Journal of Education and Future
year: 2026, issue: 30, 27-40
DOI: 10.30786/jef.1940304

Web 2.0-Supported Vocabulary Instruction: Fifth-Grade Students' Achievement and Attitudes toward the English Course*

Article Type	Received Date	Accepted Date
Research	29.04.2026	20.08.2026

Leyla Şahin** **Tarık Başar*****

Abstract

This study investigated the effect of vocabulary instruction enriched with Powtoon and Kahoot on fifth-grade middle school students' English vocabulary reading and listening achievement and their attitudes toward the English course. The study used an explanatory sequential mixed-methods design. The quantitative phase followed a pretest–posttest quasi-experimental design with experimental and control groups, while the qualitative phase was structured as a case study. Participants were 32 fifth-grade students from a public middle school in the city center of Kırşehir. In the experimental group, vocabulary instruction was supported with Powtoon and Kahoot activities, whereas the control group followed regular curriculum-based instruction. Quantitative data were collected from both groups, and qualitative data were obtained from experimental group students' views on the implementation. Data were gathered using the "Vocabulary Achievement Test", the "Attitude Scale toward the English Course", and "a semi-structured interview form". Independent- and paired-samples t-tests were used for quantitative analysis, and descriptive analysis was used for qualitative data. The results showed significant differences favoring the experimental group in vocabulary reading achievement, vocabulary listening achievement, and attitudes toward the English course. Interview results showed that students found the tools enjoyable, attention- and interest-grabbing, and motivating, and stated that these tools supported participation in the course, classroom interaction, and learning retention.

Keywords: Web 2.0 tools, Kahoot, Powtoon, vocabulary instruction, attitude toward the English course.

* This article was produced from the first author's master's thesis, prepared under the supervision of the second author at the Institute of Social Sciences, Kırşehir Ahi Evran University.

** *Corresponding Author:* Science Expert, Ministry of National Education, Kırşehir, Türkiye, E-mail: leyladagdeln@gmail.com, ORCID: 0000-0003-0907-7007

*** Assoc. Prof. Dr., Kırşehir Ahi Evran University, Faculty of Education, Department of Educational Sciences, Kırşehir, Türkiye. E-mail: tarik.basar@ahievran.edu.tr, ORCID: 0000-0002-2653-0435

Web 2.0 Destekli Kelime Öğretimi: Beşinci Sınıf Öğrencilerinin Başarı ve İngilizce Dersine Yönelik Tutumları*

Makale Türü	Başvuru Tarihi	Kabul Tarihi
Araştırma	29.04.2026	20.08.2026

Leyla Şahin** **Tarık Başar*****

Öz

Bu çalışmada, Powtoon ve Kahoot ile zenginleştirilen kelime öğretiminin ortaokul beşinci sınıf öğrencilerinin İngilizce kelime okuma ve dinleme başarıları ile İngilizce dersine yönelik tutumları üzerindeki etkisi incelenmiştir. Araştırmada açımlayıcı sıralı karma yöntem deseni kullanılmıştır. Nicel aşama, deney ve kontrol gruplu ön test–son test yarı deneysel desenle yürütülürken, nitel aşama durum çalışması olarak yapılandırılmıştır. Katılımcılar, Kırşehir il merkezindeki bir devlet ortaokulunda öğrenim gören 32 beşinci sınıf öğrencisinden oluşmuştur. Deney grubunda kelime öğretimi Powtoon ve Kahoot etkinlikleriyle desteklenirken, kontrol grubunda öğretim programına dayalı mevcut öğretim süreci izlenmiştir. Nicel veriler her iki gruptan toplanmış, nitel veriler ise deney grubundaki öğrencilerin uygulamaya ilişkin görüşlerinden elde edilmiştir. Veriler, "Kelime Bilgisi Başarı Testi", "İngilizce Dersine Yönelik Tutum Ölçeği" ve "yarı yapılandırılmış görüşme formu" kullanılarak toplanmıştır. Nicel analizlerde bağımsız ve bağımlı örneklemler t testleri, nitel verilerin analizinde ise betimsel analiz kullanılmıştır. Bulgular, kelime okuma başarısı, kelime dinleme başarısı ve İngilizce dersine yönelik tutum açısından deney grubu lehine anlamlı farklılıklar olduğunu göstermiştir. Görüşme sonuçları, öğrencilerin araçları eğlenceli, dikkat ve ilgi çekici ve motive edici bulduklarını; ayrıca bu araçların derse katılımı, sınıf içi etkileşimi ve kalıcılığı desteklediğini göstermiştir.

Anahtar Sözcükler: Web 2.0 araçları, Kahoot, Powtoon, kelime öğretimi, İngilizce dersine yönelik tutum.

*Bu makale, birinci yazar tarafından Kırşehir Ahi Evran Üniversitesi Sosyal Bilimleri Enstitüsü'nde ikinci yazarın danışmanlığında hazırlanan yüksek lisans tezinden üretilmiştir.

**Sorumlu Yazar:* Bilim Uzmanı, Millî Eğitim Bakanlığı, Kırşehir, Türkiye. E-posta: leyladagdeln@gmail.com, ORCID: 0000-0003-0907-7007

*** Doç. Dr. Kırşehir Ahi Evran Üniversitesi, Eğitim Fakültesi, Eğitim Bilimleri Bölümü, Kırşehir, Türkiye. E-posta: tarik.basar@ahievran.edu.tr, ORCID: 0000-0002-2653-0435

Introduction

Globalization, technological advances, and increasing international interaction have heightened the importance of foreign language instruction (Altunkaya, 2015; İşcan, 2018; Özer & Korkmaz, 2016). The need for effective communication among speakers of different native languages has led to the emergence of a common language for communication; in this context, the term "lingua franca" is now most commonly associated with English (Eker, 2011; Şen, 2022). Because English is widely used in global communication, proficiency in this language is considered important, particularly in areas such as technology, science, business, and economics (Pishghadam & Zabihi, 2012). In this regard, several regulations concerning English instruction have been introduced in Türkiye. Following the 4+4+4 education reform enacted in 2012, it was decided that English instruction would begin in the second grade of primary school, and in 2013, measures were adopted to place greater emphasis on foreign language instruction in the fifth grade of middle school (MoNE, 2013).

Nevertheless, various studies emphasize that the targeted level of achievement in foreign language instruction has not been attained despite these structural arrangements (Demirpolat, 2015; Işık, 2008; Kırkıç & Boray, 2017; Suna & Durmuşçelebi, 2013). According to the 2025 English Proficiency Index published by Education First, Türkiye is classified as a country with "low proficiency" in English (EF Education First, 2025). National examination results also show that students have difficulty reaching the expected level of achievement in the English course (MoNE, 2022). These findings suggest that structural arrangements alone are not sufficient and that the quality of instructional processes and teaching methods should also be reconsidered.

Vocabulary Knowledge and Affective Factors in Language Learning

Vocabulary knowledge is one of the main components affecting success in foreign language instruction. It is regarded as a prerequisite for effective written and oral communication and is directly related to the effective use of basic language skills, particularly receptive and productive skills (Karadağ, 2021; Karatay, 2007). Vocabulary knowledge extends beyond knowing a word's dictionary definition; it also includes its spelling, pronunciation, use in context, and relationships with other words (Harmer, 2007; Thornbury, 2002). Nation (2001) explains vocabulary knowledge through the dimensions of form, meaning, and use. Allen (1999) emphasizes that words should be presented in meaningful contexts, that opportunities for real-life use should be provided, and that activities supporting students' active participation in the learning process should be planned. Demirel (2021) also states that techniques such as using audio-visual materials and inferring meaning from context can be employed in vocabulary instruction.

Vocabulary learning is not only a cognitive process but also an affective one. Students' attitudes toward the course and their motivation are important variables associated with foreign language achievement (Fakeye, 2010; Gardner & Lambert, 1972). Gardner and Lambert (1972) emphasize that success in foreign language learning cannot be explained solely by cognitive ability, since students' attitudes and motivation also play a determining role in this process. Various studies indicate that attitudes guide students' interest in the course and are associated with academic achievement (Andres, 2002; Egbert, 2005; Hosseini & Pourmandnia, 2013; Lennartsson, 2008; Smith, 1971). In addition, individual characteristics, the physical conditions of the learning environment, the methods and techniques used, and instructional materials may influence students' attitudes (Oblinger, 2005). Therefore, in foreign language instruction, learning environments that support students' interest and motivation and consider the affective dimension as well as cognitive gains are needed.

Technology Integration and Web 2.0 Tools in Teaching English as a Foreign Language

The use of technology in foreign language instruction has long been on the agenda and has expanded through computer-assisted and internet-based applications (Levy, 1997; Walker & White, 2017). Visual and auditory materials can enrich the learning environment and contribute to longer-lasting learning by supporting students' participation in the course (Demirel, 2021; Scott & Beadle, 2014). One important component of this technological transformation is the use of Web 2.0 tools. Web 2.0 refers to digital environments that allow users not only to access information but also to create and share content, interact, and collaborate (O'Reilly, 2005). In educational contexts, these tools are

reported to support students' active participation in the course, enrich the learning environment with multimedia materials, and provide opportunities for content creation (Ajjan & Hartshorne, 2008; Solomon & Schrum, 2007).

Among these tools, Kahoot supports simultaneous student participation through its game-based structure and formative assessment features. Its elements of competition and enjoyment may also increase classroom interaction (Chaiyo & Nokham, 2017; Dellos, 2015). Powtoon, by contrast, visually enriches the teaching process by enabling the creation of digital presentations and video content through animation and multimedia elements. Çelik (2021) states that Powtoon can make the course more engaging and support students' creative skills. In addition, Powtoon-based applications have been reported to increase course participation, contribute to the development of certain language skills, and be associated with positive attitudes toward learning (Fimbriani, 2016; Semaan & Ismail, 2018).

Significance and Aim of the Study

Previous studies on the use of Web 2.0 tools in teaching English vocabulary as a foreign language have been conducted at different educational levels; however, much of this research has focused on higher education (Açıkgöz, 2019; Bensalem, 2018; Bozkurt-Türk, 2019; Çakır, 2019; Kuş & Alişah, 2025; Medina & Hurtado, 2017; Özdemir, 2026; Wichadee & Pattanapichet, 2018). The relatively limited number of studies conducted at the middle school level (Agustina, Bilqis, & Imamyartha, 2026; Çaparlar, 2021; Irawan & Firdaus, 2025), together with the scarcity of research specifically focusing on fifth-grade students, points to a need for further evidence on Web 2.0-supported vocabulary instruction at this grade level. In addition, many studies on vocabulary instruction have assessed achievement mostly through measures limited to reading skills (Açıkgöz, 2019; Çaparlar, 2021; Putri & Akhiriyah, 2024). In the present study, however, the achievement test used covers both vocabulary reading and vocabulary listening skills. Furthermore, while Web 2.0 applications have often been examined in relation to vocabulary knowledge outcomes, studies addressing affective variables such as attitudes are relatively limited (Bozkurt-Türk, 2019; Çinar, 2019; Lale, 2025). In this respect, the combined use of Powtoon and Kahoot and the simultaneous examination of vocabulary achievement and attitudes toward the English course among fifth-grade students may contribute to the relevant literature.

This study aimed to examine the effects of Powtoon and Kahoot, two Web 2.0 tools, on fifth-grade middle school students' English vocabulary reading and listening achievement and their attitudes toward the English course. In line with this purpose, the study addressed the following research questions:

1) Do the experimental and control groups differ significantly in their posttest scores for vocabulary reading and vocabulary listening?

2) Do students' vocabulary reading and vocabulary listening scores differ significantly from pretest to posttest within the experimental and control groups?

3) Do students' attitudes toward the English course differ significantly between the experimental and control groups at posttest and within each group from pretest to posttest?

4) What are the views of students in the experimental group on the use of Web 2.0 tools in the English course?

Method

Research Design

This study used an explanatory sequential mixed-methods design to examine the effect of Kahoot and Powtoon, two Web 2.0 tools, on fifth-grade middle school students' English vocabulary reading and listening achievement and their attitudes toward the English course. This design involves two sequential phases: quantitative data are collected first, and qualitative data collection methods are then employed to examine the quantitative results in greater detail (Creswell & Plano Clark, 2017). The quantitative phase employed a pretest–posttest control-group quasi-experimental design. The qualitative phase, conducted after the quantitative phase, used a case study design. In this study, the case was the use of Web 2.0 tools in the fifth-grade middle school English course.

Participants and Group Assignment

The study group comprised 32 fifth-grade students enrolled in a public middle school in the city center of Kırşehir under the Ministry of National Education. After the required permissions were secured, the school was selected based on accessibility, technological infrastructure, and physical conditions. The fifth-grade level was selected because vocabulary instruction receives greater emphasis at this level and because the Web 2.0 activities prepared for the study were considered appropriate for this grade level.

Before the experimental implementation, the "Vocabulary Achievement Test" and the "Attitude Scale toward the English Course" were administered as pretests to students in four fifth-grade classes at the school. Based on the pretest results, two classes with comparable scores were included in the study. One of these classes was assigned to the experimental group and the other to the control group by drawing lots. Each group comprised 16 students. The descriptive statistics and independent-samples t-test results for the pretest scores of the experimental and control groups are presented in Table 1.

Table 1. *Comparison of vocabulary reading, listening and attitude pretest scores by group*

Variable	Group	N	$\bar{x}$	sd	df	t	p
Vocabulary reading skill	Control	16	11.3750	5.89774	30	-0.110	.913
	Experimental	16	11.5625	3.44420			
Vocabulary listening skill	Control	16	13.2500	3.02214	30	-0.210	.835
	Experimental	16	13.5000	3.66970			
Attitude	Control	16	78.6250	7.71038	30	0.545	.590
	Experimental	16	77.0625	8.48111			

As shown in Table 1, no statistically significant differences were found between the experimental and control groups in their pretest scores for vocabulary reading, vocabulary listening, or attitude toward the English course ($p > .05$). These results indicate that the groups were comparable with respect to the variables examined before the intervention.

Data Collection Tools

The Vocabulary Achievement Test

The researcher developed the "Vocabulary Achievement Test" to identify the English vocabulary knowledge levels of students in the experimental and control groups; the test was used as both a pretest and a posttest. It included 30 target words selected from the "My Town" and "Games and Hobbies" units in the fifth-grade English Course Curriculum (MoNE, 2018). These units were selected by considering the units planned to be taught during the study period, in line with the unit sequence in the curriculum.

The test assessed vocabulary reading and listening skills. During the first stage of development, three reading items and three listening items were written for each target word in the pilot form, resulting in 180 multiple-choice items. The listening-section items were recorded by an English teacher who was a native speaker of English.

During the test development process, a table of specifications was first prepared by considering the learning outcomes related to the listening and reading skills in the relevant units and the target vocabulary to be taught. To establish content validity, seven experts in measurement and evaluation, curriculum development, English language teaching, and language education reviewed the test. The items were revised based on their feedback. Before pilot testing, a preliminary application with 10 students was conducted to check item clarity and test duration, and further revisions were made.

The pilot implementation was conducted with 103 fifth-grade students in six separate sessions. Afterward, item difficulty and discrimination indices were calculated for each item. From the pilot form, items with difficulty indices between 0.40 and 0.60 and discrimination indices above 0.30 were selected. The final form included one reading item and one listening item for each target word, yielding 60 multiple-choice items. The KR-20 reliability coefficient was 0.91 for the reading section, 0.91 for the listening section, and 0.96 for the whole test.

The Attitude Scale toward the English Course

Students' attitudes toward the English course were measured using the "Attitude Scale toward the English Course" developed by Baş (2012). The scale is a five-point Likert-type instrument, with responses ranging from "strongly disagree" to "strongly agree." It comprises 27 items across five subdimensions: sensitivity, consciousness, importance, methods and materials, and language and culture. Fifteen items are positively worded and 12 are negatively worded; negatively worded items are reverse scored. In the scale development study, the KMO value was 0.88, and Cronbach's alpha for the overall scale was 0.92. Reliability coefficients for the subdimensions ranged from 0.77 to 0.93 (Baş, 2012).

Interview Form

A semi-structured interview form was developed by the researchers to explore students' views regarding the Web 2.0 tools used within the scope of the English course during the experimental process. The form contained five open-ended questions. To establish content validity, three language education experts reviewed the form, and revisions were made accordingly. It was then piloted with two students before being finalized. After the experimental process, interviews were held with seven volunteer students. Participants were selected through maximum variation sampling, a purposive sampling method. Based on their posttest scores on the "Vocabulary Achievement Test", two students with the lowest scores, three with moderate scores, and two with the highest scores were interviewed. The interviews were audio-recorded, and participant confidentiality was maintained.

Experimental Procedure

The experimental implementation lasted eight weeks. The researcher taught the experimental group, while the relevant English teacher led the course in the control group. In the experimental group, the instructional process was structured around Powtoon and Kahoot activities. The digital materials and lesson plans were reviewed by one instructional technology expert and two English teachers; after revisions, a four-week pilot study was conducted before the main implementation.

In the experimental group, students' prior knowledge was activated during the engagement phase. Animated vocabulary presentations prepared with Powtoon were used in the exploration and explanation phases. The target words were limited to a maximum of seven per lesson, and the elaboration phase included the use of words in different contexts. In the evaluation phase, Kahoot-based activities were used for vocabulary reinforcement.

The vocabulary taught in the experimental group was distributed over eight weeks within the My Town and Games and Hobbies units. In the control group, the course followed the Ministry of National Education English Course Curriculum, and no Web 2.0 tool was used. At the end of the implementation, the "Vocabulary Achievement Test" and the "Attitude Scale toward the English Course" were administered to both groups as posttests; semi-structured interviews were also held with students in the experimental group.

Data Analysis

Quantitative analyses were conducted in SPSS using scores obtained from the "Vocabulary Achievement Test" and the "Attitude Scale toward the English Course". Normality was assessed using the Shapiro–Wilk test. Because all p values exceeded .05, the data were considered to satisfy the assumption of normality; accordingly, parametric tests were preferred. Independent-samples t-tests were used for between-group comparisons of pretest and posttest scores, while paired-samples t-tests were used for within-group pretest–posttest comparisons. The qualitative data from the semi-structured interviews were examined using descriptive analysis. Students were coded as S1–S7, and their responses were grouped according to thematic similarity and presented using direct quotations.

Ethical Procedures

Ethical approval for this study was obtained from the Ethics Committee of Kırşehir Ahi Evran University (Approval No. 2021/6/5).

Results

Posttest Results for Vocabulary Reading and Listening

Independent-samples t-tests were conducted to examine whether the experimental and control groups differed in their posttest vocabulary reading and listening scores (Table 2).

Table 2. *Comparison of vocabulary reading and listening posttest scores by group*

Test	Group	N	x̄	sd	df	t	p
Vocabulary reading skill	Control	16	12.6250	8.49215	30	-6.817	< .001
	Experimental	16	27.3750	1.66833			
Vocabulary listening skill	Control	16	15.1250	3.55668	30	-9.199	< .001
	Experimental	16	24.8125	2.25740			

Table 2 shows that the experimental group had higher mean scores in both vocabulary reading and listening. The mean vocabulary reading score was 27.37 for the experimental group and 12.62 for the control group. For vocabulary listening, the means were 24.81 and 15.12, respectively. The between-group differences were statistically significant for both skills ($p < .001$).

Within-Group Changes in Vocabulary Reading and Listening

Paired-samples t-tests were conducted separately for the experimental and control groups to examine changes from pretest to posttest in vocabulary reading and listening (Tables 3–6).

Table 3. *Experimental group: vocabulary reading pretest–posttest results*

Test	N	x̄	sd	df	t	p
Pretest	16	11.5625	3.44420	15	-18.764	< .001
Posttest	16	27.3750	1.66833			

Table 4. *Experimental group: vocabulary listening pretest–posttest results*

Test	N	x̄	sd	df	t	p
Pretest	16	13.5000	3.66970	15	-11.422	< .001
Posttest	16	24.8125	2.25740			

In the experimental group, both vocabulary reading and listening scores increased significantly after the implementation. The mean vocabulary reading score increased from 11.56 at pretest to 27.37 at posttest, while the mean vocabulary listening score increased from 13.50 at pretest to 24.81 at posttest. Both increases were statistically significant ($p < .001$).

Table 5. *Control group: vocabulary reading pretest–posttest results*

Test	N	x̄	sd	df	t	p
Pretest	16	11.3750	5.89774	15	-1.052	.310
Posttest	16	12.6250	8.49215			

Table 6. *Control group: vocabulary listening pretest–posttest results*

Test	N	x̄	sd	df	t	p
Pretest	16	13.2500	3.02214	15	-3.174	.006
Posttest	16	15.1250	3.55668			

In the control group, the change in vocabulary reading scores was not statistically significant, although the mean score increased from 11.37 at pretest to 12.62 at posttest ($p = .310$). In contrast, the mean vocabulary listening score increased from 13.25 at pretest to 15.12 at posttest, and this change was statistically significant ($p = .006$).

Results on Students' Attitudes Toward the English Course

For the attitude variable, the posttest scores of the experimental and control groups were first compared using an independent-samples t-test (Table 7).

Table 7. *Posttest attitude scores by group*

Group	N	$\bar{x}$	sd	df	t	p
Control	16	108.1250	16.90710	30	-2.169	.038
Experimental	16	118.3750	8.46069			

Table 7 shows that the experimental group had a higher mean posttest attitude score ($\bar{x}$ = 118.37) than the control group ($\bar{x}$ = 108.12). This difference was statistically significant (p = .038).

The experimental group's pretest and posttest attitude scores were analyzed using a paired-samples t-test (Table 8).

Table 8. *Experimental group: attitude pretest–posttest results*

Test	N	$\bar{x}$	sd	df	t	p
Pre-test	16	77.0625	8.48111	15	-13.393	< .001
Post-test	16	118.3750	8.46069			

The experimental group's attitude scores increased significantly from pretest to posttest (p < .001). The mean score rose from 77.06 before the implementation to 118.37 after the implementation.

The control group's pretest and posttest attitude scores were also analyzed using a paired-samples t-test (Table 9).

Table 9. *Control group: attitude pretest–posttest results*

Test	N	$\bar{x}$	sd	df	t	p
Pretest	16	78.6250	7.71038	15	-6.969	< .001
Posttest	16	108.1250	16.90710			

The control group also showed a statistically significant increase in attitude scores (p < .001). The mean score increased from 78.62 at pretest to 108.12 at posttest.

Student Views on the Use of Web 2.0 Tools

To address the fourth research question, the views of the students in the experimental group on the Web 2.0 tools used in the English course were obtained through semi-structured interviews and analyzed using descriptive analysis. Based on the students' views, the findings were organized under six categories: enjoyable, attention- and interest-grabbing, motivating, classroom interaction, participation in the course, and learning retention. These categories are presented in Figure 1.

Students' views showed that Web 2.0 tools made the English course more enjoyable and attention- and interest-grabbing. Student S1 stated, *"It is a great activity; it helps us learn English better, and the lessons are even more enjoyable*," while Student S5 explained, *"The videos in Powtoon were like cartoons and attracted my attention more."* These responses suggest that multimedia elements such as animation, visuals, and music increased students' attention and interest in the course.

Students also described the tools as motivating. Student S2 stated, *"Learning words with these applications increased my motivation. This became my favorite part of English lessons. When I got home, I wanted to review the words more often."* Some students also stated that Kahoot's ranking feature motivated them more. Indeed, Student S7 explained, *"Seeing my name on the screen while playing Kahoot! motivates me even more."*

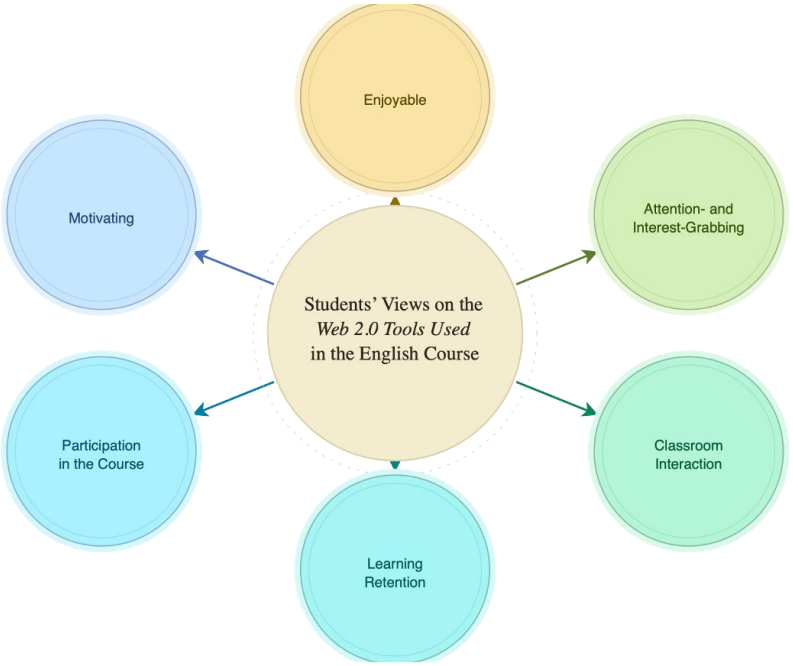

Figure 1. *Categories derived from students' views*

Another finding was that Web 2.0 tools supported classroom interaction and participation in the course. Student S2 stated, *"I am usually quieter in class, but especially when playing Kahoot, I interacted more with my classmates and started asking my teacher more questions,"* while Student S1 described a greater willingness to participate: *"Especially when playing Kahoot! I wanted to speak up more in English class."*

Students' views showed that these tools also contributed to learning retention. Student S6 stated, *"I remembered the words better and learned them more easily,"* while Student S3 explained, *"I enjoy learning the words through games; they stay in my mind, and that makes me happy."*

Overall, students expressed positive views regarding the use of Powtoon and Kahoot. They reported that the tools made the English course more enjoyable and attention- and interest-grabbing, increased their motivation, supported classroom interaction and participation in the course, and contributed to learning retention.

Discussion

One of the main results of the study was that Web 2.0-supported vocabulary instruction contributed positively to students' English vocabulary reading and listening achievement. This result suggests that Web 2.0 tools may facilitate vocabulary learning and, consequently, enhance vocabulary achievement. Similarly, previous studies have reported positive effects of Web 2.0 tools on students' vocabulary knowledge (Agustina et al., 2026; Al-Malki, 2020; Bensalem, 2018; Çakır, 2019; Çaparlar, 2021; Irawan & Firdaus, 2025; Kurtoğlu, 2021; Lale, 2025; Liu, Wang, & Tai, 2016; Medina & Hurtado, 2017; Putri & Akhiriyah, 2024; Vahdat & Mazareian, 2020; Wichadee & Pattanapichet, 2018). The higher vocabulary achievement of the experimental group compared with the control group may be associated with the multimedia opportunities offered by these tools. Learning environments enriched with sound, images, animation, and music may promote more concrete, meaningful, and durable vocabulary learning. The qualitative results also support this interpretation, as students reported that the Web 2.0 tools contributed to learning retention.

Another important finding of the study was that the use of Web 2.0 tools in fifth-grade English vocabulary instruction positively affected students' attitudes toward the English course. Previous studies have likewise reported that Web 2.0 tools positively influence students' course-related attitudes (Çinar, 2019; Türegün-Çoban & Adıgüzel, 2022; Yürük, 2019). The positive attitudes of the students

in the experimental group may also be related to their motivation. Indeed, the qualitative findings indicated that students perceived Web 2.0 tools as motivating. This finding is consistent with previous studies reporting that such tools can support students' course-related motivation (Akkuş, Özhan, & Çakır, 2021; Çinar, 2019; Gündoğdu & Korucu, 2018; Kuş & Alişah, 2025; Licorish, Owen, Daniel, & George, 2018; Özdemir, 2026; Setiawan & Soeharto, 2020; Wichadee & Pattanapichet, 2018).

Students' positive attitudes toward the course may also have positive reflections on their participation in the course and classroom interaction. The qualitative findings of this study show that Web 2.0 tools increased students' willingness to participate in the course and that they interacted more with both their teacher and classmates. Various studies in the literature have also reported that Web 2.0 tools positively support students' course participation and classroom interaction (Akkuş et al., 2021; Bensalem, 2018; Licorish et al., 2018; Saraçoğlu, 2019; Syafitri, Asib, & Sumardi, 2018; Tenekeci, 2020). Başar and Şahin (2022), in their content analysis study on technology integration in English language teaching, also stated that technology use increases students' motivation and positively affects participation in the course.

One possible explanation for students' positive attitudes toward the English course is that they found the Web 2.0 tools enjoyable. Perceiving these tools as enjoyable may have increased students' interest in and attention to the lessons. The qualitative findings of the present study also support this view. In the interviews, students reported that they enjoyed the English course in which Web 2.0 tools were used and that the multimedia elements included in these tools attracted their interest and attention. Various studies in the literature have also indicated that Web 2.0 tools have enjoyable and attention- and interest-grabbing features (Anjaniputra & Salsabila, 2018; Bozkurt-Türk, 2019; Çakır, 2019; Çaparlar, 2021; Çinar, 2019; Ertan, 2020; Kurtoğlu, 2021; Saraçoğlu, 2019; Vahdat & Mazareian, 2020; Wichadee & Pattanapichet, 2018; Zarzycka-Piskorz, 2016).

Conclusion and Recommendations

The study showed that vocabulary instruction supported by Powtoon and Kahoot positively affected fifth-grade middle school students' English vocabulary achievement and attitudes toward the English course. The qualitative results also supported this result, showing that students held positive views on the use of Web 2.0 tools, described the tools as enjoyable, attention- and interest-grabbing, and motivating, and reported that the tools supported participation in the course, classroom interaction, and learning retention.

Based on these results, teachers' and students' digital competencies could be strengthened through hands-on in-service training, projects, and similar professional development activities. In addition, more systematic integration of Web 2.0 tools into textbooks and curricula, improved technological infrastructure in schools, and institutional collaborations that facilitate access to paid digital content may be beneficial. Digital content should also be designed in accordance with students' age and readiness levels.

In future studies, similar research may be conducted at different grade levels, with larger samples and longer implementation periods. Further research may also examine the relationship between vocabulary learning and other language skills such as speaking and writing, the effects of Web 2.0 tools on variables such as motivation, anxiety, and thinking skills, and the comparative outcomes of different Web 2.0 tools. Including process-oriented assessment methods and delayed posttests in future research may also provide stronger evidence regarding learning retention.

References

Açıkgöz, Z. (2019). *Effects of two different gamified student response systems on EFL students' vocabulary achievement and intrinsic motivation*. (Unpublished Master Thesis), Bahçeşehir University**,** Institute of Educational Sciences, İstanbul.

Agustina, D. P., Bilqis, M., & Imamyartha, D. (2026). The effect of using Powtoon animated videos assisted by teacher explanation on seventh-grade students' vocabulary achievement. *JEELS Journal of English Education and Linguistics Studies, 13*(1), 133–154. https://doi.org/10.30762/jeels.v13i1.5139

Ajjan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt web 2.0 technologies: Theory and empirical tests. *The Internet and Higher Education,* (11), 71-80.

Akkuş, İ., Özhan, U., & Çakır, H. (2021). Student views on the use of online student response systems: The kahoot! Case. *Journal of Qualitative Research in Education,* 25, 243-262. https://doi.org/10.14689/enad.25.10.

Al-Malki, M. A. (2020). Quizlet: an online application to enhance efl foundation students' vocabulary acquisition at rustaq college of education, oman. *Arab World English Journal Special Issue on CALL (6),* 332-343.

Allen, J. (1999). *Words, words, words: teaching vocabulary in grades 4-12*. New York, Maine: Stenhouse Publications.

Altunkaya, H. (2015). *The relationship between reading anxiety and reading comprehension skills of learners of turkish as a foreign language.* (Unpublished Doctoral Dissertation), İnönü University, Institute of Educational Sciences, Malatya.

Andres, V. D. (2002). The influence of affective variables on EFL/ESL learning and teaching. *The Journal of The İmagination in Language Learning and Teaching*, 7, 1-5.

Anjaniputra, A. G., & Salsabila, V. A. (2018). The merits of quizlet for vocabulary learning at tertiary level. *Indonesian EFL Journal, 4*(2), 1-11.

Baş, G. (2012). Attitude scale for elementary english course: validity and reliability study. *International Online Journal of Educational Sciences, 4*(2), 411-424.

Başar, T., & Şahin, L. (2022). Technology integration in teaching English as a foreign language: A content analysis study. *Journal of Educational Technology and Online Learning, 5*(1), 204-222. https://doi.org/10.31681/jetol.972577.

Bensalem, E. (2018). The impact of whatsapp on EFL students' vocabulary learning. *Arab World English Journal, 9*(1), 23-38.

Bozkurt-Türk, H. (2019*). The effect of kahoot! As a student response system on the attitudes and success of university students in learning English vocabulary.* (Unpublished Master Thesis), Düzce University, Institute of Educational Sciences, Düzce.

Chaiyo, Y., & Nokham, R. (2017). The effect of Kahoot, Quizizz and Google Forms on the student's perception in the classrooms response system. In *2017 International Conference on Digital Arts, Media and Technology (ICDAMT), 01-04 March 2017* (pp. 178-182). Chiang Mai, Thailand.

Creswell, J. W., & Plano Clark, V. L. (2017). *Designing and conducting mixed methods research* (3rd ed.). Los Angeles: SAGE Publications.

Çakır, S. (2019). *The effect of five different gamified student response applications on students' vocabulary development and intrinsic motivation in EFL.* (Unpublished Master Thesis)*,* Bahçeşehir University, Institute of Educational Sciences, İstanbul.

Çaparlar, İ. (2021*). The effects of online applications and learner opinions on english vocabulary learning: quizlet application.* (Unpublished Master Thesis)*,* Balıkesir University, Institute of Social Sciences, Balıkesir.

Çelik, T. (2021). *Sosyal bilgilerde dijital dönüşümün yansımaları [Reflections of digital transformation in social studies]*. Ankara: Anı Publishing.

Çinar, İ. (2019). *The effects of Quizlet online vocabulary application on secondary school students' vocabulary learning and attitudes towards English.* (Unpublished Master Thesis)*,* Eskişehir Osmangazi University, Institute of Educational Sciences, Eskişehir.

Dellos, R. (2015). Kahoot! A digital game resource for learning. *International Journal of Instructional Technology and Distance Learning, 12*(4), 49-52.

Demirel, Ö. (2021). *Yabancı dil öğretimi. dil pasaportu, dil dosyası, dil biyografisi [Foreign language teaching. language passport, language file, language biography*]. (12th ed.). Ankara: Pegem Academy.

Demirpolat, B. C. (2015). *Türkiye'nin yabancı dil öğretimiyle imtihanı: Sorunlar ve çözüm önerileri [The challenge for Turkey's foreign language teaching: Problems and solutions].* İstanbul: Turkuaz Matbaacılık Publishing.

EF Education First. (2025). *EF English Proficiency Index.* Retrieved from https://www.ef.com/wwen/epi/

Egbert, J. (2005). *CALL essentials. principles and practice in CALL classrooms.* Alexandria, VA: TESOL.

Eker, S. (2011). *Çağdaş Türk dili [Contemporary Turkish language].* Ankara: Grafiker Publishing.

Ertan, K. (2020). *Investigating achievement, attitude and motivation in a gamified English course.* (Unpublished Master Thesis), Hacettepe University, Institute of Educational Sciences, Ankara.

Fakeye, D. O. (2010). Students' personal variables as correlates of academic achievement in English as a second language in Nigeria. *Journal of Social Sciences*, *22*(3), 205-211.

Fimbriani, S. C. (2016). *The use of teaching media powtoon to improve eleventh grade of language class students' writing ability at sma negeri 1 malang.* (Unpublished Undergraduate Thesis), University of Muhammadiyah Malang.

Gardner, R. C., & Lambert, W. E. (1972). *Attitudes and motivation in second language learning*. Rowley, MA: Newbury House.

Gündoğdu, M. M., & Korucu, A. T. (2018). The effects of collaborative learning developed with blog technology on reflecting thinking skills towards problem solving and motivation levels and on academic success of secondary school students. *Anadolu University Journal of Education Faculty*, *2*(3), 196-226.

Harmer, J. (2007). *How to teach English* (New ed.). England: Pearson Education Limited.

Hosseini, S. B., & Pourmandnia, D. (2013). Language learners' attitudes and beliefs: Brief review of the related literature and frameworks. *International Journal on New Trends in Education and Their Implications*, *4*(4), 63-74.

Irawan, T. R. S., & Firdaus, M. (2025). Analyzing the use of Quizizz in vocabulary development for junior high school students. *Al-Irsyad: Journal of Education Science, 4*(2), 130–139. https://doi.org/10.58917/aijes.v4i2.170

Işık, A. (2008). Where do the mistakes in our foreign language education come from? *Journal of Language and Linguistic Studies, 4*(2), 15-26.

İşcan, A. (2018). Yabancı dil öğretimi ve yabancı dil olarak Türkçe öğretiminin tarihçesi [History of foreign language teaching and teaching turkish as a foreign language]. In A. Şahin (Ed.). *Yabancı Dil Olarak Türkçe Öğretimi/Kuramlar, Yaklaşımlar, Etkinlikler* [*Teaching Turkish as a Foreign Language: Theories, Approaches, and Practice]* (pp.3-28). (2nd ed.). Ankara: Pegem Academy.

Karadağ, Ö. (2021). *Kelime öğretimi* [*Teaching Vocabulary].* (3rd ed.). Ankara: Pegem Academy.

Karatay, H. (2007). Teaching vocabulary. *Gazi University, Journal of Gazi Faculty of Education, 27*(1), 141-153.

Kırkıç, K. A., & Boray, T. (2017). An innovative technique in teaching and learning english for turkey: Boray technique (BT). *Journal of Education, Theory and Practical Research, 3*(3), 13-29.

Kurtoğlu, U. (2021). *Vocabulary teaching through Web 2.0 tools: a comparison of Kahoot! And Quizlet.* (Unpublished Master Thesis), Trakya University, Institute of Social Sciences, Trakya.

Kuş, B., & Alişah, A. (2025). Using Quizlet application to improve academic vocabulary learning in Turkish preparatory schools. *Journal of English Language Teaching and Applied Linguistics, 7*(3), 168–172. https://doi.org/10.32996/jeltal.2025.7.3.17

Lale, K. (2025). *The effect of a teaching programme based on the use of Wordwall application, one of the Web 2.0 tools, on vocabulary teaching in 5th grade English lesson.* (Unpublished Master Thesis), Sivas Cumhuriyet University, Institute of Educational Sciences, Sivas.

Lennartsson, F. (2008). *Students' motivation and attitudes towards learning a second language: British and Swedish students' points of view.* Retrieved from http://lnu.diva-portal.org/smash/get/diva2:206523/FULLTEXT01.pdf

Levy, M. (1997). *CALL: Context and conceptualization*. Oxford: Oxford University Press.

Licorish, S. A., Owen, H. E., Daniel, B., & George, J. L. (2018). Students' perception of Kahoot's influence on teaching and learning. *Research and Practice in Technology Enhanced Learning, 13*(1), 1-23.

Liu, C.C., Wang, P. C., & Tai, S. J. D. (2016). An analysis of student engagement patterns in language learning facilitated by web 2.0 technologies. *ReCALL, 28*(2), 104-122.

Medina, E. G., & Hurtado, C. P. (2017). Kahoot! a digital tool for learning vocabulary in a language. *Revista Publicando, 12*(1), 441-449.

MoNE (2013). *Amendment to the Secondary School Part of the Weekly Course Schedule for Primary Education Institutions (Primary and Secondary Schools).* Retrieved from https://www.memurlar.net/common/news/documents/572077/ek-1-28052013-22.pdf

MoNE. (2018). *English language curriculum (Primary and lower secondary school grades 2, 3, 4, 5, 6, 7, and 8).* Ankara: Ministry of National Education.

MoNE (2022). *2022 Central Examination Report for Secondary Education Institutions (Education Analysis and Evaluation Reports Series).* Retrieved from https://cdn.eba.gov.tr/icerik/2022/06/2022_LGS_rapor.pdf

Nation, I. S. P. (2001). *Learning vocabulary in another language*. Cambridge: Cambridge University Press.

Oblinger, D. (2005). Learners, learning & technology. *EDUCAUSE Review*, *40*(5), 67-75.

O'Reilly, T. (2005). *What is web 2.0: design patterns and business models for the next generation of software.* Retrieved from https://www.oreilly.com/pub/a/web2/archive/what-is-web-20.htmlm

Özdemir, O. (2026). How digital gamified learning enhances vocabulary learning and retention in EFL classrooms: An experimental study using Kahoot! *Bartın University Journal of Faculty of Education, 15*(1), 88–112. https://doi.org/10.14686/buefad.1667817

Özer, B., & Korkmaz, C. (2016). Factors affecting student achievement in foreign language teaching. *EKEV Academy Journal,* 67, 59-84.

Pishghadam, R., & Zabihi, R. (2012). Crossing the threshold of Iranian TEFL. Applied Research in English, 1(1), 57-71.

Putri, A. S. A., & Akhiriyah, S. (2024). The use of web-based vocabulary games to improve junior high school students' vocabulary mastery in reading. *Journal of English Teaching, 10*(3), 279–291. https://doi.org/10.33541/jet.v10i3.6090

Saraçoğlu, G. (2019). Opinions of high school students and teachers on kahoot use. *Mediterranean Journal of Educational Research*, *13*(29), 1-19. https://doi.org/10.29329/mjer.2019.210.1

Scott, D., & Beadle, S. (2014). *Improving the effectiveness of language learning: CLIL and computer assisted language learning. Education and Training.* Retrieved from https://www.ecml.at/Portals/1/resources/Articles%20and%20publications%20on%20the%20ECML/CLIL%20and%20CALL%20report_July.2014.pdf?ver=2017-07-11-151504-977.

Semaan, C., & Ismail, N. (2018). The effect of using powtoon on learning english as a foreign language. *International Journal of Current Research, 10(*5), 69262-69265.

Setiawan, A., & Soeharto, S. (2020). Kahoot-based learning game to improve mathematics learning motivation of elementary school students. *Al-Jabar: Jurnal Pendidikan Matematika, 11*(1),39-48.

Smith, A. N. (1971). The importance of attitude in foreign language learning. *The Modern Language Journal*, *55*(2), 82-88.

Solomon, G., & Schrum, L. (2007). *Web 2.0: new tools, new schools*. Washington, DC: International Society for Technology in Education.

Suna, Y., & Durmuşçelebi, M. (2013). A compilation work about why turkey suffers from learning and teaching English. *OPUS Journal of Society Research, 3*(5), 7-24.

Syafitri, A., Asib, A., & Sumardi, S. (2018). An application of Powtoon as a digital medium: Enhancing students' pronunciation in speaking. *International Journal of Multicultural and Multireligious Understanding, 5*(2), 295-317

Şen, Ü. (2022). *Dil eğitiminin temel kavramları* [*Basic concepts of language education]*. Ankara: Pegem Academy.

Tenekeci, M. (2020). Use of web and mobile applications in Turkish teaching and awareness of the teachers about it. *Milli Egitim Journa*l, *49*(227), 429-445.

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

Türegün-Çoban, B., & Adıgüzel, A. (2022). The effect of web 2.0 tools on students' achievement and attitude in distance english language education. *IBAD Journal of Social Sciences, 12,* 164-180. https://doi.org/10.21733/ibad.961403

Vahdat, S., & Mazareian, F. (2020). The impact of Telegram on learning of collocational knowledge among EFL high school students. *Applied Linguistics Research Journal*, *4*(3), 37-51.

Walker, A., & White, G. (2017). *Technology enhanced language learning: Connecting theory and practice.* (10th ed.). The UK: OUP Oxford.

Wichadee, S., & Pattanapichet, F. (2018). Enhancement of performance and motivation through application of digital games in an english language class. *Teaching English with Technology, 18*(1), 77-92.

Yürük, N. (2019). Edutainment: Using Kahoot! As a review activity in foreign language classrooms. *Journal of Educational Technology & Online Learning, 2*(2), 89-101.

Zarzycka-Piskorz, E. (2016). Kahoot it or not? Can games be motivating in learning grammar? The Journal of *Teaching English with Technology, 16*(3), 17-36.