

Research Article

Open Access

Examination of University Students' Opinions on Online Education: The Case of a Private Foundation University in Türkiye

Nihal GÜLCAN¹  Mehmet Akın BULUT²  Mehmet Haldun KAYA³ 

Adem YURDUNKULU⁴  Rusen MEYLANI^{5*} 

^{1,2,4} İbn Haldun University, İstanbul, Türkiye, nihal.gulcan@ihu.edu.tr; akin.bulut@ihu.edu.tr; adem.yurdunkulu@ihu.edu.tr

³ İzmir University of Economics, Manisa, Türkiye, mehmethaldunkaya@gmail.com

⁵ Dicle University, Diyarbakır, Türkiye, rusen.meylani@dicle.edu.tr

* Corresponding Author: rusen.meylani@dicle.edu.tr

Article Info

Received: 20 December 2025

Accepted: 27 July 2026

Published: 10 August 2026

 10.18009/jcer.1845817

Keywords: Online education, university students, covid-19 pandemic, self-efficacy, motivation, hybrid learning, qualitative case study

Publication Language: English

This article was published under the continuous publishing model.

Abstract

This qualitative case study examined university students' perceptions and experiences of online education during the Covid-19 pandemic across motivation, self-efficacy, assessment, technological infrastructure, readiness, and lifelong learning, and compared these views with course evaluation data. Semi-structured interviews with 26 undergraduate and graduate students at a foundation university in İstanbul were triangulated with content analysis of 110 course evaluation surveys using thematic content analysis. Students valued flexibility, time efficiency, and access to recorded materials, but reported social isolation, reduced motivation, and technical problems as major drawbacks. Online learning supported digital literacy and presentation skills, yet practical and highly interactive courses were seen as less effective. Assessment fairness and exam disruptions were recurring concerns. Most participants preferred face-to-face or hybrid models, viewing hybrid as the best balance of flexibility and engagement. Limited to one institution and self-reports, the study recommends stronger infrastructure, digital equity, online pedagogy training, interactive design, fair formative assessment, and community-building, contributing nuanced evidence from Turkish foundation universities.



To cite this article: Gülcan, N., Bulut, M.A., Kaya, M.H., Yurdunkulu, A. & Meylani, R. (2026). Examination of university students' opinions on online education: The case of a private foundation university in Türkiye. *J. Comp. Educ. Res.*, 14, e2614062 <https://doi.org/10.18009/jcer.1845817>

Introduction

Online Education in Higher Education

Education has continually changed in response to social, scientific, and technological developments (Köseler, 2020). The digital transformation of the twenty-first century has accelerated this process by reshaping how instruction is delivered, accessed, and evaluated (Kaya et al., 2023; Kirazlı Korkmaz, 2022). Distance education enables teaching and learning despite spatial or temporal separation through technologies that support communication, content delivery, interaction, and assessment (Uşun, 2006). It developed from

correspondence education through radio and television to internet-based platforms, learning management systems, and virtual classrooms (Moore & Kearsley, 2011).

Online education has expanded access to higher education, supported lifelong learning, and provided flexibility for students balancing academic, occupational, and family responsibilities (Radha et al., 2020). Its effectiveness, however, depends on reliable infrastructure, appropriate instructional design, meaningful interaction, institutional support, and learner readiness. Limited social interaction, isolation, unequal technological access, and motivational difficulties remain persistent concerns (Lassoued et al., 2020). Recent evidence further indicates that interaction influences online engagement partly through students' self-efficacy and academic emotions (Wang et al., 2022). Digital technology therefore functions neither as an inherently effective solution nor as a substitute for pedagogy; its educational value depends on whether it is implemented equitably, purposefully, and in ways that complement human interaction (UNESCO, 2024).

Emergency Online Education during COVID-19

The COVID-19 pandemic transformed online education from an optional instructional model into an emergency mechanism for sustaining academic continuity. Following the suspension of face-to-face instruction, universities rapidly adopted virtual classrooms, learning management systems, and digital assessment tools (Sahu, 2020). This compulsory transition required students and instructors to adapt with limited preparation and exposed differences in technological resources, digital competence, pedagogical readiness, and institutional support (Kocabaş, 2021).

Emergency online education also intensified established problems involving social isolation, weak interaction, distracting home environments, declining motivation, assessment integrity, and unreliable internet access. These conditions should be distinguished from deliberately designed online learning because many pandemic practices represented temporary crisis responses rather than fully developed digital programs. Nevertheless, the transition provided a large-scale test of universities' technological and pedagogical capacity and produced evidence relevant to the continuing development of online and hybrid education. Higher education now has the highest rate of digital-technology adoption among education sectors, but evidence concerning its added value remains uneven and context-dependent (UNESCO, 2024).

Conceptual Framework

The study draws on constructivist and social cognitive perspectives. Constructivism views learning as an active process in which knowledge develops through engagement with content, instructors, peers, and meaningful tasks. Online learning therefore requires more than access to digital materials; it requires opportunities for participation, interaction, feedback, and collaborative knowledge construction.

Online environments also place greater responsibility on students to regulate their time, effort, learning pace, and use of resources. Learner autonomy is consequently connected with technological competence, motivation, and self-efficacy. From a social cognitive perspective, students who believe that they possess the capacity to use digital tools and manage online-learning demands are more likely to persist and engage productively (Moore & Kearsley, 2011). Contemporary research similarly connects online-learning self-efficacy with engagement, achievement emotions, learning approaches, and academic performance (Wang et al., 2022). Accordingly, the present study treats students' online-education experiences as the product of interacting personal, technological, pedagogical, and social conditions. Its conceptual focus includes autonomy, time management, self-efficacy, motivation, social interaction, technological readiness, assessment fairness, and perceived academic performance.

Online Education in Türkiye

The institutional development of distance education in Türkiye began later than its global development. John Dewey's 1924 report included an early recommendation for distance-learning provision, while correspondence education emerged during the 1950s (Bozkurt, 2017). A major institutional turning point occurred in 1982 with the establishment of Anadolu University's Open Education Faculty (Uluçay, 2016). Internet expansion during the 1990s enabled universities to introduce web-based programs for larger student populations (Çukadar & Sönmez, 2003), while adult-education initiatives extended distance learning beyond conventional university programs during the 2000s (Papi & Büyükaslan, 2007).

In March 2020, the Council of Higher Education directed Turkish universities to transfer instruction online (Koçoğlu & Tekdal, 2020). Institutions generally preserved educational continuity, but students experienced unequal access, infrastructure problems, limited interaction, and insufficient digital and pedagogical preparedness (Kürtüncü & Kurt,

2020). Turkish research has documented these general problems across large and predominantly public-university samples, yet institutional experiences were not uniform because public and foundation universities differed in governance, resources, student profiles, technological capacity, and responsiveness.

Research Gap and Purpose

Existing studies have already established that pandemic-era online education offered flexibility and accessibility while producing technical, motivational, social, pedagogical, and assessment-related difficulties. Merely reproducing this advantages–disadvantages distinction provides limited additional knowledge. More specific evidence is needed concerning how these dimensions operated together within particular institutional environments and whether students' interview accounts were reflected in routine institutional evaluation data.

Research in Türkiye has largely emphasized public universities, broad student populations, or quantitative measures of satisfaction and learning conditions. Comparatively little attention has been given to the lived experiences of students at foundation universities, despite their distinct organizational structures, resource arrangements, student demographics, and institutional decision-making processes. Qualitative evidence is also limited regarding the connections among flexibility, social interaction, self-efficacy, motivation, course type, technological readiness, and assessment fairness within the same study.

The present qualitative case study therefore examines how undergraduate and graduate students at a private foundation university in Istanbul experienced online education during the COVID-19 pandemic. It investigates time and spatial flexibility, social interaction, motivation, self-efficacy, technical infrastructure, instructional practices, assessment, readiness, academic performance, and preferred future delivery modes. Semi-structured interviews with 26 students are triangulated with open-ended course-evaluation data from 110 courses conducted during the same period.

Significance and Original Contribution of the Study

The study does not claim that flexibility, isolation, motivational decline, or technical difficulty are newly discovered features of online education. Its contribution lies instead in providing context-specific, methodologically triangulated, and institutionally actionable

evidence concerning how these established issues converged within an underexamined segment of Turkish higher education.

First, the study focuses specifically on a private foundation university in Türkiye, whereas much of the national pandemic literature has concentrated on public institutions or aggregated students across institution types. This context matters because foundation universities operate through different governance, financing, support, accountability, and student-service arrangements. The findings therefore illuminate whether access to a comparatively structured private-university environment eliminated common online-learning problems or whether motivational, social, pedagogical, and assessment concerns persisted despite institutional resources.

Second, the study combines 26 students' detailed interview accounts with open-ended evaluations drawn from 110 courses. The course-evaluation data extend the evidence beyond a small interview group and allow recurring interview themes to be examined against naturally occurring institutional feedback from the same period. This convergence between two data sources strengthens the credibility of the identified patterns and distinguishes the study from research relying on a single perception survey or one set of interviews.

Third, the study analyzes online education as an interconnected experience rather than a list of isolated advantages and disadvantages. It shows how technological conditions, instructor support, social presence, course modality, motivation, self-efficacy, and assessment fairness jointly shaped students' judgments. This integrated analysis clarifies, for example, why flexibility initially supported motivation while prolonged screen exposure and reduced interaction later weakened it, and why technological skill development coexisted with dissatisfaction in applied courses.

Fourth, the inclusion of undergraduate and graduate students from multiple academic fields permits examination of discipline- and course-sensitive boundaries of online learning. The findings distinguish theoretical courses, which benefited from recordings and flexible access, from practical and interaction-intensive courses, which students regarded as less suitable for fully online delivery. This distinction supports a more selective model of digitalization rather than a uniform recommendation for or against online education.

Fifth, students' simultaneous preference for face-to-face interaction and continued access to digital flexibility provides an empirical basis for purposeful hybrid design. The

findings identify which components should be retained online—such as recorded content, flexible access, and some assignment-based assessment—and which require stronger in-person provision, including applied learning, immediate interaction, social participation, and high-stakes assessment. This contribution remains relevant beyond the pandemic because international evidence increasingly emphasizes that technology should complement rather than replace meaningful teacher–student interaction (UNESCO, 2024).

The study thus moves beyond confirming familiar pandemic experiences. It explains how those experiences were configured within a Turkish foundation-university context, validates interview themes against institutional course feedback, and translates the resulting patterns into differentiated recommendations for online, face-to-face, and hybrid course design.

Research Questions

1. How did online education shape students' experiences of time management, spatial independence, and social interaction?
2. How did students perceive its relationship with self-efficacy, motivation, technological competence, and academic performance?
3. How did students evaluate the fairness, reliability, and suitability of online assessment practices?
4. How did students' interview accounts correspond with themes identified in course-evaluation data?
5. Which instructional mode—online, face-to-face, or hybrid—did students consider most appropriate for different learning needs and course types?

Methodology

Research Design

The study employed a qualitative single-case study design. A case study is appropriate when a phenomenon is examined in depth within a clearly bounded real-life context (Brown, 2008). The bounded case was the experience of online education during the COVID-19 period at one foundation university in Istanbul.

The study was not designed to estimate the prevalence of particular opinions among all university students or to make statistical generalizations. Instead, it sought to develop a detailed contextual account of how students experienced online instruction within the

selected institution. Interview data were supplemented with open-ended course-evaluation responses to compare individual accounts with a broader source of institutional feedback.

Participants and Sampling

The study sample consisted of 26 undergraduate and graduate students enrolled at a foundation (private) university in Istanbul. A purposive sampling method was used to ensure participants had direct experience with online learning during the pandemic. The inclusion criteria required that each student had completed at least one full semester through online instruction.

Purposive maximum-variation sampling was used to include students from different departments, academic levels, age groups, and gender categories. This variation increased the range of experiences represented within the case but did not make the sample statistically representative of the university or of higher education in Türkiye (Yıldırım & Şimşek, 2016). The sample should therefore be understood as an information-rich group selected to illuminate the institutional case rather than as a population sample.

Table 1. Demographic characteristics of participants

Characteristic	Category	Number of participants
Gender	Female	15
	Male	11
	Total	26
Age	20–25	17
	25–30	3
	30–35	2
	35–40	4
	Total	26
Education level	Undergraduate	17
	Graduate	9
	Total	26
Undergraduate department	Guidance and Psychological Counseling	5
	Political Science and International Relations	3
	Islamic Studies	2
	New Media and Communication	2
	Economics	2
	Business Administration	1
	Psychology	1
	Sociology	1
	Total	17
Graduate program	Educational Administration	5
	Basic Islamic Sciences	2
	Clinical Psychology	1
	Guidance and Psychological Counseling	1
	Total	9

Data Collection Instruments

The study used a semi-structured interview form as its primary data-collection instrument. The form consisted of 10 open-ended questions designed to obtain detailed accounts of students' experiences of distance education during the COVID-19 period. The questions addressed students' overall experiences, technological infrastructure, self-efficacy, instructional efficiency, motivation, assessment, instructors' use of teaching methods and technological tools, institutional technical readiness, instructors' pedagogical readiness, and lifelong-learning outcomes. The complete interview questions were as follows:

1. What are your positive and negative opinions about your experiences of taking courses through distance education during the COVID-19 period?
2. What are your opinions about the technological infrastructure, systems, and applications used in distance education during the COVID-19 period?
3. What are your opinions and experiences concerning your self-efficacy in taking courses through distance education during the COVID-19 period?
4. When distance education and formal face-to-face education are compared, which is more effective in terms of instructional efficiency? Please explain your answer.
5. What effects did distance education have on your level of motivation?
6. What are your opinions about the assessment and evaluation processes used in courses delivered through distance education, including quizzes, midterm and final examinations, performance tasks, presentations, assignments, projects, take-home examinations, and remotely proctored examinations?
7. What are your opinions about faculty members' use of teaching methods, instructional techniques, and technological tools in courses delivered through distance education?
8. What are your opinions about the university's technical readiness for the transition to distance education?
9. What are your opinions about faculty members' pedagogical readiness, including their teaching methods, instructional techniques, and diversity of instructional practices, during the transition to distance education?
10. What lifelong-learning skills did you acquire through distance education in the social, academic, technical, or technological domains?

The questions were sufficiently broad to allow participants to describe both positive and negative experiences while also providing a consistent structure across the interviews. Follow-up prompts were used when clarification or elaboration was necessary. These prompts asked participants to explain the reasons for their views, provide examples, compare different courses or instructors, and describe how particular experiences affected their learning, motivation, self-efficacy, or academic performance.

The interview form covered distinct but interrelated dimensions of the distance-education experience. The first question elicited an overall evaluation of benefits and difficulties, including flexibility, time and spatial independence, interaction, socialization, home-learning conditions, workload, and access to recorded lessons. The second question focused on technological systems and applications, including the university's infrastructure, Canvas, Zoom, internet connectivity, system accessibility, and adaptation difficulties. The third question examined students' perceived self-efficacy, including confidence in using technological tools, expressing themselves online, conducting research, making presentations, and managing independent learning. Questions 4 and 5 examined perceived instructional efficiency and motivation, particularly the roles of interaction, socialization, flexibility, course structure, family environment, screen exposure, and anxiety. Question 6 addressed the fairness, reliability, security, workload, and educational value of online assessment practices. Questions 7–9 examined instructors' use of instructional methods and digital tools, the institution's technical preparedness, and instructors' pedagogical readiness. The final question examined perceived gains in technological competence, communication, presentation, research, academic development, self-discipline, time management, and lifelong learning.

In addition to the interviews, open-ended end-of-term course-evaluation responses from 110 courses were used as a supplementary data source. These evaluations provided institution-level feedback concerning instructor support, course duration, assessment design, assignment and examination workload, suitability of courses for face-to-face instruction, teaching methods and strategies, and the use of technological tools. The interview and course-evaluation data were analyzed as separate datasets and were subsequently compared at the thematic level. The course-evaluation data were used to determine whether issues identified in the detailed interview accounts also appeared in broader institutional feedback; they were not treated as responses from the same 26 interview participants.

Collection Procedures

Participation in the interviews was voluntary, and all participants provided informed consent before data collection. Each interview lasted approximately 45 minutes and was audio-recorded with the participant's permission. The recordings were transcribed verbatim, anonymized, and assigned participant codes from K1 to K26.

At the end of each interview, the researcher summarized the participant's principal statements and invited the participant to correct, clarify, or expand the summary. This immediate member-checking procedure supported the accuracy of the recorded interpretations (Creswell, 2009).

The course-evaluation responses were obtained as an existing institutional data source and analyzed separately from the interviews. The two datasets were linked only at the thematic level. No claim was made that the course-evaluation respondents and interview participants constituted the same group.

Data Analysis

The interview transcripts and open-ended course-evaluation responses were examined through qualitative content analysis, which involves the systematic organization of textual data into codes, categories, and themes (Miles & Huberman, 1994). The datasets were analyzed separately before being compared.

The analysis proceeded through six stages. First, each interview transcript was read repeatedly to establish familiarity with the participant's complete account. Second, meaning units relevant to the research questions were identified and assigned descriptive codes. Third, codes with similar meanings were compared, merged, or differentiated. Fourth, related codes were organized into categories and subcategories. Fifth, the categories were grouped under the broader themes reported in the findings. Sixth, representative quotations were selected to illustrate the themes while preserving both common and contrasting experiences.

The main interview themes were:

1. flexibility and access;
2. social, environmental, and technological barriers;
3. digital and academic self-efficacy;
4. motivation and engagement;
5. assessment fairness and reliability; and
6. preferences for face-to-face, online, and hybrid education.

The course-evaluation responses were analyzed through the same general coding sequence. Codes were organized under motivation, assessment, preferred instructional mode, pedagogical readiness, and use of technological tools.

After the two analyses were completed, a thematic convergence matrix was developed (Table 2). Each course-evaluation category was compared with the interview themes and classified as convergent, complementary, or not represented in the other source. Convergence indicated that a similar issue appeared in both datasets. Complementarity indicated that the datasets addressed the same general issue but emphasized different aspects. This procedure clarified how the findings supported one another without implying that the two datasets were collected from the same participants.

Table 2. Thematic structure used in the qualitative analysis

Main theme	Category	Subcategory or code
Flexibility and access	Temporal flexibility	Time saving; flexible participation
	Spatial flexibility	Elimination of spatial constraints; learning from home
	Material access	Recorded lessons; access to course materials
	Social barriers	Limited peer interaction; limited instructor interaction; isolation
Social, environmental, and technological barriers	Home environment	Distraction; difficulty concentrating
	Technological barriers	Internet interruption; platform malfunction; examination failure
Self-efficacy	Digital competence	Technological skills; mastery of online tools
	Academic communication	Presentation skills; online participation
	Practical competence	Difficulty in applied and practice-based courses
Motivation and engagement	Motivation-supporting conditions	Flexibility; instructor support; family environment
	Motivation-reducing conditions	Monotony; long screen time; social isolation
Assessment	Positive assessment experiences	Assignment-based assessment; formative tasks
	Negative assessment experiences	Technical failure; examination design; perceived unfairness
Preferred instructional mode	Face-to-face education	Direct interaction; immediate feedback; social presence
	Online education	Flexibility; recorded materials; theoretical courses
	Hybrid education	Combination of flexibility and interaction

Validity and Reliability

Several procedures were used to establish credibility, dependability, confirmability, and transparency (Lincoln & Guba, 1985). The initial 12-question semi-structured interview form was independently reviewed by four experts who were also among the study authors. Their collective expertise included educational technology and online-learning design; curriculum and instruction, language and teacher education, and technology integration; educational administration, leadership, institutional readiness, and lifelong learning; and

educational psychology, assessment, quantitative research, and technology-supported learning. These areas were directly relevant to the study's focus on online-learning experiences, technological infrastructure, self-efficacy, motivation, assessment, pedagogical readiness, and lifelong-learning outcomes.

The experts evaluated the questions for relevance to the study purpose, clarity, comprehensibility, scope, consistency with the research questions, and suitability for eliciting detailed participant experiences. Agreement was calculated by dividing the number of agreements by the total number of agreements and disagreements and multiplying the result by 100. The resulting agreement rate was 84%. Based on the expert review, overlapping questions were combined and repetitive or unclear wording was revised, reducing the form from 12 to 10 questions. The revised form was then pilot-tested to assess its clarity, sequencing, and comprehensibility.

Member checking was conducted at the end of each interview. Participants reviewed an oral summary of their principal statements and were invited to correct, clarify, or expand the summary. Direct quotations were also retained in the findings to maintain a clear connection between the interpretations and participants' own accounts.

To support coding consistency, the coding framework was reviewed by comparing code assignments, category definitions, and representative extracts. Differences in interpretation were discussed and resolved through consensus. Because the original analysis did not include a formal inter-coder coefficient such as Cohen's kappa, no numerical inter-coder reliability value is reported.

Source triangulation was achieved by analyzing the interview and course-evaluation datasets separately and then comparing their findings. Participant diversity was treated as a means of increasing variation within the case rather than as triangulation or evidence of generalizability.

Findings

This section presents the descriptive results derived from the semi-structured interviews and end-of-course student evaluation surveys. The findings are organized under seven major themes: advantages of online education, disadvantages of online education, effects on self-efficacy, motivation and assessment factors, preferred education models, technical challenges, and student feedback from course evaluations. Frequencies and percentages are included to illustrate patterns in the data.

Advantages of Online Education

Students identified several advantages of online education, particularly the flexibility it offered in managing time and space. As shown in **Table 3**, participants emphasized the ability to access materials at any time and study from home as key benefits.

Table 3. Advantages of online education reported by students

Advantages	Number of Participants	Percentage (%)
Time saving	14	53.8
Elimination of spatial constraints	13	50.0
Access to course materials at any time	16	61.5
Studying in home comfort	12	46.1
Totals	26	100.0

The majority of students (61.5%) noted that having access to recorded materials whenever needed made the learning process more manageable, while over half (53.8%) valued the time saved by avoiding commuting.

Disadvantages of Online Education

Despite these benefits, students also reported significant disadvantages. As seen in Table 4, social isolation and technical issues were the most common challenges.

Table 4. Disadvantages of online education reported by students

Disadvantages	Number of Participants	Percentage (%)
Lack of social interaction	15	57.7
Technical infrastructure problems	12	46.1
Distracting home environment	10	38.5
Ineffectiveness in practical courses	8	30.8
Totals	26	100.0

13

“A majority (57.7%) stated that the lack of social interaction negatively affected their engagement, while 46.1% encountered technological barriers that disrupted learning continuity.

Effects on Self-Efficacy

The online education process influenced students' self-efficacy in various ways. As presented in Table 5, participants reported both gains and limitations in their skills and confidence.

Table 5. Effects of online education on students' self-efficacy

Effects	Number of Participants	Percentage (%)
Improved technological skills	6	23.0
Enhanced presentation skills	5	19.2
Increased mastery of online tools	7	26.9
Perceived inadequacy in practical courses	8	30.8
Totals	26	100.0

While several participants (26.9%) indicated an increased familiarity with online platforms, a comparable proportion (30.8%) expressed difficulty applying these skills to hands-on or practical subjects.

Motivation and Assessment Factors

Student motivation and perceptions of assessment fairness varied considerably. The descriptive data summarized in Table 6 reveal differing experiences related to engagement and evaluation.

Table 6. Effects of online education on motivation and assessment

Factors	Number of Participants	Percentage (%)
Assignment-based evaluation seen as fair	16	61.5
Participation flexibility increased motivation	14	53.8
Monotony reduced motivation	12	46.1
Technical problems affected exam performance	10	38.5
Totals	26	100.0

The data suggest that while a majority (61.5%) viewed assignment-based grading as fair, nearly half (46.1%) struggled with decreasing motivation over time.

Preferred Education Models

Participants were asked to indicate which mode of education they found most effective. As shown in Table 7, face-to-face education remained the most preferred, though many students also favored hybrid models.

Table 7. Preferred educational models

Educational Model	Number of Participants	Percentage (%)
Face-to-face education	18	69.2
Online education	6	23.1
Hybrid (online + face-to-face)	12	46.1
Totals	26	100.0

The data indicate overlapping preferences, with a large portion of students (46.1%) expressing support for hybrid models that combine flexibility with interpersonal interaction.

Technical Challenges

Technical difficulties were among the most frequently mentioned issues. Table 8 presents the types of problems encountered during the online learning period.

Table 8. Technical challenges experienced during online education

Technical Issue	Number of Participants	Percentage (%)
Internet connectivity interruptions	13	50.0
Platform malfunctions	11	42.3
Technical failures during exams	7	26.9
Perceived unfairness in exams	14	53.8
Totals	26	100.0

Connectivity problems (50%) and perceived unfairness in assessments (53.8%) were the most frequent issues reported.

Student Feedback from Course Evaluation Surveys

Data from 110 course evaluation surveys were also analyzed to identify recurring themes. Table 9 summarizes the main categories and frequencies extracted from open-ended responses.

Table 9. Themes from end-of-term course evaluation surveys

Theme	Category	Code	Percentage
Motivation	Instructor support	33	22.9
	Long course durations	3	2.08
	Instructor's strict attitude	5	3.4
	Adaptation problems	4	2.7
Assessment	Inappropriate exam design	19	13.1
	Excessive homework load	8	5.5
	Excessive exam load	5	3.4
Preferred Mode	Course better suited for face-to-face	18	12.5
Pedagogical Readiness	Lack of teaching methods and strategies	9	6.25
Use of Technical Tools	Active course delivery	39	27
	Insufficient use of tools	1	0.6
Totals		144	100

Overall, students valued supportive and understanding instructors, yet raised concerns about excessive workloads, assessment fairness, and the monotony of long online sessions.

Convergence of the Two Data Sources

The two sources supported one another most clearly in relation to assessment, instructional mode, and pedagogical readiness (Table 10). The interviews provided greater detail about personal motivation, social isolation, home conditions, and technological failures. The course evaluations placed greater emphasis on instructor support, workload, and course design.

Table 10. Comparison of the interview and course-evaluation findings

Area	Interview findings	Course-evaluation findings	Relationship
Motivation	Flexibility and family conditions supported motivation; monotony, isolation, and screen fatigue reduced it	Instructor support, strict attitudes, long sessions, and adaptation problems influenced motivation	Complementary
Assessment	Assignments were often viewed positively; technical failures and perceived unfairness affected examinations	Inappropriate examination design and excessive assignment and examination loads were criticized	Convergent
Instructional	Face-to-face and hybrid models	Some courses were considered	Convergent

mode	were preferred, especially for interactive and practical courses	better suited to face-to-face instruction	
Pedagogical readiness	Practical and interaction-intensive courses were considered less effective online	Insufficient teaching methods and strategies were identified	Convergent
Technology	Students developed digital skills but experienced connectivity and platform problems	Active use of technological tools was frequently valued; insufficient use was occasionally criticized	Complementary

Summary of Findings

The descriptive findings reveal a nuanced view of online education. Students acknowledged the convenience and time efficiency it provided but highlighted ongoing difficulties in maintaining motivation, ensuring fairness in assessments, and overcoming social isolation and technical barriers. These summarized patterns form the interpretive discussion that follows next.

Results

This section interprets the descriptive findings presented earlier, focusing on the key themes derived from participant interviews and survey data. The results are explained in five subsections: perceived advantages and disadvantages of online education, effects on self-efficacy, motivation and assessment experiences, comparison of instructional modes, and a synthesis of interpretive patterns. Direct quotations from participants are used to illustrate their perspectives.

Perceived Advantages and Disadvantages of Online Education

Students' perceptions of online education revealed both clear benefits and significant challenges. The most frequently emphasized advantages were time flexibility, spatial independence, and access to course materials. Many participants found online learning convenient, noting that it allowed them to attend classes without commuting and to manage their schedules more efficiently. As one participant explained,

"In terms of time and effort, I found it more positive and efficient." (K4)

Students also appreciated the opportunity to revisit recorded lessons, which they felt supported their learning and comprehension. Another student stated,

"The most beneficial aspect for me was that the lessons were recorded with all their details." (K15)

However, despite these advantages, many participants also identified significant drawbacks. The most commonly mentioned disadvantages were lack of social interaction,

technological problems, and distracting home environments. Some students described feeling disconnected from their peers and instructors, which negatively affected their engagement:

“Being distant from socialization reduces interest and motivation for the lessons.” (K17)

Others highlighted the challenge of maintaining focus in home settings:

“Taking classes at home was really difficult; there were too many distractions.” (K12)

These findings suggest that while online education provided convenience and autonomy, it also led to a decrease in social and emotional engagement—elements crucial to sustained learning motivation.

Effects on Self-Efficacy

The transition to online learning influenced students’ self-efficacy in complex ways. On one hand, participants reported improvements in their technological and digital skills. They became more adept at using online tools, preparing presentations, and managing digital assignments. As one student observed,

“During this period, I think I improved myself by taking online seminars.” (K19)

Some also gained confidence in their ability to speak and present ideas during online sessions:

“I realized I was more comfortable when giving presentations; my self-confidence increased.” (K16)

On the other hand, students found that practical or hands-on courses were difficult to conduct effectively in virtual environments. Several felt that their learning in such subjects was insufficient:

“Learning in practical courses was quite difficult during online education.” (K7)

Additionally, a few participants expressed frustration with their limited command of technological tools, which at times hindered their learning:

“I struggled with using technology; in some classes, it just wasn’t enough.” (K14)

These results indicate that while online education enhanced digital literacy and presentation confidence, it simultaneously exposed disparities in students’ technological readiness and reduced opportunities for experiential learning.

Motivation and Assessment Experiences

Students reported both positive and negative motivational outcomes during online education. The flexibility of attending classes from home and the elimination of commuting time initially enhanced engagement for many.

"Being able to participate from home motivated me because it saved time." (K5)

Family presence and comfort also supported emotional well-being for some participants:

"Being with my family positively affected my motivation." (K12)

However, prolonged exposure to the same physical environment led to boredom and fatigue, reducing motivation over time.

"Because of the pandemic, constantly studying in the same place became tiring and boring." (K4)

"Sitting in front of the computer for too long exhausted me and decreased my motivation." (K17)

Participants also shared mixed views regarding assessment methods. Many considered assignment-based evaluation fairer and less stressful than traditional exams. Others, however, questioned the fairness of online exams, expressing concern about cheating and technical disruptions that affected performance.

"The internet cut off during the exam, and I couldn't finish it." (K7)

These insights reflect how motivational dynamics in online learning depend not only on personal discipline and environment but also on the perceived fairness and reliability of evaluation processes.

Comparison of Online and Face-to-Face Learning

When comparing online and face-to-face education, the majority of participants expressed a clear preference for face-to-face learning due to its interactive and social nature. They felt that direct contact with instructors and peers facilitated deeper understanding and engagement:

"There is more interaction in face-to-face education, and that makes the lessons easier to understand." (K3)

However, several students proposed hybrid education as the most effective solution, combining the convenience of online classes with the interactive advantages of in-person instruction:

"A hybrid model would be better; it combines the advantages of both." (K7)

Students also noted that online education was particularly suitable for theoretical courses where materials could easily be reviewed through recordings. As one participant stated,

"Being able to rewatch lessons in online education is a big advantage." (K15)

These findings show that while face-to-face instruction remains the preferred mode, students recognize the potential of blended learning models to balance flexibility and interaction.

Summary of Interpretive Patterns

The interpretive analysis reveals a dual-sided experience of online learning among university students. While participants appreciated the autonomy, flexibility, and accessibility of online education, they also encountered significant social, motivational, and technical challenges.

Overall, the online learning environment supported the development of digital skills and time management but struggled to replicate the social engagement, immediacy, and structure of traditional classroom settings. Participants' reflections emphasize the need for more interactive pedagogical designs and robust technological infrastructure to optimize future online or hybrid learning models.

Discussion and Implications

The findings largely correspond with established research on pandemic-era online education. Flexibility, time saving, access to recorded materials, social isolation, technological difficulties, reduced motivation, and concerns about assessment have been reported across numerous higher-education settings. The contribution of the present study therefore lies not in treating these patterns as previously unknown, but in showing how they were interconnected within one Turkish foundation university and how interview accounts converged with open-ended course-evaluation feedback.

This interpretation requires appropriate restraint. The data represent a bounded institutional case rather than a national or internationally generalizable account. Nevertheless, the comparison of personal narratives and course-level feedback provides useful evidence about the institutional conditions under which students experienced online education as supportive or restrictive.

Synthesis with Existing Literature

The flexibility and accessibility identified in the present study are consistent with earlier research showing that distance education enables learners to access materials across time and place (Moore & Kearsley, 2011). The value attached to recordings, flexible participation, and reduced travel also corresponds with evidence that students value online

learning when it supports self-paced study and the management of competing responsibilities (Radha et al., 2020).

The findings are also consistent with the systematic review by Cramarenco et al. (2023), which identified flexibility, self-directed learning, and use of digital technologies as recurring advantages of pandemic online education. The same review documented limited interaction and reduced social presence as persistent disadvantages. Tosto et al. (2023) similarly found that post-pandemic students valued self-paced learning and recorded sessions while expressing concerns about reduced interaction with peers and instructors.

The technological barriers identified in the present study support research demonstrating that online learning depends on more than the availability of digital platforms. Zhou et al. (2024) concluded that successful digital adaptation required adequate infrastructure, staff and student competence, institutional support, and pedagogically appropriate implementation. The present findings provide a contextual example of this relationship: technology increased access and digital competence, but connectivity problems and platform failures also interrupted instruction and assessment.

The findings concerning social interaction are consistent with Duran et al. (2006), who emphasized the importance of socialization in online education, and with Lassoued et al. (2020), who identified isolation and limited interaction as major barriers. Participant statements in the present study indicate that interaction was not an optional addition to online education; it was closely connected with motivation, comprehension, and preference for face-to-face instruction.

The preference for hybrid education reflects an attempt to combine technological flexibility with direct interpersonal engagement. Recent evidence indicates that well-designed blended learning can support academic achievement, engagement, and educational equity when implementation is supported by sustained professional development and effective instructional practice (Meylani, 2026). Recent systematic evidence further indicates that hybrid education offers this combination but remains dependent on technological integration, pedagogical innovation, student engagement, faculty support, assessment practices, and feedback (Raes et al., 2025).

Interpretation of Major Themes

The study's results highlight several interconnected themes that characterize students' experiences of online education:

- *Autonomy and Convenience:* Online learning empowered students to manage their schedules, access materials asynchronously, and personalize their learning processes. These features enhanced students' sense of control and efficiency, contributing positively to their self-efficacy and academic confidence.
- *Social Isolation and Motivation:* Despite the autonomy afforded by online education, the lack of real-time interpersonal communication negatively influenced emotional engagement and sense of belonging. Students repeatedly emphasized that limited peer and instructor interaction reduced motivation, echoing previous observations about the emotional dimension of learning (Bilgiç & Tüzün, 2015).
- *Technological Competence and Barriers:* Students' digital literacy improved significantly, yet the unevenness of technical resources and the occurrence of connectivity issues limited consistent learning experiences. This reflects the dual role of technology in education—as both an enabler and a constraint—depending on infrastructure quality and user competence.
- *Assessment Fairness:* The transition to online examinations created uncertainty about fairness and academic integrity. While project- and assignment-based assessments were perceived as fairer and more reflective of real effort, technical failures and opportunities for misconduct diminished students' trust in exam processes.
- *Preference for Hybrid Models:* The preference for hybrid (blended) education among nearly half the participants suggests a desire for continuity of flexibility while restoring face-to-face engagement. Students valued the convenience of digital access but sought the social and cognitive benefits of classroom learning.

Collectively, these themes illustrate that online education offers structural flexibility but requires stronger pedagogical and emotional design to achieve comparable engagement to traditional learning environments.

Implications for Policy and Practice

The findings of this research provide several important implications for educational policy, institutional planning, and teaching practice in higher education (Table 11):

Table 11. Summary of institutional, pedagogical, and student support implications, including recommendations for implementing sustainable hybrid education models post-pandemic

Category	Key Implications	Description
Institutional Implications	Strengthen technological infrastructure	Invest in reliable internet connectivity and robust online platforms to ensure consistent access to learning materials, assessments, and high-quality interactive online instruction.
	Ensure digital equity	Address inequalities in access to devices and stable internet by providing loaner equipment or on-campus facilities when possible.
Pedagogical Implications	Promote interactive learning design	Use engagement-enhancing tools such as breakout rooms, discussion boards, and collaborative assignments to increase student participation.
	Instructor training in digital pedagogy	Offer continuous professional development to help instructors adapt teaching strategies for online and hybrid environments.
	Feedback-centered assessment	Prioritize assignment-based evaluation and formative feedback to enhance fairness and maintain trust in assessment processes.
Student Support Implications	Foster social presence	Create structured opportunities for interaction, including peer groups, online discussions, and mentoring programs, to reduce social isolation.
	Psychological and motivational support	Provide academic counseling and motivation workshops to support students' resilience and self-regulation in remote learning contexts.
Hybrid Education Implementation	Adopt hybrid education models	Design flexible systems that deliver theoretical courses online while preserving in-person instruction for applied, practical, or laboratory-based courses.

Artificial Intelligence, Personalization, and Educational Equity

Artificial intelligence introduces an additional dimension to the future of online and hybrid education. Generative AI systems can function as learning assistants by providing immediate explanations, personalized feedback, examples adapted to students' needs, and support outside scheduled class hours. These functions could be particularly valuable for students who have limited access to individualized academic assistance. Yu and Guo (2023) identify personalized, intelligent, collaborative, and virtual teaching as major areas in which generative AI could support educational reform.

Unequal access to advanced systems, differences in AI literacy, unreliable outputs, algorithmic bias, privacy risks, and inaccessible design can reproduce existing educational disadvantages. Equitable AI integration therefore requires inclusive access, ethical safeguards, educator preparation, support for diverse learners, and sustained attention to data quality and systemic inequality (Akyıldız, 2024; Garcia Ramos & Wilson-Kennedy, 2024;

Kaplan & Meylani, 2025; Meylani, 2024). AI-supported learning should complement rather than replace instructor guidance, peer interaction, critical evaluation, and human support.

Broader Theoretical Insights

From a theoretical standpoint, the findings reinforce the relationship between self-efficacy, motivation, and autonomy in online learning environments. Students' ability to adapt successfully depended not only on their technical competence but also on their confidence in managing their own learning processes.

The results highlight that technology alone does not ensure effective education; rather, meaningful interaction and emotional engagement are equally vital. This suggests that future models of online education should integrate socio-constructivist approaches emphasizing collaboration, feedback, and authentic communication between students and instructors.

Overall, this study supports a balanced model of education in which technological flexibility is complemented by human connection and pedagogical intentionality — principles that are essential for building resilient and inclusive digital learning ecosystems.

Conclusion

Summary of Key Results

This study explored university students' experiences and perceptions of online education during the COVID-19 pandemic, focusing on aspects such as motivation, self-efficacy, assessment, technical infrastructure, and learning engagement. Using a qualitative case study approach, the research revealed that online education provided both opportunities and challenges for learners.

Students recognized clear advantages in terms of flexibility, time efficiency, and accessibility. The ability to attend classes from home and access recorded materials at any time improved their ability to manage learning independently. Moreover, many students reported growth in technological and presentation skills, reflecting an increase in digital literacy and self-confidence.

However, the findings also revealed significant limitations. Participants frequently reported social isolation, reduced motivation, and technological barriers that disrupted learning. Practical courses, which rely heavily on interaction and physical resources, were considered less effective in the online format. Additionally, concerns about assessment

fairness, technical failures during exams, and uneven infrastructure negatively affected perceptions of educational quality.

Overall, while students acknowledged the necessity of online education during the pandemic, they viewed it as a temporary substitute rather than a complete alternative to face-to-face instruction. Many participants favored hybrid learning models, which combine the accessibility of online education with the interactivity and community of traditional classrooms.

Research Gaps and Future Research Directions

The findings of this study open several avenues for further exploration. Future research should address the following key gaps:

- *Comparative Institutional Studies:* Expanding the scope beyond a single foundation university to include multiple institutions—both public and private—would provide a broader understanding of how organizational structures and resources shape students' experiences.
- *Longitudinal Research:* As this study reflects perceptions formed during a crisis period, longitudinal research is needed to examine how students' attitudes evolve once online education becomes normalized within higher education systems.
- *Instructor and Administrative Perspectives:* Further studies should incorporate instructors' and administrators' viewpoints to understand the full spectrum of challenges in designing, implementing, and sustaining online learning systems.
- *Quantitative and Mixed-Method Approaches:* Integrating survey-based or experimental data could complement the qualitative insights presented here, enhancing generalizability and identifying causal relationships.
- *Hybrid Learning Models:* Research should explore how blended education frameworks can best balance digital flexibility with interactive learning to support different disciplines and learning styles.

Through these directions, future scholarship can deepen understanding of how digital education transforms higher education and how institutions can ensure equitable, high-quality learning experiences.

Limitations

This study was conducted with 26 students at one foundation university in Istanbul. The findings represent an in-depth account of a bounded institutional case and should not be

generalized statistically to other universities or student populations. The inclusion of participants from different programs increased variation within the case but did not make the sample representative.

The study relied on self-reported experiences. Participants' accounts could have been influenced by memory, personal expectations, emotional responses to the pandemic, or willingness to disclose negative experiences. The course-evaluation data broadened the institutional evidence but were not obtained from the same defined group as the interview data. They were therefore used for thematic triangulation rather than participant-level comparison.

The data were collected during emergency pandemic conditions. The findings should not be interpreted as a direct evaluation of all contemporary online or hybrid education, which can be deliberately designed and implemented under more stable conditions. Differences in internet access, devices, home environments, disciplines, and course requirements also shaped student experiences and limit the transferability of the findings.

Finally, the original instrument-review and coding records did not contain numerical expert ratings or a formal inter-coder coefficient. The study therefore reports the qualitative review and consensus procedures transparently rather than introducing retrospective statistics that were not calculated during the research process.

Final Concluding Remarks

The significance of pandemic-era online education now lies less in documenting that students experienced both advantages and disadvantages and more in identifying which lessons should shape future digital and hybrid learning. The present case shows that flexibility, access to recorded materials, and digital competence were meaningful benefits, but these benefits were weakened when students encountered poor connectivity, unsuitable assessment, limited interaction, inadequate teaching strategies, or learning environments that did not support concentration.

The findings support differentiated course design rather than the assumption that one instructional mode is appropriate for every course. Theoretical content, review activities, and flexible access can be supported online, whereas applied, laboratory-based, and interaction-intensive learning requires stronger face-to-face or carefully designed hybrid components.

The study also indicates that emerging technologies, including artificial intelligence, should be evaluated according to the same principles identified in the participants' experiences: accessibility, pedagogical appropriateness, reliability, interaction, fairness, and equity. The future of higher education does not depend solely on adopting more technology. It depends on integrating technology in ways that preserve meaningful human interaction and respond to differences in students' resources, needs, and learning conditions.

Acknowledgement

This study has been produced from the first author's (Nihal Gülcan) master's thesis under the second author's supervision (Mehmet Akın Bulut).

Ethical Committee Permission Information

Name of the board that carries out ethical assessment: İbn Haldun University Social and Humanities Scientific Research and Publication Ethics Board

The date and number of the ethical assessment decision: 13.07.2023/ E-71395021-100-28236

Author Contribution Statement

Nihal GÜLCAN: *Conceptualization, methodology, investigation, data collection, formal analysis, literature review, and writing—original draft.*

Mehmet Akın BULUT: *Supervision, methodological guidance, literature review, planning of the university's distance education system, preparation of e-learning materials, and writing—review and editing.*

Mehmet Haldun KAYA: *Supervision, methodological guidance, literature review, planning of the university's distance education system, preparation of e-learning materials, and writing—review and editing.*

Adem YURDUNKULU: *Supervision, methodological guidance, literature review, planning of the university's distance education system, preparation of e-learning materials, and writing—review and editing.*

Rusen MEYLANI: *Writing—review and editing.*

References

- Akyıldız, S. T. (2024). Enhancing or hindering? AI's role in sparking creativity in language teaching: Insights from private high school EFL teachers. *International e-Journal of Educational Studies*, 8(18), 234-254. <https://doi.org/10.31458/iej.1502509>
- Bilgiç, S., & Tüzün, H. (2015). Uzaktan eğitimde teknolojik zorluklar ve öğrenci deneyimleri [Technological challenges and student experiences in distance education]. *Yükseköğretim Dergisi*, 15(3), 112-124.

- Bozkurt, A. (2017). Türkiye’de uzaktan eğitimin dünü, bugünü ve yarını [The past, present, and future of distance education in Turkey]. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, 3(2), 85–124.
- Brown, A. P. (2008). A review of the literature on case study research. *Canadian Journal for New Scholars in Education*, 1(1), 1–13.
- Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). Sage Publications.
- Çukadar, S., & Sönmez, Ç. (2003). İnternete dayalı uzaktan öğretim ve üniversite kütüphaneleri [Internet-based distance learning and university libraries]. *Doğuş Üniversitesi Dergisi*, 4(1), 31–42.
- Duran, M., Önal, A., & Kurtuluş, B. (2006). Çevrim içi eğitimde sosyalleşme [Socialization in online education]. *Eğitim Bilimleri Dergisi*, 12(3), 345–359.
- Garcia Ramos, J., & Wilson-Kennedy, Z. (2024). Promoting equity and addressing concerns in teaching and learning with artificial intelligence. *Frontiers in Education*, 9, Article 1487882. <https://doi.org/10.3389/feduc.2024.1487882>
- Kaplan, R., & Meylani, R. (2025). Dimensions of artificial intelligence literacy: A qualitative synthesis of contemporary research literature. *Journal of Computer and Education Research*, 13(26), 790–825. <https://doi.org/10.18009/jcer.1648380>
- Kaya, D., Kutluca, T. & Dağhan, G. (2023). Transforming education with augmented reality, metaverse and virtual reality technologies in the 21st century. *Hacettepe University Journal of Education*, 38(4), 470–497. <https://doi.org/10.16986/HUJE.2023.503>
- Kirazlı Korkmaz, E. (2022). *Covid-19 sürecinde yükseköğretimde turizm eğitimi alan öğrencilerin uzaktan eğitime yönelik bakış açılarının değerlendirilmesi* [An evaluation of tourism students’ perspectives on distance education during the Covid-19 process] (Master’s thesis, Atılım University).
- Kocabaş, C. (2021). *COVID-19 sonrasında yükseköğretimde dönüşümün izleri: Tespitler ve öneriler* [Traces of transformation in higher education after COVID-19: Findings and suggestions].
- Koçoğlu, E., & Tekdal, M. (2020). Covid-19 pandemisi ve eğitimde uzaktan eğitim süreci: Türkiye’de uzaktan eğitim sürecine genel bir bakış [The Covid-19 pandemic and distance education: A general overview of the distance education process in Turkey]. *Uluslararası Eğitim Dergisi*, 22(4), 76–89.
- Köseler, S. (2020). *Turizm eğitimi alan öğrencilerin sosyal medya kullanımı ve dijital oyun bağımlılıklarının akademik başarıya etkisi: Çanakkale Onsekiz Mart Üniversitesi örneği* [The effect of social media use and digital game addiction on the academic achievement of tourism students: The case of Çanakkale Onsekiz Mart University] (Master’s thesis, Çanakkale Onsekiz Mart University).
- Kürtüncü, M., & Kurt, A. (2020). COVID-19 pandemisi döneminde hemşirelik öğrencilerinin uzaktan eğitim konusunda yaşadıkları sorunlar [Problems experienced by nursing students regarding distance education during the COVID-19 pandemic]. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi*, 7(5), 66–77.
- Lassoued, Z., Alhendawi, M., & Bashithalshaer, R. (2020). An exploratory study of the obstacles for achieving quality in distance learning during the COVID-19 pandemic. *Education Sciences*, 10(9), 232–245.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Sage Publications.

- Meylani, R. (2024). Artificial intelligence in the education of teachers: A qualitative synthesis of the cutting-edge research literature. *Journal of Computer and Education Research*, 12(24), 600–637. <https://doi.org/10.18009/jcer.1477709>
- Meylani, R. (2026). Optimizing academic and non-cognitive outcomes through blended learning: A framework for advancing SDG 4. *Sustainability*, 18(3), Article 1466. <https://doi.org/10.3390/su18031466>
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Sage Publications.
- Moore, M. G., & Kearsley, G. (2011). *Distance education: A systems view of online learning*. Wadsworth Cengage Learning.
- Özbay, Ö. (2015). Dünyada ve Türkiye’de uzaktan eğitimin güncel durumu [The current state of distance education in the world and Turkey]. *Uluslararası Eğitim Bilimleri Dergisi*, 376–394.
- Papi, C., & Büyükaslan, A. (2007, October). Developments in distance education in Turkey and France: Which right to education?. In *Colloque TICE Méditerranée* (Marseille).
- Patton, M. Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Sage Publications.
- Radha, R., Mahalakshmi, K., Kumar, V. S., & Saravanakumar, A. R. (2020). E-learning during lockdown of COVID-19 pandemic: A global perspective. *International Journal of Control and Automation*, 13(4), 1088–1099.
- Raymond, E. (2000). *The sociology of education*. Palgrave Macmillan.
- Sahu, P. (2020). Closure of universities due to Coronavirus Disease 2019 (COVID-19): Impact on education and mental health of students and academic staff. *Cureus*, 12(4), e7541.
- Sadeghi, M. (2019). A shift from classroom to distance learning: Advantages and limitations. *International Journal of Research in English Education*, 4(1), 80–88.
- Strauss, A., & Corbin, J. (1990). *Basics of qualitative research: Grounded theory procedures and techniques*. Sage Publications.
- Telli, E., & Altun, D. (2020). COVID-19 pandemisinde eğitim: Zorluklar ve fırsatlar [Education during the COVID-19 pandemic: Challenges and opportunities]. *Açıköğretim Uygulamaları ve Araştırmaları Dergisi*, 6(3), 7–20.
- Uluçay, A. (2016). Türkiye’de uzaktan eğitimin gelişimi ve geleceği üzerine bir değerlendirme [An evaluation of the development and future of distance education in Turkey]. *Eğitim Teknolojileri Dergisi*, 7(1), 24–32.
- UNESCO. (2024). *Digital learning and transformation of education: What you need to know*. UNESCO.
- Uşun, S. (2006). *Uzaktan eğitim: Temelleri, gelişimi ve uygulaması* [Distance education: Its foundations, development, and application]. Nobel Yayın Dağıtım.
- Yıldırım, A., & Şimşek, H. (2016). *Sosyal bilimlerde nitel araştırma yöntemleri* [Qualitative research methods in the social sciences] (10th ed.). Seçkin Yayıncılık.
- Wang, Y., Cao, Y., Gong, S., Wang, Z., Li, N., & Ai, L. (2022). Interaction and learning engagement in online learning: The mediating roles of online learning self-efficacy and academic emotions. *Learning and Individual Differences*, 94, 102128.