

The Effect of Web 2.0 Tools on Students' Attitudes and Achievement in Online English Language Teaching

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Abstract

This study investigates how Web 2.0 tools affect students' academic achievement and attitudes regarding learning English in distance courses. An experimental design with pre and post-tests was used in the study. The participants were divided into groups based on the equality of their pre-test scores in terms of the dependent variable of the study, English language course achievement. Accordingly, while Web 2.0 tools were the independent variables, academic success and attitudes towards the English lesson Dreams theme were the dependent variables of this research. A total of 24 seventh-grade students (12 in the experiment group and 12 in the control group) participated in this study from a secondary school in Samsun, Black Sea Region. Both groups received instruction via distance education in English because of the global impact of COVID-19. The experimental group used Web 2.0 tools during lessons, while the control group used the English language curriculum without using these tools. The achievement test was conducted as a pre and post-test for the experimental and control groups. Additionally, data on attitudes were collected from the experimental group using the Middle School English Course Attitude Scale. It was found that the academic achievement scores of the experimental group were higher than those of the control group. Comparatively to the pre-test, the attitudes of experimental group students towards English language instruction have also improved. The findings of these studies provide suggestions for using Web 2.0 tools for teaching English in distance education. The integration and effective use of Web 2.0 tools facilitates teaching-learning processes and contributes significantly to the students' enthusiasm for the lesson, active participation, and success. Based on these results, it can be suggested that Web 2.0 tools should be used, disseminated and developed in English language distance education.

Keywords: English language teaching, Online teaching, Web 2.0 tools, Attitude, Achievement



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INTRODUCTION

Advancements in the fields of social, political, economic, and technology exert a significant influence on various aspects of human existence. Language, being an interactive tool, plays a crucial role in enabling us to keep pace with these changes. As [Chomsky \(1975\)](#) suggests, language is integral to virtually every aspect of our lives. In contemporary times, it is widely acknowledged that proficiency in at least one foreign language is essential for professional advancement and social development. Foreign languages facilitate communication with a wider audience, thus enabling the exchange of information. Consequently, the Turkish education system must place great importance on teaching foreign languages, beginning in primary school and continuing through college-level education.

Over the course of history, foreign language learning and teaching methods have evolved significantly, with a growing diversity of approaches. Technology has empowered students to become self-directed learners in today's digital age. Many tools, including documentaries, movies, podcasts, virtual world applications, websites supporting foreign language reading skills, electronic dictionaries, books-magazines, and online games, have been developed in recent years to support language learning. Using blogs for writing skills, messaging tools for communication, discussion forums for group discussions, and videos for listening and speaking skills can be particularly advantageous. Furthermore, as [Setiawan and Wiedarti \(2020\)](#) highlight, digital technologies have become readily accessible, and digital assessment tools, electronic portfolios, and alternative assessment and evaluation methods have replaced traditional pen-and-paper assessments.

[Horzum \(2010\)](#) asserts that Web 2.0 encompasses a range of web technologies facilitating two-way communication, allowing for the exchange of information rather than solely receiving it in a one-way manner. This technology empowers users to communicate, create content, and generate information. In Web 2.0 instructional design, students become active learners, engaging in individual and interpersonal interactions rather than passively receiving information. This approach enables students to assume responsibility for their learning.

The global outbreak of Covid 19 requires re-evaluating learning and teaching practices. Distance education systems, virtual classrooms, and e-content were used in many courses. In the literature, there have been many studies evaluating the views of educational administrators, teachers and students on distance education ([Kavuk & Demirtaş, 2021](#); [Şimşek & Toprakçı, 2023](#); [Toprakçı & Hepsöğütü, 2022](#); [Toprakçı, Hepsöğütü & Toprakçı 2021](#); [Yavuz & Toprakçı, 2021](#)). The rapid transition to online classes has introduced many students to the concept for the first time. As a result, their attitudes toward the course and their success in the course are affected. Some studies which gathered opinions from different stakeholders, including educational administrators, teachers, students, and parents, regarding this process found that distance education caused a loss of motivation among students. As a result, online learning is usually seen as less effective than traditional classroom instruction, and Web 2.0 tools may increase participation, interaction, and efficiency in online teaching ([Özdoğan & Berkant, 2020](#)). [Almalı \(2020\)](#) investigated the impact of teaching geography subjects on student success and attitudes by adopting Web 2.0 tools in the Social Sciences course and found that using Web 2.0 technologies increased academic achievement and student attitudes. As a result of integrating Web 2.0 tools into the science course of 7th-grade students, students achieved better academic grades. In another study examining the impact of Web 2.0 tools, attitudes were reported to have positively changed ([Sarı, 2019](#)). Using success and motivation variables, researchers found that the experimental group achieved significantly more success than the control group. [Batıbay \(2019\)](#), on the other hand, examined the effects of Kahoot on motivation and success in Turkish lessons and noted that students' motivation was positively influenced, but achievement scores did not increase significantly.

[Chotimah and Rafi \(2018\)](#) examined how Kahoot improved English reading skills. Thirty-nine students at a university studying at prep school participated in the study. Kahoot was used for two weeks in one of the courses. Data were collected using observation checklists, questionnaires, and field notes. In the study, participants rated Kahoot in language classes as enjoyable. As well as improving their ability to read English, they also believed that Kahoot assisted them in improving their vocabulary. Kahoot, a web 2.0 tool, is particularly beneficial for vocabulary learning in foreign languages. Its engaging quizzes and games promote active participation, repetition, and vocabulary reinforcement. Immediate feedback

helps students' correct errors, while customization allows educators to focus on specific vocabulary topics. The social learning aspect encourages collaboration and competition, further enhancing vocabulary acquisition. With its accessibility and personalized features, Kahoot serves as a valuable tool for improving foreign language vocabulary skills.

Hoy (2016) conducted a study to investigate the use of Edmodo in a general English class in Dubai, aimed at improving learner autonomy. The study involved 17 Adult English learners with proficiency levels ranging from pre-intermediate to upper-intermediate. The results showed that lower-level students tended to post short messages on Edmodo, while higher-level students tended to post longer messages. Content analysis indicated that learners at both proficiency levels could use Edmodo for interactive and collaborative learning outside the classroom. Students asked questions, provided answers, and sought help, promoting collaborative and cooperative skills as well as learner autonomy. Furthermore, a phenomenological study on the application of Web 2.0 tools in Turkish classes found that these tools create an engaging and instructive environment (Karadağ & Garip, 2021). Several case studies on Web 2.0 tools used in online teaching were conducted on the use of Web 2.0 tools in distance education, including a case study at the undergraduate level in experimental design (Bozna & Yüzer, 2020; Den Exter et al., 2012; Uzunboylu et al., 2011) and a doctoral level study (Meyer, 2010). A sufficient number of studies have been conducted in the literature investigating the effects of Web 2.0 tools on language learning. However, the number of studies on the effects of Web 2.0 tools on Turkish students' academic achievement and attitudes is limited. In order to fill this gap in the field, this study was designed to investigate the impact of using Web 2.0 tools in distance education on students' attitudes and success in the seventh-grade English course.

This research investigates the effect of Web 2.0 tools in the seventh-grade English course in distance education on students' academic success and attitudes. Within the scope of this purpose, answers are sought to the following questions:

- (1) Do the post-test success scores of the experimental group students taught using Web 2.0 tools differ significantly from those of the control group students in the study?
- (2) Is there a significant difference in the attitude towards the English lesson between the experimental and control groups?

METHOD

1. Research Pattern

This study employed an experimental design, specifically a pre-post-test control group, to investigate the efficacy of Web 2.0 tools on the academic success and attitudes of students enrolled in a seventh-grade distance education course. The cause-effect relationship between independent and dependent variables is revealed in studies with experimental design. Quasi-experimental studies also reveal this relationship, but the control and experimental groups are not randomly selected but are based on measurements (Büyüköztürk, 2007). Similarly, in this study, the experimental and control groups were not randomly selected; the participants were divided into groups based on the equality of their pre-test scores in terms of the dependent variable of the study, English language course achievement. Accordingly, while Web 2.0 tools were the independent variables, academic success and attitudes towards the English lesson Dreams theme were the dependent variables of this research. Using Web 2.0 tools for seventh-grade English lessons in distance education in the experimental group, lessons were conducted based on the uninterrupted curriculum in distance education in the control group. It took six weeks, four hours a week, to complete the experimental process.

2. Working Group

This study involved 24 students (12 experiments, 12 controls) from a secondary school in the Blacksea region who continued their education through online teaching in the 2020-2021 academic year. A convenient sampling method was employed to select the study group since it is easy and feasible to reach this sample regarding time and labor in distance education.

To preserve scientific integrity and to select appropriate data analysis tests in experimental research, normality tests are applied (Büyüköztürk, 2007; Gürbüz & Şahin, 2014). Despite including the

principle, parametric tests are preferred when the sample size exceeds 30. In the case of small sample sizes, nonparametric tests are used. The pre-test data of this study showed a normal distribution; however, since the sample size was less than 30, nonparametric tests were adopted for the control (n=12) and experimental groups (n=12).

The Mann-Whitney U test was employed to evaluate the differentiation status between the experimental and control groups, which is one of the nonparametric tests. Table 1 presents the Mann-Whitney U test results.

Table 1. Results of mann-whitney u tests involving experimental and control groups

		n	Average	Total	U	Z	p
Pretest	Experiment	12	6,49	151,50	68,60	-,148	,881
	Control	12	6,83	146,50			
	Total	24					

In the Mann-Whitney U test, in which the achievement pre-test scores of the experimental and control groups were compared, there was no statistically significant difference between them ($U=69.50$ $p>.05$). In the English course, the experimental and control groups had equivalent academic performance before the research. As a result, the planned experimental process was carried out as planned.

3. Data Collection

Data were collected using the Dreams Theme Achievement Test and Middle School English Lesson Attitude Scale (Aydoğmuş & Kurnaz, 2017). Permission was obtained before both measurement tools were used. The permissions for the experimental procedure were obtained from the Scientific Research and Publication Ethics Committee at Ondokuz Mayıs University before the study began.

The researcher developed the Dreams Theme Achievement Test in line with the seventh-grade English curriculum at secondary schools. A 24-item trial form and a specifications table were prepared to ensure content validity. Following this, expert opinions were obtained from six individuals: two professors at the Department of Curriculum, Instruction, and Management, two instructors at the School of Foreign Languages, and two English teachers in a public secondary school. The trial form was applied to 115 students after receiving feedback. Due to their low discrimination index, questions 7, 8, 10, and 21 were excluded from the test.

The lowest item difficulty index was found on items 2, 5, 14, and 20. The highest item difficulty index was found on items 1 and 13. The discrimination indices for items 7, 17, 19, and 24 are high, while those for items 1, 11, 13, and 23 are low. The average item difficulty of the test in its final version was 0.646. The KR10 reliability coefficient is 0.870, which indicates that this test is effective and reliable.

4. Process

In the first two weeks, a lesson plan based on reading skills was used in the experimental group to measure achievement in the seventh-grade curriculum. In the introduction part of the lesson, a brainstorming activity was conducted with the experimental group using the Mentimeter Web 2.0 tool; after reading the text during the development section, the Zoom Web 2.0 intelligent whiteboard feature was used to analyze the main idea and details of the text. In conclusion, the students wrote short poems about the subject using the Padlet Web 2.0 tool. Through Google Forms, the students stated in one sentence what they knew about the subject beforehand, what they learned in this lesson, and what they could not learn. As a comparison, the same learning outcome was achieved in the control group using only the textbook and no Web 2.0 tools. In the third week, a lesson plan focused on listening skills was prepared and applied to the experimental group. During the introduction part of the lesson, a mind map was created with the Popplet Web 2.0 tool; after listening to the development part, Liveworksheets Web Word completion activities were completed through the 2.0 tools. In the conclusion section, students created cartoons using the ToonyTool Web 2.0 tool and provided feedback on AnswerGarden Web 2.0 in the evaluation section. The same course and learning outcomes were achieved in the control group using only textbooks without incorporating Web 2.0 tools. A writing skill-based lesson was scheduled based on the curriculum during the fourth week of the semester. An introduction to the lesson included a short warm-up activity for the experimental group. A writing activity followed in the development part. A vocabulary study with LearningApps Web 2.0 was carried out, and in the conclusion part, the students used Jigsaw Planet Web 2.0 to create puzzles suitable for the theme. Using SurveyMonkey Web 2.0, the students evaluated their learning by voting and commenting. The fourth week of the study also did not include Web 2.0 tools for the control group.

A speaking skill-based lesson plan was prepared in the fifth week by targeting related outcomes in the national curriculum. Students constructed a word cloud using WordArt Web 2.0 in the introductory part of the experimental group. In the development phase, they used the Wordwall Web 2.0 tool to perform the speaking activity; in the conclusion phase, they created posters using the Canva Web 2.0 tool; and in the evaluation phase, they took a multiple-choice mini-quiz using Kahoot. As in previous weeks, the control group's introduction, development, conclusion, and evaluation sections were conducted without Web 2.0 tools. In the sixth week, post-tests were administered, and the experimental process was completed.

While the researcher observed the lesson for both groups, the same teacher conducted the lesson. To remove the effect of the researcher, both groups used the same distance education platform, and the duration of the lessons was not different. The platform used for distance education activities was not a Web 2.0 tool. Platform features were disabled. Screen sharing allowed students to see the teacher and the course book presentation. Students' voices were turned on, their images were turned off, and they chatted in the control group in online lessons to prevent the distance education platform from becoming a Web 2.0 tool. The teacher and textbook's presentation were the only things students could see when screen sharing was used. An online experiment was conducted to examine the effect of Web 2.0 tools on vocabulary teaching in distance education. In the lessons of the experimental group, the distance education platform was used as a kind of Web 2.0 tool, and various Web 2.0 tools were used.

As the purpose of the research was to investigate the effects of implementing Web 2.0 tools in distance education language teaching, the experimental process was conducted online, and both the features of the distance education platform used were kept open and incorporated as a kind of Web 2.0 tool in the lesson given to the experimental group of students. A variety of Web 2.0 tools were employed in the lessons.

5. Analysis of Data

Statistical analysis was conducted on the data obtained from the measurement tools. The study employed a Mann-Whitney U test as a statistical tool to explore and analyze the differences between the experimental and control groups. Specifically, the test was used to compare the achievement and attitude pretest-posttest scores, success and attitude pretest-posttest scores, as well as achievement and attitude post-test scores. By conducting this analysis, it was aimed to gain a deeper understanding of the potential variations in these variables between the two groups.

Table 2 summarizes the tests used and the comparisons between differentiated instruction and a non-intervention curriculum to measure students' academic performance and attitudes regarding vocabulary learning in online English language classes.

Table 2. *Statistical Tests Used in the Analysis of the Data Obtained*

Measurement	Source	Compared Unit	Used Test
Dreams Theme Achievement Test ()	Experiment-DTAT Pre-Post	Normal Distribution	Shapiro-Wilk
	Experiment DTAT Pre Test	Experiment DTAT Post Test	Dependent Samples t-test
	Control-DTAT Pretest and Post Test	Normal Distribution	Shapiro-Wilk
	Control DTAT Pre Test	Control DTAT Post Test	Dependent Samples t-test
	Experiment-DTAT Pre-Post	Control DTAT Post Test	Mann-Whitney U
	Middle School English Course Attitude Scale (MSECAS)	Experiment-MSECAS Pre-Post	Normal Distribution
Experiment MSECAS Pre Test		Experiment DTAT Post Test	Dependent Samples t-test
Control MSECAS Pre-Test and Post Test		Normal Distribution	Shapiro-Wilk
Control MSECAS Pre Test		Control DTAT Post Test	Dependent Samples t-test
Experiment-MSECAS Pre-Post		Control DTAT Post Test	Mann-Whitney U

FINDINGS

This section analyzes the collected data following the research purpose.

1. Impact of Web 2.0 Tools on the Academic Success of Students

Figure 1 and Table 2 present the analysis results to determine if there is a significant difference between the experimental group's achievement variable pre-test and post-test scores.

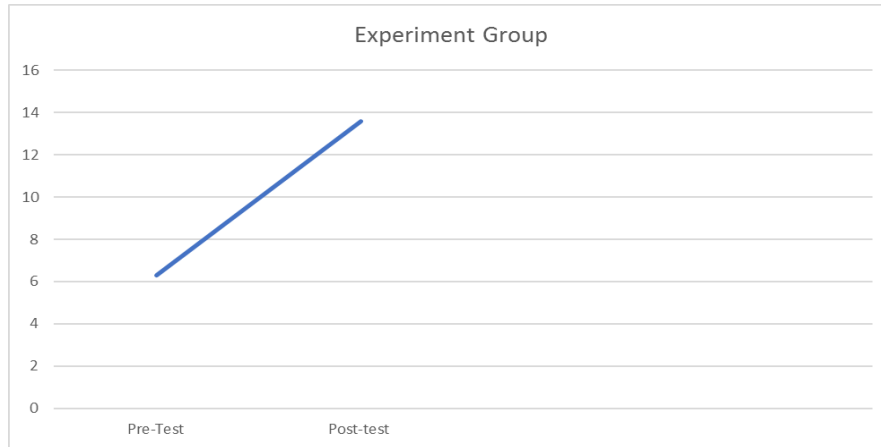


Figure 1. Achievement Pre-test and post-test mean scores of experimental group students

The academic achievement (7,28 points) of the students in the group using Web 2.0 tools increased during the assessment period (pre-test $x=6.32$; post-test $x=13.60$).

Table 3. Mann-whitney u test results regarding the experimental group achievement pre-test and post-test scores

	n	Average	Total	U	Z	p
Pretest	12	6,32	79,00	,000	-4,171	,000*
Post-test	12	13,60	201,00			

* $p>,05$

Comparison of the experimental group's achievement pre-test and post-test scores revealed a statistically significant difference ($U=.00$, $p>.05$.) Students' post-test scores in Web 2.0 applications were higher than their pre-test scores.

2. Students' Academic Success When the Curriculum is Implemented without the Use of Web 2.0 Tools

Table 4 and Figure 2 show the analysis results of the control group's success variable pre-test and post-test scores in which Web 2.0 tools were not used.

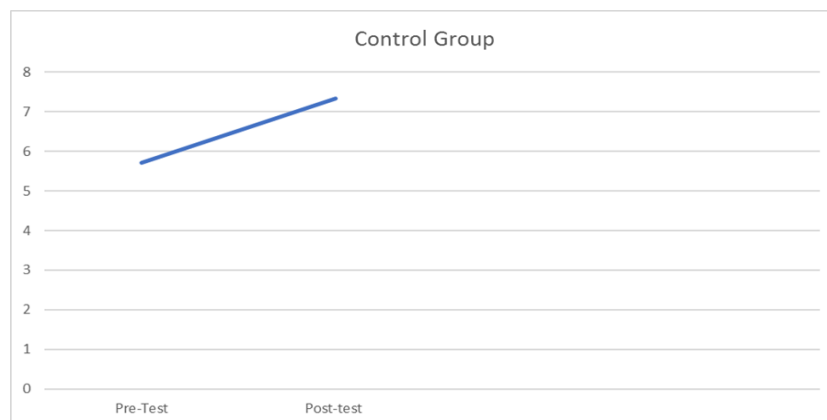


Figure 2. Achievement pre-test and post-test mean scores of control group students

Figure 2 depicts an increase in academic achievement for the control group students (1,62 points) (pre-test \bar{x} =5.71; post-test \bar{x} =7.33.)

Table 4. Pre-test and Post-test Achievement Scores for the Control Group by Mann-Whitney U-Test

	n	Average	Total	U	Z	p
Pretest	12	6,82	83,00	4,000	-3,959	,000*
Post-test	12	10,18	173,00			

*p>,05

Based on Table 4, the pre-test and post-test achievement scores of the control group without Web 2.0 tools are significantly different, and the post-test score is considerably higher than the pre-test score.

3. A Comparison of Students' Academic Performance with and without Web 2.0 Tools

Figure 3 and Table 5 present a comparison of the final score averages of the experimental group that used Web 2.0 tools in distance education and the control group that did not use Web 2.0 tools.

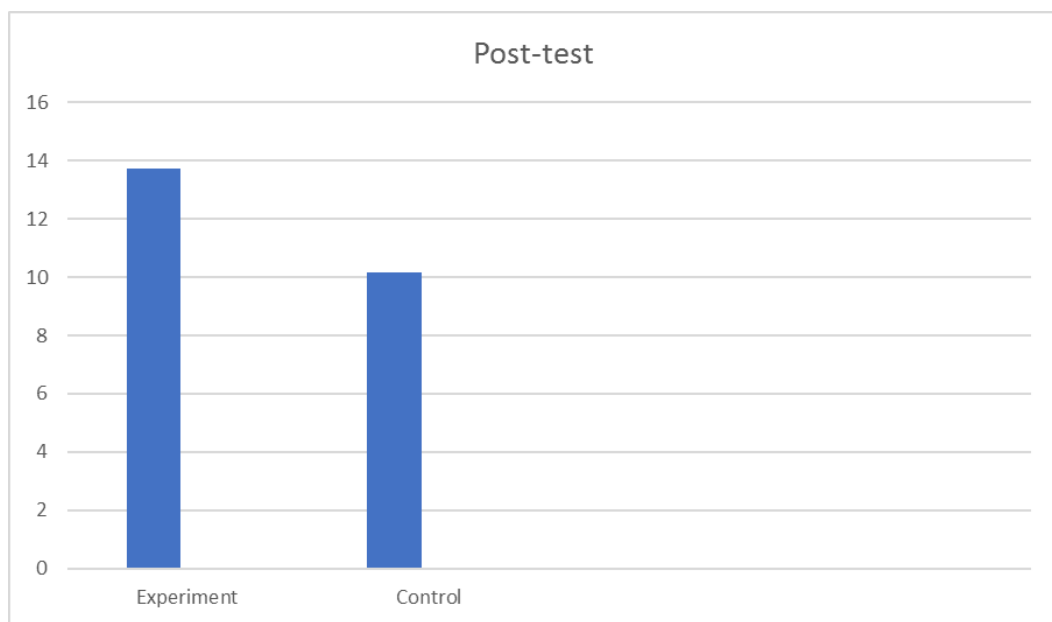


Figure 3. Experimental and Control Groups' Achievement Post-test Scores

Based on Figure 3, the experimental group, which used Web 2.0 tools, achieved a post-test score of 14, which was 6.50 points higher than the control group.

Table 5. A Comparison of achievement post-test scores between experimental and control groups using the mann-whitney u test

	n	Average	Total	U	Z	p
Experiment	12	13,71	203,00	3,000	-4,005	,000
Control	12	10,18	173,00			

*p<,05

There was a significant difference between the achievement post-test scores of the experimental and control groups (U=3.00, p<.05). Compared to the control group, students who used Web 2.0 tools grew at a higher rate than those who did not. In other words, the analysis revealed a significant difference in favor of the experimental group that adopted Web 2.0 tools.

4. Students' Attitudes towards English Lessons: Impact of Web 2.0 Tools

Results of the analysis examining whether there was a significant difference between the attitude variable pre-test and post-test scores of the experimental group students in which Web 2.0 tools were used in distance education are presented in Figure 4 and Table 6.

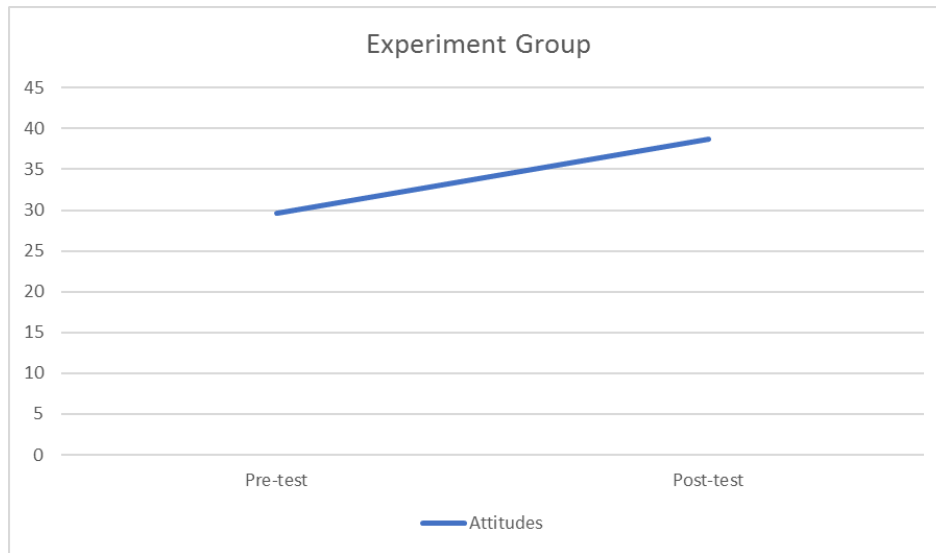


Figure 4. Attitude pre-test and post-test mean scores of experimental group students

According to Figure 4, there was a significant increase in the attitudes of students in the experimental group who utilized Web 2.0 tools. The figure visually represents this positive shift in attitudes among the students. (pre-test \bar{x} =29.60; post-test \bar{x} =38.75).

Table 6. Mann-whitney u test results regarding attitude pre-test and post-test scores of the experimental group

	n	Average	Total	U	Z	p
Pretest	12	11,74	116,00	27,00	-2,612	,009*
Post-test	12	16,26	194,00			

*p>.05

A statistically significant difference was found between the experimental group's pre- and post-test attitude scores (U=27.00, p>.05). The attitude post-test scores of the experimental group students using Web 2.0 tools were higher than their pre-test scores.

5. Curriculum Implemented Without Web 2.0 Tools: Impact on Students' Attitudes Toward English Lessons

Figure 5 and Table 7 illustrate the difference between the pre-and post-test attitude variables for the control group students toward the English lesson, whose teaching program included no use of Web 2.0 tools.

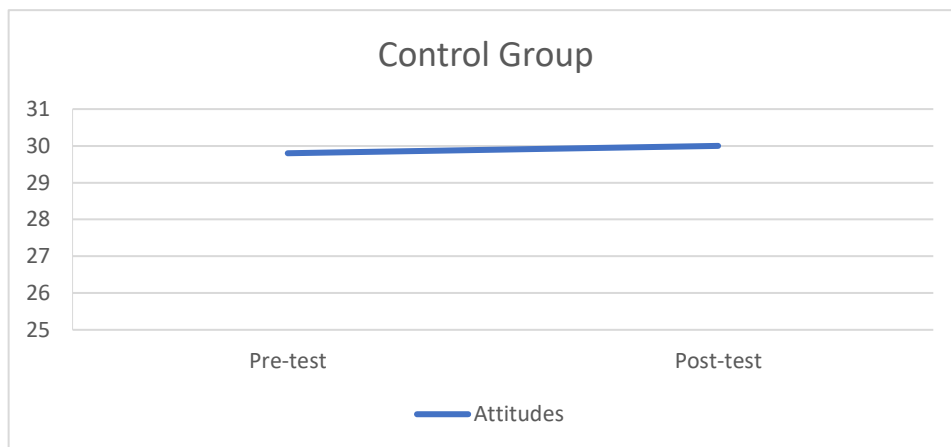


Figure 5. Pre-test and Post-test Mean Scores of the Attitude Scale for Students in the Control Group

Figure 5 illustrates that the attitude of the control group students toward the English lesson remained almost unchanged (pre-test \bar{x} =29.70; post-test \bar{x} =30).

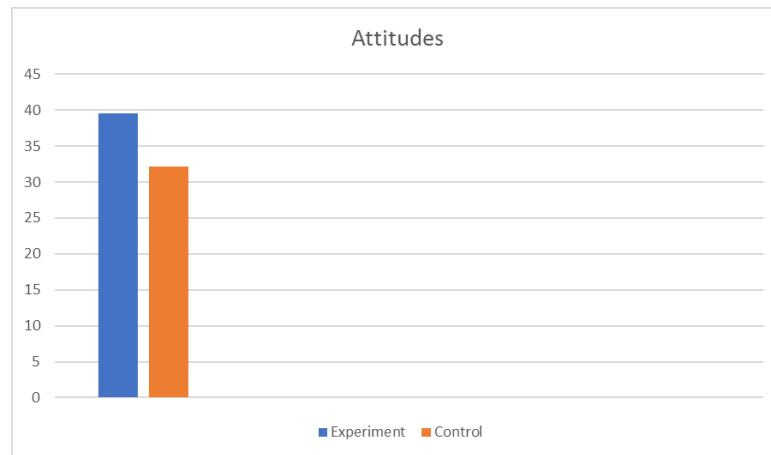
Table 7. Mann-whitney u test results regarding the attitude pre-test and post-test scores of the control group

	n	Average	Total	U	Z	p
Pretest	12	12,27	171,00	72,00	-,160	,76
Post-test	12	11,60	149,00			

Table 6 shows no significant difference between post-test and pre-test attitude scores for the control group without Web 2.0 tools.

6. Student Attitudes Toward English Lessons with and without the Use of Web 2.0 Tools

Figure 6 and Table 8 show the comparison of the attitude scale post-test scores between the experimental group and the control group that did not use Web 2.0 tools.

**Figure 6.** Attitude scale post-test mean scores of the experimental and control groups

An attitude scale post-test score of 39.30 in the experimental group using Web 2.0 tools was 6.90 points higher than a score of 32.4 in the control group.

Table 8. Mann-whitney u test results regarding the attitude post-test scores of the experimental and control groups

	n	Average	Total	U	Z	p
Experiment	12	16,35	194,00	24,00	-3,106	,004*
Control	12	11,60	151,00			

*p>,05

A significant difference was found between the test and control groups' attitude scale scores (U=24.00, p<.05). Attitude scale post-test averages (\bar{x} =39.30) of the experimental group students were higher than those of the control group students who did not employ these tools. The experimental group using Web 2.0 tools showed a significant difference.

DISCUSSION, CONCLUSION AND SUGGESTIONS

This study aimed to determine the effect of Web 2.0 tools in teaching "Dreams theme" in distance education seventh-grade English lessons on students' academic achievement and attitude. Based on the results obtained in the research, it is obvious that Web 2.0 tools have significantly increased student success. The pre-test and post-test results of the experimental group showed a significant difference in favor experimental group. This difference was attributed to the effectiveness of Web 2.0 tools in teaching and learning. Similar results were obtained in a recent study by [Bayar and Karaduman \(2021\)](#), who conducted a qualitative study by phenomenological research design and found that Web 2.0 tools are effective in distance English learning and partially overcome the disadvantages of distance education.

Furthermore, it is possible to interpret from the study results that choosing Web 2.0 tools appropriate to the characteristics of the course has significantly increased student attitudes. Students are more likely to participate actively in teaching when Web 2.0 tools include visual and motion features. [Asiksoy, \(2018\)](#) also conducted a descriptive survey design to investigate the ELT students' attitudes towards the use of Web 2.0 and found that the vast majority of students are happy with the use of Web

2.0 tools in language learning, and they believe these tools help them in learning English. Furthermore, similar to the results of our study, Gören et al. (2020) found that Web 2.0 tools are thought to affect learning due to their rich content positively and may be useful in increasing the prospective teachers' communicative abilities with their common workspaces. Therefore, it is predicted that teachers' use of Web 2.0 tools in their courses will contribute to the development of prospective teachers. In addition, it is thought that the training provided by educators who have an important role in guiding prospective teachers and guiding them to a better education will enable prospective teachers to use Web 2.0 tools more frequently and efficiently. On the other hand, [Hartshorne and Ajjan \(2009\)](#) suggested that while many students feel that some Web 2.0 applications can be effective at increasing satisfaction with a course, improving their learning and writing ability, and increasing student interaction with other students and faculty, few students tend to use them in educational contexts.

The seventh-grade English lesson was found to be more engaging when Web 2.0 tools were used to teach language skills related to the theme of Dreams. A significant difference in attitudes between the pre-test and post-test data analysis results was observed in the experimental group in favor of the post-test data analysis. This difference was attributed to the Web 2.0 tools' ability to attract students' attention. When the post-test scores of the experimental and control groups were compared, a significant difference was observed in favor of the experimental group, which was attributed to the Web 2.0 tools' mobility and attention-grabbing features. In the studies in which [Almalı \(2020\)](#) examined the effect of using Web 2.0 tools in the Social Studies course and [Yıldırım \(2020\)](#) and [Brereton and Dunne \(2016\)](#) in the Science course, it was concluded that the use of Web 2.0 tools increased academic achievement. Due to the interactive nature of English teaching, employing Web 2.0 tools are frequently perceived as a valuable tool. Nevertheless, a study conducted by [Batıbay \(2019\)](#) in a Turkish class showed that Web 2.0 tools did not significantly increase achievement. This conflicting result may be due to various factors such as student level, lack of technological equipment, instructors' or students' inefficacy of using these tools effectively, and so on. As it has been mentioned above, through the visual nature of Web 2.0 tools and the fact that they are activity-based, which makes them more attractive to students, they are seen as effective in increasing students' success in distance education English courses, contrasting with [Batıbay's \(2019\)](#) result.

The study results also indicated that using Web 2.0 tools provided a fun atmosphere which encourages students to enjoy the lessons and develop positive attitudes toward them. Looking at the literature, we see that the use of Web 2.0 tools in the Social Studies course in [Almalı \(2020\)](#) and the Science course in [Sarı \(2019\)](#) positively impacted the attitudes of the students towards the course, while the use of Web 2.0 tools in the [Yıldırım \(2020\)](#) Science course did not. Like [Almalı \(2020\)](#) and [Hoy \(2016\)](#), this study found that using Web 2.0 tools was positively associated with students' attitudes toward English lessons and therefore a contributing factor for academic success. Similarly, [Akçay and Şahin \(2012\)](#) investigated how Webquest, a Web 2.0 tool that they used, affected the Turkish course's success as well as the attitudes of students towards it, and their findings coincide with those of this study, which indicates that the Web 2.0 tool used high academic achievement as well as student attitudes toward the course. [Cunningham \(2015\)](#) conducted a study to evaluate the effectiveness of the Voki Web 2.0 tool in an online writing course with 40 students. Despite the potential of Web 2.0 technology to provide new and diverse teaching approaches, he found that it was not significantly more effective than traditional pedagogical methods. Language teaching is a complex process, and a one-size-fits-all approach may not be suitable for all learning contexts. Although [Cunningham's \(2015\)](#) findings may be reasonable to some extent, the existing literature predominantly report the positive impact of Web 2.0 tools on student achievement and attitudes. Moreover, there is a growing trend of using Web 2.0 tools in language learning, and their usage frequency in this context is on the rise. As distance education is expected to gain more popularity in the future and with the increasing integration of Web 2.0 tools in language education, it is likely that the use of these tools will continue to increase in the future.

In the case studies conducted at the undergraduate level in distance education, students expressed positive opinions ([Bozna & Yüzer, 2020](#); [Den Exter et al., 2012](#); [Uzunboylu et al., 2011](#)). A comparison could not be made due to the lack of experimental research examining the effects of Web 2.0 tools on achievement and attitudes at the secondary school level in distance education. Nevertheless, the results of this study were considered necessary to contribute to this gap in the literature. Further,

Web 2.0 tools are beneficial in achieving results in face-to-face education (Özbal, 2017) and promote an enjoyable and engaging learning environment (Karadağ & Garip, 2021). Using these devices in distance education is essential for making online learning fun, instructive, and easier to learn.

Based on the evaluation of the results, Web 2.0 tools were found to increase the success of the seventh-grade students in the English lesson theme Dreams and their attitude towards English. Thus, it is possible to say that students' success and attitudes toward distance education can be improved through Web 2.0 tools. The use of Web 2.0 tools can be expanded to achieve higher quality and efficiency for distance education processes and distance education applications. Subject matter characteristics, educational level, student level, and difficulty of subject matter were defined as appropriate for the web. The selection and effective use of 2.0 tools facilitates teaching-learning processes and contributes significantly to the students' enthusiasm for the lesson, active participation, and success. The use of distance education may be one of the most impressive applications of today's information technologies, and it may be necessary to implement Web.2.0 tools to ensure the continuity of education in unexpected circumstances. As an indispensable tool for achieving educational objectives, technology is frequently necessitated for designing, developing, implementing, and evaluating teaching methods. For teaching processes to become more effective and efficient, employing the appropriate teaching technologies and methods is crucial. To achieve educational goals, web 2.0 tools must be enriched, diversified, and effectively incorporated into teaching-learning processes. It may be helpful for researchers in this field to conduct long-term studies to examine how different variables at different levels are affected by Web 2.0 tools in distance education.

Çevrimiçi İngilizce Öğretiminde Web 2.0 Araçlarının Öğrencilerin Tutum ve Başarıları Üzerindeki Etkisi

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Özet

Bu çalışma, Web 2.0 araçlarının öğrencilerin akademik başarılarını ve uzaktan eğitimde İngilizce öğrenmeye ilişkin tutumlarını nasıl etkilediğini araştırmaktadır. Çalışmada ön ve son testlerden oluşan deneysel bir desen kullanılmıştır. Katılımcılar, çalışmanın bağımlı değişkeni olan İngilizce ders başarıları açısından ön test puanlarının eşitliğine göre gruplara ayrılmıştır. Buna göre, Web 2.0 araçları bağımsız değişkenler iken, akademik başarı ve İngilizce dersi Düşler temasına yönelik tutumlar bu araştırmanın bağımlı değişkenleridir. Bu çalışmaya Karadeniz Bölgesi, Samsun'daki bir ortaokuldan toplam 24 yedinci sınıf öğrencisi (12 deney grubu ve 12 kontrol grubu) katılmıştır. Her iki grup da COVID-19'un küresel etkisi nedeniyle uzaktan eğitim yoluyla İngilizce eğitimi almıştır. Deney grubu derslerinde Web 2.0 araçlarını kullanılırken, kontrol grubunda bu araçlar kullanılmadan İngilizce müfredatı uygulanmıştır. Başarı testi, deney ve kontrol grupları için ön ve son test olarak uygulanmıştır. Ayrıca, deney grubundan Ortaokul İngilizce Dersi Tutum Ölçeği kullanılarak tutum verileri toplanmıştır. Deney grubunun akademik başarı puanlarının kontrol grubundan daha yüksek olduğu bulunmuştur. Ön testle karşılaştırıldığında, deney grubu öğrencilerinin İngilizce eğitimine yönelik tutumları da iyileşmiştir. Bu çalışmaların bulguları, uzaktan eğitimde İngilizce öğretimi için Web 2.0 araçlarının kullanılmasının olumlu sonuçlar vereceğini göstermektedir. Web 2.0 araçlarının entegrasyonu ve etkin kullanımı, öğretme-öğrenme süreçlerini kolaylaştırmakta ve öğrencilerin derse karşı istekli olmalarına, aktif katılımlarına ve başarılarına önemli katkılar sağlamaktadır. Bu sonuçlara dayalı olarak İngilizce dili uzaktan öğretiminde Web 2.0 araçlarının kullanılması, yaygınlaştırılması ve geliştirilmesi önerilebilir.

Anahtar Kelimeler: İngilizce öğretimi, Çevrimiçi öğretim, Web 2.0 araçları, Tutum, Başarı



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Extended Abstract

Problem: Teknolojinin, özellikle de Web 2.0 araçlarının dil öğrenimini kolaylaştırmadaki ve etkileşimli ve ilgi çekici bir öğrenme ortamı yaratmadaki rolü her geçen gün artmaktadır. COVID-19 salgını, öğrenci motivasyonunu ve başarısını etkileyen çevrimiçi eğitime geçişi daha da hızlandırmıştır. Web 2.0 araçlarının çevrimiçi öğretime entegre edilmesinin katılımı, etkileşimi ve verimliliği artırdığını gösteren çeşitli çalışmalar bulunmaktadır. Örneğin, web tabanlı bir test ve oyun platformu olan Kahoot'un kullanımının İngilizce'de kelime edinimini ve okuma becerilerini geliştirdiği bulunmuştur. Bir başka çevrimiçi platform olan Edmodo'nun, yetişkin İngilizce öğrenenler arasında öğrenen özerkliği ve işbirlikçi öğrenmeyi teşvik ettiği gösterilmiştir. Bu örnekler, Web 2.0 araçlarını dil eğitimine dahil etmenin faydalarını vurgulamaktadır.

Web 2.0 araçlarının dil öğrenimi üzerindeki etkileri üzerine önemli sayıda araştırma olmasına rağmen, özellikle Türk öğrencilerin akademik başarı ve tutumlarına odaklanan sınırlı sayıda çalışma bulunmaktadır. Bu nedenle, bu çalışmada uzaktan eğitimde Web 2.0 araçlarının kullanımının yedinci sınıf öğrencilerinin İngilizce dersindeki tutumları ve başarıları üzerindeki etkisini araştırılmıştır. Çalışmada, teknolojinin, özellikle de Web 2.0 araçlarının dil eğitimine entegre edilmesinin önemini vurgulamakta ve öğrencilerin tutumları ve akademik başarıları açısından potansiyel faydalarını ortaya koymaktadır. Çalışma, Web 2.0 araçlarının Türk öğrencilerin dil öğrenme deneyimleri üzerindeki etkilerini inceleyerek mevcut literatüre katkıda bulunmayı amaçlamaktadır. Bu doğrultuda, uzaktan eğitimde yedinci sınıf İngilizce dersinde Web 2.0 araçlarının öğrencilerin akademik başarı ve tutumları üzerindeki etkisini araştırılmaktadır. Çalışmada aşağıdaki sorulara yanıt aranmaktadır:

- (1) Web 2.0 araçları kullanılarak ders işlenen deney grubu öğrencilerinin son test başarı puanları kontrol grubu öğrencilerinin başarı puanlarından anlamlı düzeyde farklılaşmakta mıdır?
- (2) Deney ve kontrol grupları arasında İngilizce dersine yönelik tutum açısından anlamlı bir fark var mıdır?

Yöntem: Deney ve kontrol gruplarının başarı ön test puanlarını karşılaştırmak için Mann-Whitney U testi kullanılmış ve aralarında istatistiksel olarak anlamlı bir fark bulunmamıştır ($U=69.50$, $p>.05$). Bu durum, deney ve kontrol gruplarının araştırma öncesinde İngilizce dersinde benzer akademik performansa sahip olduğunu ve planlanan deneysel sürecin amaçlandığı gibi ilerlediğini göstermektedir.

Araştırmanın verileri Hayaller Teması Başarı Testi ve Ortaokul İngilizce Dersi Tutum Ölçeği kullanılarak toplanmıştır. Hayaller Teması Başarı Testi, araştırmacı tarafından yedinci sınıf İngilizce müfredatına dayalı olarak geliştirilmiş ve kapsam geçerliliğini sağlamak için uzman görüşlerine başvurulmuştur. Geri bildirim ve düzeltmelerden sonra, testin 20 maddelik son hali oluşturulmuş ve yüksek güvenilirlik ($KR10=0,870$) göstermiştir.

Deneysel süreç, haftada dört saatlik eğitimle altı haftalık bir süre boyunca yürütülmüştür. Her hafta farklı bir dil becerisine odaklanılmıştır: okuma, dinleme, yazma ve konuşma. Deney grubu, derslere entegre edilmiş çeşitli Web 2.0 araçlarını kullanarak eğitim alırken, kontrol grubu Web 2.0 araçlarını kullanmadan aynı müfredatı takip etmiştir.

Deneysel süreç boyunca, farklı etkinlikler için belirli Web 2.0 araçları kullanılmıştır. Örneğin, okuma becerisi temelli derste Mentimeter, Zoom'un akıllı beyaz tahta özelliği ve Padlet kullanılmıştır. Dinleme becerisi temelli derste Popplet, Liveworksheets, ToonyTool ve AnswerGarden kullanılmıştır. Yazma becerisi temelli derste LearningApps, Jigsaw Planet ve SurveyMonkey, konuşma becerisi temelli derste ise WordArt, Wordwall, Canva ve Kahoot kullanılmıştır.

Kontrol grubunda dersler, aslında bir Web 2.0 aracı olmayan bir uzaktan eğitim platformu kullanılarak çevrimiçi olarak yürütülmüştür. Tutarlılığı sağlamak için hem deney hem de kontrol grupları için dersleri aynı öğretmen yürütmüştür. Uzaktan eğitim platformunun özellikleri devre dışı bırakılarak öğrencilerin ekran paylaşımı sırasında sadece öğretmeni ve ders kitabı sunumunu görmeleri sağlanmıştır. Kontrol grubunda öğrenciler iletişim için sohbet işlevini kullanmışlardır.

Çalışmada, Web 2.0 araçlarının uzaktan eğitim İngilizce dersinde yedinci sınıf öğrencilerinin akademik başarı ve tutumları üzerindeki etkisini araştırmak için ön-son test kontrol gruplu bir tasarım

kullanılmıştır. Deneysel süreç, çeşitli Web 2.0 araçlarını derslere dahil ederek çevrimiçi olarak yürütülürken, kontrol grubu Web 2.0 araçları olmadan geleneksel müfredatı takip etmiştir.

Deneysel süreç altıncı haftada son testlerin uygulanmasıyla sona ermiştir. Dersler araştırmacı tarafından gözlemlenmiş ve olası yanlışlıkları en aza indirmek için gerekli önlemler alınmıştır. Amaç, uzaktan eğitim dil öğretiminde Web 2.0 araçlarının uygulanmasının etkilerini incelemektir ve bu nedenle deney grubuna verilen derslerde uzaktan eğitim platformuna çeşitli Web 2.0 araçları entegre edilerek dersler işlenmiştir.

Çalışmada, deney ve kontrol grupları arasındaki başarı ve tutum puanlarındaki farklılıkları araştırmak ve karşılaştırmak için Mann-Whitney U testi de dahil olmak üzere istatistiksel analizler kullanılmıştır. Amaç, farklılaştırılmış öğretim ile müdahale edilmeyen müfredatın çevrimiçi İngilizce derslerinde öğrencilerin akademik performansı ve tutumları üzerindeki etkisini araştırmaktır.

Bulgular: Sonuçlar, deney grubunda ön test ve son test puanları arasındaki kayda değer farkın da gösterdiği gibi öğrenci başarısında önemli bir gelişme olduğunu göstermiştir. Bu gelişme, Web 2.0 araçlarının öğretme ve öğrenme süreçlerini kolaylaştırmadaki etkinliğine bağlanmıştır. Bayar ve Karaduman (2021) tarafından yakın zamanda yapılan nitel bir çalışmanın bulguları, Web 2.0 araçlarının uzaktan İngilizce öğreniminde etkili olduğunu ve uzaktan eğitimle ilgili zorlukların kısmen üstesinden gelebileceğini öne sürerek bu sonuçları desteklemiştir.

Ayrıca çalışma, dersin özelliklerine uygun Web 2.0 araçlarının seçilmesinin öğrenci tutumlarını önemli ölçüde artırdığını göstermiştir. Web 2.0 araçları görsel ve etkileşimli özellikler içerdiğinde, öğrencilerin öğrenme sürecine aktif olarak katılma olasılıkları daha yüksektir. Benzer bulgular, ELT öğrencilerinin Web 2.0 araçlarına yönelik tutumlarını araştırmak için bir anket yapan ve öğrencilerin çoğunluğunun kullandıklarından memnun olduklarını ve bu araçların İngilizce öğrenmelerine yardımcı olduğuna inandıklarını tespit eden Asiksoy (2018) tarafından da rapor edilmiştir. Ayrıca, Gören vd. (2020), zengin içerikleri ve işbirliğine dayalı çalışma alanlarıyla Web 2.0 araçlarının, öğretmen adaylarının öğrenme çıktılarını ve iletişim becerilerini olumlu yönde etkilediğini keşfetmiştir. Dolayısıyla, Web 2.0 araçlarının derslere entegre edilmesi, geleceğin eğitimcilerinin gelişimine katkıda bulunabilir.

Ancak Hartshorne ve Ajjan (2009), birçok öğretmenin Web 2.0 uygulamalarının ders deneyimlerini geliştirme, etkileşimi artırma ve öğrenme çıktılarını iyileştirme potansiyelini fark etmesine rağmen, sınırlı sayıda öğretmenin bunları eğitim bağlamlarında kullanma eğiliminde olduğunu belirtmiştir. Bu durum, öğrenci yeterliliği, teknolojik kaynak eksikliği ve etkili araç kullanımı için yetersiz eğitim gibi çeşitli faktörlerin etkilerinin boyutunu etkileyebileceğini göstermektedir. Batıbay'ın (2019) başarıda anlamlı bir artış rapor etmeyen çalışmasının aksine, bu çalışma Web 2.0 araçlarının görsel ve etkinlik tabanlı doğasının uzaktan eğitim İngilizce derslerinde başarıyı artırmada etkili olduğunu vurgulamıştır.

Ayrıca, çalışma Web 2.0 araçlarının kullanılmasının olumlu ve eğlenceli bir öğrenme atmosferi yarattığını ve bunun da öğrencilerin derslere yönelik olumlu tutumlarına katkıda bulunduğunu ortaya koymuştur. Web 2.0 araçlarının sosyal bilgiler ve fen bilimleri gibi diğer derslerde kullanımını inceleyen çalışmalarda da öğrenci tutumları üzerinde benzer olumlu etkiler gözlemlenmiştir. Ancak Yıldırım (2020) gibi bazı çalışmalarda öğrenci tutumları üzerinde anlamlı bir etki bulunmamıştır. Bununla birlikte, literatürün geneli, Web 2.0 araçlarının öğrenci başarısı ve tutumları üzerindeki olumlu etkisini büyük ölçüde desteklemektedir. Cunningham (2015), çevrimiçi bir yazma dersinde Voki Web 2.0 aracının etkinliği üzerine bir çalışma yürütmüş ve Web 2.0 teknolojisinin farklı öğretim yaklaşımları sunma potansiyeline sahip olmasına rağmen, geleneksel yöntemlerden önemli ölçüde daha etkili olmadığı sonucuna varmıştır. Bu nedenle, dil öğretiminde Web 2.0 araçlarını uygularken bağlamı ve özel öğrenme ihtiyaçlarını göz önünde bulundurmak çok önemlidir.

Daha da önemlisi, uzaktan eğitimin gelecekte daha fazla popülerlik kazanması beklendiğinden ve Web 2.0 araçlarının dil eğitimine giderek daha fazla entegre edilmesiyle, kullanımlarının artmaya devam etmesi beklenmektedir. Web 2.0 araçlarının ortaokul düzeyinde uzaktan eğitimde başarı ve tutumlar üzerindeki etkilerini inceleyen çalışmalar sınırlı olsa da, bu çalışma literatürdeki bu boşluğun doldurulmasına katkıda bulunmayı amaçlamıştır. Ayrıca, lisans düzeyinde uzaktan eğitim ortamlarında yapılan önceki araştırmalar, Web 2.0 araçlarının kullanımına ilişkin olumlu öğrenci görüşleri bildirmiştir. Dolayısıyla, bu araçların hem yüz yüze hem de çevrimiçi öğrenmeye dahil edilmesi etkili olacaktır.

Öneriler: Sonuçların değerlendirilmesi, Web 2.0 araçlarının kullanımının başarıyı önemli ölçüde artırdığını ve yedinci sınıf öğrencilerinin İngilizce derslerine, özellikle de Hayaller temasına yönelik tutumlarını geliştirdiğini göstermiştir. Bu durum, Web 2.0 araçlarının uzaktan eğitime entegre edilmesinin öğrencilerin başarılarını ve uzaktan eğitim algılarını geliştirebileceğini göstermektedir. Ayrıca, Web 2.0 araçları uzaktan eğitim süreçlerinin kalitesini ve verimliliğini artırmak için genişletilebilir ve kullanılabilir. Konu özellikleri, eğitim seviyesi, öğrenci yeterliliği ve konu zorluğu gibi faktörler, web tabanlı araçların etkili bir şekilde uygulanması için önemli hususlar olarak belirlenmiştir. Bu araçların seçilmesi ve kullanılmasıyla öğretme ve öğrenme süreçleri kolaylaştırılabilir, böylece öğrenci katılımı, hevesi ve başarıları artırılabilir. Bilgi teknolojilerinin eğitimdeki önemi göz önünde bulundurulduğunda, Web 2.0 araçlarının kullanımı beklenmedik durumlarda eğitimin kesintisiz devam etmesini sağlamak için elzem hale gelmektedir. Teknoloji, eğitim hedeflerine ulaşmak için hayati bir bileşendir ve uygun öğretim teknolojileri ve yöntemlerinin entegre edilmesi, etkili ve verimli öğretim uygulamaları için çok önemlidir. Web 2.0 araçlarının uzaktan eğitimdeki etkisini daha iyi anlamak için, daha uzun vadeli çalışmalar farklı değişkenlerin çeşitli düzeylerdeki etkilerini araştırmalıdır.

REFERENCES/KAYNAKÇA

- Akçay, A., & Şahin, A. (2012). The effect of WebQuest learning method on academic achievement and attitude in Turkish lesson. *Journal of Educational Sciences Research*, 2(2), 33-45.
- Almalı, H. (2020). *The effect of teaching geography subjects using web 2.0 technologies in social studies education on students' academic achievement and attitudes* (Unpublished master's thesis). Sivas Cumhuriyet University, Sivas, Türkiye.
- Asiksoy, G. (2018). ELT students' attitudes and awareness towards the use of WEB 2.0 technologies for language learning. *Journal of Language and Linguistic Studies*, 14, 240-251. ISSN: 1305-578X
- Aydoğmuş, M., & Kurnaz, A. (2017). Validity and reliability of middle school English lesson attitude scale. *Journal of Research in Education, Science, and Technology*, 2(2), 14-24.
- Batıbay, E. F. (2019). *The effect of Web 2.0 applications on motivation and success in Turkish lesson: Kahoot example*. (Unpublished master's thesis). Hacettepe University, Ankara, Türkiye.
- Bayar, A., & Karaduman, H. (2021). Views of high school students on the effectiveness of "english" course by means of a distance education. *Shanlax International Journal of Education*, 9(4), 359-373.
- Bozna, H., & Yüzer, T. V. (2020). Digital natives' use of web 2.0 tools in learning a foreign language: A case study. *Language and Technology*, 2(1), 26-43.
- Brereton, B., & Dunne, K. (2016). An analysis of the impact of formative peer assessment and screencast tutor feedback on veterinary nursing students' learning. *The All Ireland Journal of Teaching and Learning in Higher Education*, 8(3), 2941-2965.
- Büyüköztürk, Ş. (2007). *Sosyal bilimler için veri analizi el kitabı*. Ankara: Pegem Akademi.
- Chomsky, N. (1975). *Reflections on language*. New York: Pantheon Books.
- Chotimah, I., & Rafi, M. (2018). Kahoot as the alternative media in teaching reading. *Proceeding Icon-Elite*, 1(1), 167-174.
- Cunningham, J. M. (2015). Mechanizing people and pedagogy: Establishing social presence in the online classroom. *Journal of Asynchronous Learning Networks*, 19, 34-47. <http://dx.doi.org/10.30736/ej.v5i1.44>
- Den Exter, K., Rowe, S., Boyd, W., & Lloyd, D. (2012). Using web 2.0 technologies for collaborative learning in distance education-case studies from an Australian University. *Future Internet*, 4(1), 216-237. <https://doi.org/10.3390/fi4010216>
- Gören, S., Gök, F., Yalçın, M., Göregen, F., & Çalışkan, M. (2020). Evaluation of distance education in the global epidemic process: Ankara example. *Milli Eğitim Journal*, 49(1), 69-94. <https://doi.org/10.37669/milliegitim.787145>
- Gürbüz, S., & Şahin, F. (2014). *Sosyal bilimlerde araştırma yöntemleri*. Ankara: Seçkin Yayıncılık.
- Hartshorne, R., & Ajjan, H. (2009). Examining student decisions to adopt Web 2.0 technologies: theory and empirical tests. *Journal of Computing in Higher Education*, 21, 183-198. <https://doi.org/10.1007/s12528-009-9023-6>
- Horzum, M. B. (2010). Investigation of teachers' awareness of Web 2.0 tools, frequency of use and purposes in terms of various variables. *International Journal of Human Sciences*, 7(1), 603-634.

- Hoy, C. (2016). Using Edmodo to build personal learning networks and develop digital literacies. In Using Action Research to Explore Technology in Language Teaching: International Perspectives. London: British Council. *ELT Research Paper*, 16(06), 46–48.
- Karadağ, B. F., & Garip, S. (2021). The use of LearningApps as a web 2.0 application in Turkish teaching. *Child, Literature and Language Education Journal*, 4(1), 21–40. <https://doi.org/10.47935/ceded.897374>
- Kavuk, E., & Demirtaş, H. (2021). Covid-19 pandemisi sürecinde öğretmenlerin uzaktan eğitimde yaşadığı zorluklar. *E-Uluslararası Pedagoji Dergisi*, 1(1), 55–73. Erişim bağlantısı: <https://www.e-ijpa.com/index.php/pedandragoji/article/view/20>
- Meyer, K. A. (2010). A comparison of Web 2.0 tools in a doctoral course. *The Internet and Higher Education*, 13, 226–232. <https://doi.org/10.1016/j.iheduc.2010.02.002>
- Özbal, A. (2017). *Using web 2.0 tools in the development of writing skills* (Unpublished master's thesis). Akdeniz University, Antalya, Türkiye.
- Özdoğan, A., & Berkant, H. (2020). Examination of stakeholder views on distance education during the COVID-19 pandemic period. *Milli Eğitim Journal*, 49(1), 13–43. <https://doi.org/10.37669/milliegitim.788118>
- Sarı, E. (2019). *Examining the effectiveness of the science course designed according to Web 2.0 applications* (Unpublished master's thesis). Düzce University, Düzce, Türkiye.
- Setiawan, R., & Wiedarti, P. (2020). The effectiveness of Quizlet application towards students' motivation in learning vocabulary. *Studies in English Language and Education*, 7(1), 83–95. <https://doi.org/10.24815/siele.v7i1.15359>
- Şimşek, S. ve Toprakçı, E. (2023). Milli eğitim müdürlerinin uzaktan yönetimde karşılaştıkları sorunlar. *Uluslararası Liderlik Eğitimi Dergisi (ULED)* 7(1), 53–66. TrDoi: <https://trdoi.org/10.26023458/uled.1305008>
- Toprakçı, M. S., Hepsöğütü, Z.B., & Toprakçı, E. (2021). Covid-19 salgını sürecinde öğrencilerin uzaktan öğretimde sorun kaynağı algıları (İzmir Atatürk lisesi örneği). *E-Uluslararası Pedagoji Dergisi*, 1(2), 41–61. <https://www.e-ijpa.com/index.php/pedandragoji/article/view/40>
- Toprakçı, E. ve Hepsöğütü, Z. B. (2022). Anadolu lisesi öğretmenlerinin uzaktan öğretime ilişkin sorun kaynağı algıları. *Uluslararası Liderlik Eğitimi Dergisi (ULED)/ International Journal of Leadership Training (IJOLT)*, 6(2), 1–14. TrDoi: <https://trdoi.org/10.26023458/uled.1166943> Erişim: <https://dergipark.org.tr/tr/download/article-file/2615800>
- Uzunboylu, H., Bicen, H., & Cavus, N. (2011). The efficient virtual learning environment: A case study of web 2.0 tools and Windows live spaces. *Computers & Education*, 56(3), 720–726. <https://doi.org/10.1016/j.compedu.2010.10.014>
- Yavuz, B., & Toprakçı, E. (2021). Covid-19 pandemisi sebebiyle okulların uzaktan öğretim yapması ile ilgili internet forumlarında paylaşılan görüşler. *Karalmas Eğitim Bilimleri Dergisi / Karalmas Journal of Educational Sciences* 9 (2021) 120–139. <https://dergipark.org.tr/tr/download/article-file/1699013>
- Yıldırım, İ. (2020). *Investigation of the effects of web 2.0 tools on students' academic achievement, self-learning levels with technology and their attitudes towards science in the interaction of light and matter in the classroom.* (Unpublished master's thesis). Kocaeli University, Kocaeli, Türkiye.