, pp. 1-7; Kress, 2010, p. 8). Such a multimodal approach captures learners' attention, enhances new vocabulary retention, and promotes its application in different contexts.

2.3.3. Reading Digital Novels: Features and Benefits

2.3.3.1. Features of Digital Novels

Digital novels are more convenient than traditional novels due to features that enable user interactivity as discussed below.

A. Annotation Tools

Digital novels often include annotation tools in which readers are able to clearly identify new, difficult, or specialized terms by bookmarking, underlining, or making notes directly on the text. This increased level of engagement ensures that the new vocabulary being tracked is retained through active implication of the text (Hockly, 2018, p. 72).

B. Hyperlinks to Definitions

Hyperlinked texts in digital novels that lead to various texts depicting the meaning of the word are crucial in assisting students with self-learning. These links enable definitions or explanations to be accessed with little time delay, therefore supporting self-learners who may not have vocabulary on hand. This in turn assists in fluent reading without disruption (Djonov & Zhao, 2018, p. 6).

C. Interactive Glossaries

Digital novels that have glossaries are most times outfitted with interactive windows that either pop up during reading sessions or are directly available. These glossaries allow students to modify meaning, ensuring active engagement and learning to strengthen vocabulary (Hockly, 2018, p. 220).

D. Search Functionality

Students have the ability to use search features to find words, phrases, or concepts within the text of the novel. This feature supports vocabulary reviewing, word usage in context, and focused language study (Liu, 2018, p. 298).

E. Contextual Learning

Digital novels enhance understanding by enabling readers to retrieval detailed context or explanations by clicking. This added information facilitates learning by helping students to derive meaning from the context and enhancing comprehension (Webb, 2008, p. 83).

F. Quizzes and Challenges

Quizzes and vocabulary challenges, often called "comprehension checks" or "vocabulary contracts," are often included in digital novels so that learners can assess their comprehension of the text and learn about the new words they encountered while reading the text (Al-Qahtani & Higgins, 2020, p. 30).

G. Multimedia Elements

Digital novels generally now provide audio, video, and images through the use of multimodal elements. Digital novels use a variety of formats to connect to different learners' preferred learning styles and give a tangible meaning to vocabulary words through multimodal representations (Kress, 2010). (Kress, 2010, p. 131).

H. Adjustable Font Size, Customizable Background Color, and Text-to-Speech Options

By giving visually impaired students and other individuals with learning difficulties the flexibility to use text size, background colours, and text-to-speech options, digital novels allow for greater user participation and engagement. Such technologies will enhance a person's experience with reading by addressing some of the obstacles to reading success (Liu, 2018; Al-Qahtani & Higgins, 2020). These features of digital novels help students with visual and learning disabilities possess some elements of inclusive learning tools (Al-Qahtani & Higgins, 2020, p. 35).

2.3.3.2. Digital Novels Benefits for Vocabulary Learning

Digital novels allow students to learn vocabulary in context and promote incidental vocabulary learning, which is one of the major benefits of reading digital novels (Webb, 2008, p. 82). Multimedia elements incorporated in the novels may deepen vocabulary retention by strengthening the learning process through various input channels (Laufer & Ravenhorst-Kalovski, 2010, pp. 15-30). Moreover, the flexible and engaging aspects of the digital novels increase learners' interest and motivation to read which, in turn, contributes to better vocabulary attainment (Mangen & Kuiken, 2014, p. 252).

2.4. Factors Influencing Perceptions of Digital Reading

Many different, interconnected influences will shape student's perspectives on Digital Reading. Two of the most prominent influences are familiarity with and ability to use technology. According to Al-Qahtani and Higgins (2020, p. 45), students who feel comfortable and competent using digital tools have a more positive attitude and have more advocacy for digital reading environments because they can easily learn and use the functions and features of those tools. Due to the sense of technological mastery, the learner experiences reduced anxiety and increased self-efficacy, which result in enhanced performance.

2.5. Digital novels and their impact on vocabulary enhancement

Digital novels benefit students linguistically based on the students' level of engagement, often measured by the depth and breadth of reading. Laufer & Hulstijn (2001) noted the correlation between the time students allocated for extensive reading and the vocabulary they were able to acquire, which implies that greater engagement results in large vocabulary gains. This is due to the overwhelming presence of new vocabulary in a given situation as deeper learning and retention is more likely to take place. Webb (2008, p. 67) also noted that the time made available by students for reading digital novels is a major

determinant of unplanned vocabulary learning, wherein the repetition of the words within a particular context greatly enhances retention and understanding. It follows that digital novels ought to be read on a regular and continuous basis in order to capture the gains and retention in vocabulary, suggesting that the primary goal in the case of EFL learners is to ensure access and foster motivation.

2.6. Related Studies

According to Chen (2021, pp. 1-5), while EFL students who used digital texts improved their vocabulary and reading comprehension better than those who used traditional print texts, the gain was attributed to the interactive features and built-in dictionaries available in digital novels.

Another Study conducted by Elvriza & Nurcholis (2025) stated that using digital novels in EFL classes not only enhanced vocabulary acquisition, but also bolstered learner motivation and participation. Students enjoyed the multimedia features and adjustable reading modes.

Hockly (2018) also noted that the repetitive and contextualized nature of vocabulary within digital novels enhanced students' ability to remember and recall the words. Students reported favorable comments about the digital reading materials' availability and ease of access.

Webb (2008, p. 88) discovered that the extent to which students engaged in digital reading greatly determined the amount of vocabulary they were able to acquire. He noticed were the considerable vocabulary gains among high-frequency readers, and minimal improvement among the less engaged. According to Mangen & Kuiken (2014), the vocabulary learning opportunities that digital novels provide are sometimes undermined by students' distraction to multimedia features and notifications, which could interfere with deep reading and vocabulary retention.

One more paper is done in (2020) by Al-Qahtani & Higgins and they noted that students with low levels of technology skills tended to not derive much benefit from digital novels. Some also preferred print materials because of familiarity and less technical problems.

Shwani & Saleh (2020, pp. 29-37) noted that a large number of Kurdish students tended to prefer traditional print novels rather than digital novels for language learning because of some cultural traits and a lack of comfort with reading on screens.

3. Methodology

3.1. Research Design

This study utilizes a mixed method: quantitative and qualitative. The quantitative approach enables statistical treatment of the data collected and supports the effectiveness of digital novels in vocabulary enhancement. In addition, the qualitative approach provides a better understanding of the insights and the results obtained through the statistic figures.

3.2. Participants

The research involved 54 students who studied English at the University of Charmo in Chamchamal, Kurdistan Region, Iraq. The students participated in this study because they were in their 8th semester of undergraduate studies at the Department of English. The students were in their final year of undergraduate studies at the time of the research because they had finished most of their required courses and received extensive English language instruction. The students participated in the study because they were eager to join and there were no barriers that prevented them from taking part. The participants received information about their voluntary participation in the study and their right to leave the research at any point without facing any negative effects.

3.3. Data Collection tool

As a first step in the process, the deputy head of the Department of English of the University was first approached for official endorsement for the use of the instruments. Participants were supplied with an information sheet which detailed the purpose of the study, its formulation and implementation, possible risks and possible benefits of becoming a part of the study.

Quantitative data

The quantitative data collection tool was a structured questionnaire in printed version that was used for the analysis. The questionnaire consisted of 10 Likert-scale questions (strongly disagree, disagree, agree, and strongly agree) divided into three sections strongly as below:

- A. Frequency of Digital Novel Usage
- B. Perceived Vocabulary Improvement
- C. Engagement with Vocabulary Learning

3.3.1 Qualitative data Semi-Structured Interviews

Qualitative data was collected from the students in the form of six questions concerning the participants' diverse experiences and perceptions, in the form of semi structured interviews.

3.4. Data Analysis Procedure

3.4.1. Quantitative Analysis

The completed surveys for the present study were examined using the Statistical Package for the Social Sciences (SPSS) Program. Please refer to (Appendix A).

3.4.2. Qualitative Analysis

Students' answers are analyzed thematically to assess the impact of the digital novels used on the learners' vocabulary. Refer to (Appendix A).

3.5. Validity and Reliability

This is to lend some degree of trustworthiness to the whole exercise, the research tool, that is, the questionnaire, was revised. The first draft was distributed to three faculty members of the department to

get their opinion on the content of the document in terms of its completeness, relevance, and correctness (appendix B). They were used in drafting the questionnaire that was later administered to the respondents. The department's English major students were invited to participate in the pilot study, composed of five subjects, to examine the trustworthiness and understanding of the tool employed. The adjustments made pertaining to the phrasing and structure of the questions were based on the input given by the respondents during this pilot study. The internal consistency of the instrument was measured using Cronbach's alpha as a means of ascertaining the reliability of the distributed questionnaire, and the value obtained was 0.645 which is considered sufficient. It will be shown in the form of a table (Table 5) in part four.

4. Results and Discussions

4.1. Quantitative Data

In this case the English proficiency levels are especially pertinent for the discussion. Most participants are matched with the intermediate level with some prior experience digital novels. The rest of this section is devoted to the results with accompanying tables.

Table 1: Age Distribution of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-21	24	44.4	44.4	44.4
	22-25	28	51.9	51.9	96.3
	26-30	1	1.9	1.9	98.1
	Over 30	1	1.9	1.9	100.0
	Total	54	100.0	100.0	

The data presented in this table shows that the overwhelming majority of individuals in the sample (96.3%) were between the ages of 18 to 25. This suggests that the sample is largely representative of young adults. Only two individuals (3.8%) were 25 years of age or older.

Table 2: Gender Distribution of Participants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	9	16.7	16.7	16.7
	Female	45	83.3	83.3	100.0
	Total	54	100.0	100.0	

Table 3: Previous Exposure to Digital Novels (in years)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	None	3	5.6	5.6	5.6
	Less than a Year	6	11.1	11.1	16.7
	1-2 years	39	72.2	72.2	88.9
	3 years or more	6	11.1	11.1	100.0
	Total	54	100.0	100.0	

Table 3 illustrates how a large number of students (72.2 %) have spent 1-2 years of exposure to digital novels. This illustrates how the students regularly engage in the practice of digital reading. A significant minority have never engaged in digital novels (5.6 %) or have spent more than three years (11.1 %) engaged in the practice.

Table 4: Current English Proficiency Level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Beginner	2	3.7	3.7	3.7
	Intermediate	50	92.6	92.6	96.3
	Advanced	2	3.7	3.7	100.0
	Total	54	100.0	100.0	

Above shows that most of the participants (92.6 %) reported themselves as intermediate users of the English language, with a considerably less number being beginners and advanced.

In addition to this, the statistically significant data provided in table 5 confirms that this study is reliable. Cronbach's Alpha reported the overall reliability of the questionnaire as 0.645, which indicates reliability with respect to the three major sections. This suggests the questionnaire items have some level of agreement with respect to the constructs.

Table 5: Overall Reliability Statistics

Cronbach's Alpha	N of Items
.645	3

Along with the quantitative analysis, the paper tests the correlation between the variables as follow.

Table 6: Correlations Among Key Variables**Correlations**

		Frequency of Digital Novel Usage	Perceived Vocabulary Improvement	Engagement with Vocabulary Learning
Frequency of Digital Novel Usage	Pearson Correlation	1	.530**	.487**
	Sig. (2-tailed)		.000	.000
	N	54	54	54
Perceived Vocabulary Improvement	Pearson Correlation	.530**	1	.434**
	Sig. (2-tailed)	.000		.001
	N	54	54	54
Engagement with Vocabulary Learning	Pearson Correlation	.487**	.434**	1
	Sig. (2-tailed)	.000	.001	
	N	54	54	54

Correlation is significant at the 0.01 level (2-tailed).

The results given in Table 6 depict the Pearson correlation coefficients regarding the digital novel frequency, self-reported vocabulary improvements, and vocabulary learning engagement by the Kurdish EFL students in the sample (N=54). As the results from the analysis indicate, the nexuses of the variables are all significantly positively correlated to each other at the 0.01 level of significance. More specifically, regarding digital novel frequency, there are moderate correlations in self-reported vocabulary improvements ($r = .530$, $p < .01$) and engagement in ($r = .487$, $p < .01$) vocabulary learning. Also, self-reported vocabulary improvements and engagement in vocabulary learning are significantly correlated ($r = .434$, $p < .01$). It therefore follows that students who used digital novels frequently believed they mastered vocabulary more and were more active in vocabulary learning.

As for the consequences of various levels of exposure to the three dependent variables, Table 7 below seems to provide the relevant data.

ANOVA

Sum of Squares	Df	Mean Square	F	Sig.
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Frequency of Digital Novel Usage	Between Groups	4.888	3	1.629	3.281	.028
	Within Groups	24.826	50	.497		
	Total	29.714	53			
Perceived Vocabulary Improvement	Between Groups	1.231	3	.410	.613	.609
	Within Groups	33.436	50	.669		
	Total	34.667	53			
Engagement with Vocabulary Learning	Between Groups	3.886	3	1.295	3.079	.036
	Within Groups	21.036	50	.421		
	Total	24.922	53			

Table 7 outlines the outcome of the single-way ANOVA focused on the impact of different exposure levels (likely exposure to the digital novels) on the three dependent variables. Interestingly, there is a statistically significant difference between groups on the frequency of digital novel usage ($F = 3.281$, $p = .028$), and also significant difference on the engagement with vocabulary learning ($F = 3.079$, $p = .036$). On the contrary, there are no significant differences in the groups regarding improvement of vocabulary with the novel ($F = .613$, $p = .609$). Exposure, on the other hand, influenced the frequency of use of digital novels and the engagement in vocabulary learning. It did not predict the improvement of vocabulary using the given novel.

To ascertain statistically significant differences among groups of Kurdish EFL students at varying levels of English proficiency (Beginner, Intermediate, Advanced) concerning the frequency of digital novel usage and perceived vocabulary enhancement, Tables 8, 9, and 10 are presented and delineated below.

Table 8: Tukey HSD Post Hoc Test for Frequency of Digital Novel Usage by English Proficiency Level

Frequency of Digital Novel Usage

Tukey HSD^{a,b}

		Subset for alpha = 0.05
Current English Proficiency Level	N	1
Beginner	2	3.1667
Advanced	2	3.1667
Intermediate	50	3.1800
Sig.		1.000

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 2.941.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 8 shows the results of the Tukey HSD post hoc test, which compared the average number of times students of different English proficiency levels read digital novels. The means for beginners (3.1667), advanced learners (3.1667), and intermediate students (3.1800) are nearly the same, and the p-value is not significant (Sig. = 1.000). This means that the frequency of digital novel use is not significantly different between proficiency levels.

Table 9: Tukey HSD Post Hoc Test for Perceived Vocabulary Improvement by English Proficiency Level

Perceived Vocabulary Improvement

Tukey HSD^{a,b}

Current English Proficiency Level	N	Subset for alpha = 0.05
		1
Intermediate	50	3.6533
Beginner	2	3.6667
Advanced	2	4.0000
Sig.		.866

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 2.941.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 9 shows the Tukey HSD post hoc comparisons for how different proficiency groups thought their vocabulary had improved. The average perceived progress is highest for advanced students (4.0000), then for beginners (3.6667), and finally for intermediates (3.6533). But the differences aren't statistically significant (Sig. = 0.866), which means that people of all skill levels get the same vocabulary benefits from reading digital novels.

Table 10: Tukey HSD Post Hoc Test for Engagement with Vocabulary Learning by English Proficiency Level

Engagement with Vocabulary Learning

Tukey HSD^{a,b}

		Subset for alpha = 0.05
Current English Proficiency Level	N	1
Beginner	2	3.0000
Intermediate	50	3.4500
Advanced	2	3.8750
Sig.		.280

Means for groups in homogeneous subsets are displayed.

- a. Uses Harmonic Mean Sample Size = 2.941.
- b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

Table 10 presents the results of the Tukey HSD test, which compares vocabulary development across different proficiency groups with involvement. The mean engagement is lowest for beginning (3.0000), intermediate (3.4500), and advanced students (3.8750), but these differences are not statistically significant. This suggests that there is no discernible difference in how students approach vocabulary acquisition since, regardless of competence level, it may be altered by their use of digital novels.

In brief, tables 7, 8, and 9 illustrate that the level of proficiency does not meaningfully change the results from the provided sample of EFL students learning Kurdish.

4.2. Qualitative Data

For each interview question, the answers of students are assessed in themes of the majority, some, or few.

1-Do you usually read digital novels?

Almost all the students claimed they read digital novels and were particularly enthusiastic about how they add to enjoyment, and access, and help them to enhance their learning or even to occupy spare time. Some students claimed they read digital novels only sporadically and even claimed to read them only for certain topics where digital media is the only option available. A small number of them, however, said they like reading printed novels or hard copies and claimed they do not or very rarely read digital novels and even stated that they feel a strong connection to print media and dislike digital formats.

2- How often do you read digital novels?

Most of the students stated they read digital novels without any restrictions and do so on a regular basis, and in most cases, do so at least once or twice a week, making reading an integral part of their free time, class, or even for personal enjoyment. A small number of students said that they do not engage their

reading in a constant, but only in a sporadic manner, and this is solely dependent on their calendar, state of mind, or the unavailability of printed books. A small number of students do not engage themselves in reading digital novels and claimed to do so only if they have printed books or have an interest, irrespective of the effect digital reading may have on eyesight, engage, and only in certain cases.

3- In your view, how does the field of vocabulary benefit from reading digital novels?

Many students stated that digital novels assist in vocabulary acquisition the most because readers are able to quickly look up, understand, and memorize new words. They pointed out easy access to definitions, the ability to copy and search for the meaning, and guessed spelling as major benefits. A small number of students discussed motifs of spelling patterns and constructed meaning of words. A small number of people, who are not regular readers, still to this day appreciate the ability novels in general lend to improving vocabulary, admitting to themselves that they do not use them enough.

4- Do you usually come across new vocabulary in digital novels? If so, give a few examples?

Majority of students claimed that reading digital novels is a primary source of new vocabulary, quoting words like “melancholic”, “rebirth”, “nostalgic”, and “collapse”. They reveled in learning synonyms, antonyms, and contextual usage of the words. A small number of students do not need to always prove examples, yet still maintain that new words are introduced to them on a regular basis. On the other hand, pedagogically they are under the impression that they do not, or very seldom, come across new vocabulary, with the primary reason being an infrequent use of digital novels or an overwhelming aversion for them when compared to printed books.

5- Is reading a novel in digital format more or less effective than reading the novel in printed format for the purpose of expanding your vocabulary? And how?

Most of the students who worked on this case viewed reading digital novels as more effective or at least as effective for vocabulary expansion. They mentioned features like having a dictionary, ease of access, and higher availability. A minority of students, however, had a preference for printed novels, arguing that they offer more focus and better ease for annotating. Some students mentioned that they do not offer as much effectiveness in terms of distraction and eye strain, whereas a few others argued that the effectiveness of digital and printed formats depends on the context and the individual’s learning style.

6- Which features (e.g., Annotation Tools , Hyperlinks to Definitions, Interactive Glossaries, Search Functionality, Contextual Learning, Quizzes and Challenges, Multimedia Elements) of digital novels do you believe help with the expansion of your vocabulary?

All students considered hyperlinks to definitions of vocabulary as most valuable, relishing the fact that new words could be learned with so little effort. Some students preferred quizzes and challenges because of the interactive nature of the activities that helped them reinforce the vocabulary. A few students liked contextual learning and the annotation tools because they helped them to understand and remember new

words. A few students also talked about these digital features, though, most confessed that they did not use them because they preferred reading printed books.

4.3 Research Questions' Answers

1. To what extent do Kurdish EFL students perceive reading digital novels as an effective method for enhancing their English vocabulary acquisition?

Kurdish EFL students capitalize on digital novels and grade a them as a very good tool to enhance vocabulary acquisition. Quantitative data reveal a substantial correlation, in a positive direction, between the frequency of digital novels used and the perceived improvement of vocabulary ($r = .530$, $p < .01$), regardless of the English proficiency level. Almost all of the participants indicated that they routinely experienced the acquisition of new vocabulary when reading digital novels. And it is not only quantitative data that testify to this phenomenon: many students write in the open-ended questions that digital novels are advantageous because they can understand words and phrases instantly and master them easily in context. In sum, there is consensus that digital novels are good tools for increasing English vocabulary.

2. What specific features of digital novels do Kurdish EFL students identify as most beneficial for vocabulary learning compared to traditional print formats?

Students mostly considered hyperlinks to definitions as the most beneficial digital novel feature for vocabulary acquisition as it fosters understanding of the words in context. Other notable features are quizzes and digital games, annotation, and learning support tools that together promote active learning and retention. A minority of a students who cherished print books emphasized the enhanced focus, while most of the respondents championed the usability of digital print materials. These features greatly overshadow print materials as respondents specifically noted in the surveys and interviews that aspects of their tools help learners active, retain, and use the vocabulary instantly.

3. How does the frequency and duration of digital novel engagement correlate with Kurdish EFL students' self-reported vocabulary improvement?

Students self-reported vocabulary improvement is positive with frequency and time spent on digital novels. Digital novel readers more often and for longer periods reported some perceived gains vocabulary than students who reported less engagement with digital novels ($r = .530$, $p < .01$). Students who demonstrated gains also developed a more positive engagement with vocabulary learning ($r = .487$, $p < .01$). Data suggests that most of the regular readers are able to report a substantial number of vocabulary words and believe that they are able to acquire vocabulary more than once. Hence, it is clear that digital novels can be an effective means of vocabulary development for Kurdish EFL students.

4.4 Discussion

As stated previously, the study found that Kurdish EFL students regard digital novels as very effective for improving English vocabulary, owing to features like hyperlinks to definitions, interactive glossaries, and ready access to contextual information. Participants experienced increased self-reported vocabulary improvements relative to their English proficiency level, and use of digital novels sustained a significant positive correlation with novel use. Despite the degree of proficiency and use of digital novels, self-reported improvements in vocabulary were positive. These results correlate with and diverge from other studies as discussed in the literature review (the related studies).

This Research has shown that long-term exposure to digital novels increases your ability to learn vocabulary rapidly and increases your level of engagement/learning. This finding supports the research done by Chen (2021), Elvriza & Nurcholis (2025), Hockly (2018), and Webb (2008), who all agree that reading New Adult Fiction produces a positive effect on vocabulary acquisition. Chen's (2021) research demonstrates how interactive learning along with an increased exposure to vocabulary helps with retention and understanding, while both Elvriza & Nurcholis (2025) describe how an increase in motivation and engagement provides an opportunity for learners to be even more engaged in their learning.

Furthermore, the Students in the present work emphasized the advantages of digital nature, including hyperlinks to definitions, quizzes, and annotation tools as far as vocabulary acquisition is concerned. (Chen, 2021) and (Elvriza & Nurcholis, 2025) have the same observation and emphasize the role of multimedia tools and instant access to dictionaries as a means to increase student motivation and improve vocabulary acquisition efficacy. Besides, the present work revealed a strong connection between regular and long-term digital novel reading and perceived vocabulary improvement. Similarly, (Webb 2008) noted that the vocabulary improvement of the high-frequency digital readers was pronounced as compared to low-engagement readers indicating that high and regular engagement was key to vocabulary improvement.

Regarding the possibility of distraction, the present research indicated that part of the students believed that digital formats were less efficient in the context of learning vocabulary because of distracting factors or eye fatigue. This was further elaborated by Mangen and Kuiken (2014), who specifically concluded that digital novels are capable of diminishing deep reading and vocabulary retention due to the sheer number of distractions caused by notifications and multimedia features of digital gadgets.

This study has shown that students most often tend to choose digital novels, whereas some still tend to print books because of cultural customs, or reading discomfort on screens. In contrast. (Shwani & Saleh, 2020) pointed to low levels of technology including heavy cultural barriers as notable issues, wherein

some students than others, either learned to embrace, or dislearned the digital platforms for language learning.

All students regardless of language their level, equally benefited from the use of digital novels. This study has shown that regardless of the proficiency level of English, vocabulary improvement which has been perceived from the use of digital novels has not shown any significant difference. In contrast, (Al-Qahtani & Higgins, 2020) emphasized that it is technological proficiency—not language proficiency—that determines the extent of students' benefits from digital novels, noting stark contrast on what type of learner variable has more bearing on vocabulary gains in contexts of digital reading

5. Conclusion

This study reveals that Kurdish EFL students benefit greatly from Digital novels in vocabulary acquisition. There is a substantial positive correlation between the self-reported vocabulary improvement and the digital novel reading frequency, regardless of the students' language proficiency. Features such as hyperlinks to definitions, interactive glosses, and annotation tools characterized by students as helpful in the process of meeting new words and facilitating the immediate comprehension and retention of the vocabulary. All the participants, regardless of the cognitive level, appreciated the motivational aspects of digital novels and the convenience of interacting with embodiment, simulation, and narration features that are absent in standard printed books. Most importantly, the positive effects of the digital novels, which consist of a variety of digital text, audio, and visual materials, are available to all.

The strength of digital novels in EFL instruction lies in their context-rich, immersive, and flexible learning environments that foster both incidental and intentional learning. Accessible educational technology and rising digital literacy makes digital novels an increasingly appealing resource for language instruction. Some drawbacks remain, such as occasional distractions and a minority who prefer print, which suggests that some degree of purposeful integration and attention to learner preferences is warranted. All in all, the integration of digital novels into vocabulary EFL instruction is progressive. They offer both an immediate and enduring advantage for learners, and their thoughtful adoption coupled with proper instructional design and educational technology is bound to improve the vocabulary and language proficiency of EFL learners.

5.1. Limitation of the Study

As much as this study contributes to the literature, there are certain limitations that need to be recognized. The study focuses only on developmental stages of the Kurdish EFL learner, which narrows the scope of the conclusions that can be drawn across different age, proficiency, and even educational settings. Besides, the self-reported information on the students' perceptions on reading, their reading habits, and vocabulary development self-reportedly raises the possibility of biases as respondents may

exaggerate or underestimate their level of involvement and advancement. These limitations in scope call for more expansive future research with regard to the diversity of the participants, along with the deployment of other strategies, such as more comprehensive vocabulary tests, longitudinal studies, or other forms of monitoring, to further validate and enhance the outcomes of the inquiry.

5.2. Recommendations for Future Research and Implications for EFL Instruction

The next step for maximizing the use of e-books in EFL context should include longitudinal studies that assess vocabulary acquisition over time and self-reported attainment of vocabulary gains vis-a-vis robust evaluation on objective vocabulary assessment tools and the overall learning outcome. For integrating digital novels into the EFL curriculum, teachers should use digital novels as tools for expanding vocabulary and cover the interactive features that promote vocabulary acquisition. Professional development policies should be adopted that focus on training teachers in digital pedagogy and teaching them to facilitate the use of appropriate platforms, so that learners can be in a position to use the tools effectively. Further, educational setup should invest in providing access to appropriate eBooks for curriculum support, along with the requisite technology, to provide equality of opportunity and inspiration to AS learners.

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Appendix A

The Perceptions of Kurdish EFL Students on the Effect of Reading Digital Novels on Enhancing the English Language Vocabulary

This study explores how engagement with digital novels affects vocabulary acquisition by assessing student attitudes toward this medium, their frequency of use, and the perceived impact on their language skills. Questionnaires. Thank you for participating in our study. Your responses will help us better understand Kurdish EFL students' perceptions on the role of reading digital novels in enhancing the English language vocabulary.

Demographic Information

Age:

- ☒ 18-21
- ☐ 22-25
- ☐ 26-30
- ☐ Over 30

Gender:

- ☒ Male
- ☐ Female
- ☐ Other

Previous Exposure to Digital novel (in years):

- ☐ None
- ☒ Less than 1 year
- ☐ 1-2 years
- ☐ 3 years or more

Current English Proficiency Level:

- ☐ Beginner
- ☒ Intermediate
- ☐ Advanced
- ☐

Questionnaires for Quantitative Method

Part 1: Frequency of Digital Novel Usage

1. I regularly read novels online.
 - ☐ Strongly Disagree
 - ☐ Disagree
 - ☒ Neutral
 - ☐ Agree
 - ☐ Strongly agree
2. I usually read digital novels in my free times.
 - ☐ Strongly Disagree
 - ☐ Disagree

- ☐ Neutral
- ☐ Agree
- ☐ Strongly agree

3. I have electronic novels in my devices.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☒ Agree
- ☐ Strongly agree

Part 2: Perceived Vocabulary Improvement.

4. Reading digital novels has improved my English vocabulary.

- ☐ Strongly Disagree
- ☐ Disagree
- ☒ Neutral
- ☐ Agree
- ☐ Strongly agree

5. I recall and use the vocabulary learned from digital novels in speech and writing.

- ☒ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☐ Agree
- ☒ Strongly agree

6. Reading digital novels is a useful tool for expanding my vocabulary.

- ☐ Strongly Disagree
- ☐ Disagree
- ☐ Neutral
- ☒ Agree
- ☐ Strongly agree

Part 3: Engagement with Vocabulary Learning

7. I usually search for unfamiliar words' meanings that I encounter in digital Novels.

- ☐ Strongly Disagree
☐ Disagree
☒ Neutral
☐ Agree
☐ Strongly agree

8. I discuss the terms that I have learned from the digital novels with my peers.

- ☐ Strongly Disagree
☐ Disagree
☐ Neutral
☒ Agree
☐ Strongly agree

9. Reading digital novels improves my vocabulary knowledge since they're enjoyable.

- ☐ Strongly Disagree
☐ Disagree
☐ Neutral
☒ Agree
☐ Strongly agree

10. Reading digital novels has helped me do well in my tests on different modules.

- ☐ Strongly Disagree
☐ Disagree
☐ Neutral
☒ Agree
☐ Strongly agree

Questions for Qualitative Method

1- Do you usually read digital novels?

yes because it is enjoyable

2- How often do you read digital novels?

I read them few time a week

- 3- In your view, how does the field of vocabulary benefit from reading digital novels?

Really help me learn new words

- 4- Do you usually come across new vocabulary in digital novels? If so, give a few examples?

Yes I do

- 5- Is reading a novel in digital format more or less effective than reading the novel in printed format for the purpose of expanding your vocabulary? And how?

Digital format ^{most} ~~is~~ effect

- 6- Which features (e.g., Annotation Tools , Hyperlinks to Definitions, Interactive Glossaries, Search Functionality, Contextual Learning, Quizzes and Challenges, Multimedia Elements) of digital novels do you believe help with the expansion of your vocabulary?

Hyperlinks to definition and search
functionality help most

