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The Relationship between University Students' Social Media-Specific Epistemological Beliefs and Technology Addiction

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Abstract

The current study explores the relationship between university students' social media-specific epistemological beliefs and technology addiction levels. This study was conducted using a correlational survey model with 350 university students at a state university in Turkey. SPSS-23 software was used to analyze the data. The findings highlighted that the relationship between university students' social media-specific epistemological beliefs and technology addictions is above average and high. The social media-specific epistemological beliefs of pre-service teachers differed significantly according to gender, department, grade, longest place of residence, and father's educational status. Technology addictions differed significantly according to gender, department, and longest place of residence before starting university. The study found a significant and positive relationship between university students' social media-specific epistemological beliefs and technology addictions. The simplicity and certainty of social media-based knowledge and the source of knowledge were significant predictors of technology addiction. The data of the study will contribute to the literature on social media-specific epistemological beliefs and technology addiction and will shed light on future studies. Instead of knowledge and comprehension activities, it is suggested to create learning environments in which individuals actively participate in practices with activities that will enable the evaluation of application analysis, synthesis, and cognitive skills.

Keywords: Technology addiction, social media addiction, epistemological beliefs, social media-specific epistemological beliefs.

Üniversite Öğrencilerinin Sosyal Medyaya Özgü Epistemolojik İnançları ile Teknoloji Bağımlılığı Arasındaki İlişki

Öz

Bu çalışma, üniversite öğrencilerinin sosyal medyaya özgü epistemolojik inançları ile teknoloji bağımlılık düzeyleri arasındaki ilişkiyi incelemektedir. Bu çalışma, Türkiye'de bir devlet üniversitesinde öğrenim gören 350 üniversite öğrencisi ile ilişkisel tarama modeli kullanılarak gerçekleştirilmiştir. Verilerin analizinde SPSS-23 yazılımı kullanıldı. Bulgular, üniversite öğrencilerinin sosyal medyaya özgü epistemolojik inançları ile teknoloji bağımlılıkları arasındaki ilişkinin ortalamanın üzerinde ve yüksek olduğunu vurgulamıştır. Öğretmen adaylarının sosyal medyaya özgü epistemolojik inançları cinsiyete, bölüme, sınıfa, uzun süre yaşanılan yere ve baba eğitim durumuna göre anlamlı farklılık göstermektedir. Teknoloji bağımlılıkları cinsiyete, bölüme ve uzun süre yaşanılan yere göre anlamlı farklılık göstermektedir. Çalışma, üniversite öğrencilerinin sosyal medyaya özgü epistemolojik inançları ile teknoloji bağımlılıkları arasında anlamlı ve pozitif bir ilişki bulmuştur. Sosyal medya temelli bilginin ve bilgi kaynağının basitliği ve kesinliği, teknoloji bağımlılığının anlamlı yordayıcılarıdır. Sonuç olarak çalışmanın verileri sosyal medyaya özgü epistemolojik inançlar ve teknoloji bağımlılığı ile ilgili literatüre katkı sağlayacak ve bundan sonraki çalışmalara ışık tutacaktır. Bilgi ve kavrama etkinlikleri yerine uygulama analiz, sentez ve bilişsel becerilerinin değerlendirilmesine olanak sağlayacak etkinliklerle bireylerin uygulamalara aktif olarak katıldıkları öğrenme ortamlarının oluşturulması önerilmektedir.

Anahtar kelimeler: Teknoloji bağımlılığı, sosyal medya bağımlılığı, epistemolojik inançlar, sosyal medyaya özgü epistemolojik inançlar.

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INTRODUCTION

The most striking feature in such a cyber age with the penetration of technology into every aspect of today's human life is the speed of digital transformation. While digital transformation is increasing with technological improvements everywhere, using technology in the business world, education, communication, healthcare, etc. is a necessity for countries. The need for using technology in many areas made access to technology very simple. This situation has brought about the fact that almost everyone has computers and the internet at home and in offices, and it has also made smartphones a part of human life. However, the improvements in technology and the indispensable use of technology have made technology addiction a problem (Akkaş, 2019; Demirci et al., 2014; Ektiricioğlu et al., 2020; Gerhart, 2017; Hamissi et al., 2013; Karadağ and Kılıç, 2019).

In general terms, one of the problems that arise with the increasing use of technology and which is a distinctive kind of non-substance addiction is technology addiction (Turel et al., 2011). According to Beard (2005), technology addiction is the destruction of the emotional and mental psychology of the person due to excessive use of technology. Griffiths (2005) and Turel et al. (2011) also define technology addiction as a dependence resulting from the use of technological devices at a level that produces typical behavioral addiction symptoms (e.g. (i) salience, (ii) conflict, (iii) withdrawal, (iv) relapse, (v) tolerance, and (vi) mood modification). While technology has various uses, there are also various types of addiction. In this case, one of the most common of these is social media addiction which is increasing in the 21st century (Esmaeili Rad and Ahmadi, 2018; Simsek et al., 2019). This equals 58.7 percent of the world's population and also there is a 10% increase observed compared to January 2021 (We Are Social, 2022). Social media, which allows individuals to be active and share from anywhere at any time, regardless of geography, language, religion, race, gender, or any economic or cultural discrimination, is one of the most common areas of technology (Çiftçi, 2018; Durmuş et al., 2018; Obee, 2012). Social media environments allow individuals to produce various content related to their areas of interest, supply the content of the media, be socially active, and transfer knowledge (Yıldız-Durak, 2019). Social media environments, which enable an individual or collective global communication and can be used in all areas of life, have thus become an indispensable part of our lives (Tutgun-Ünal and Deniz, 2020). Since people are freer to express themselves and make comments on social media, establishing two-way communication becomes easier in this way. In this context, while it is possible to see social media in almost every area of daily life in the cyber age, the purposes of individuals' use of social media may differ in many respects. Although these purposes differ, communicating with family and friends (Boyd and Ellison, 2007), having fun (Lin et al., 2013; Wang et al., 2014), and accessing information (Kim & Park, 2013), and educational uses (Yıldız-Durak & Saritepeci, 2019) come to the fore. One of the features that can be considered the biggest advantage and disadvantage of the widespread use of social media is the ease of access to information because social media environments offer users the opportunity to share all kinds of information. However, such a diversity of information enables us to have information about a subject quickly and it becomes difficult to reach the right information. In this context, the epistemological beliefs of human beings examine the source of knowledge are important in terms of evaluating information because of the suspicion of the reliability of knowledge and knowledge sources in social media environments (Atman-Uslu & Yıldız-Durak, 2022). Schommer (1994) defines epistemological beliefs as philosophical assumptions about the nature and acquisition of knowledge or the source, scope, and limits of knowledge. Today, the internet generally provides young people, especially university students, with many environments and new opportunities to access information, share information, and sources of information. Yengin (2019) indicated that there has emerged a social media-addicted generation who create a new identity for themselves on social media to meet with friends, those who do not have a social life except for their mobile phones. Since social media enables easy access to information today, the importance of social media-specific epistemological beliefs is increasing. Thus, it is of great importance to conduct studies on social media-specific epistemological beliefs.

Although there are many studies on epistemological beliefs when the relevant literature is investigated (Bråten et al., 2019; Chiu et al., 2013; Deng et al., 2014; Kılıç-Çakmak et al., 2015; Lee et al., 2012), a limited number of studies have been found examining social media-specific epistemological beliefs (Atman-Uslu & Yıldız-Durak, 2022; Celik, 2020; Celik et al., 2021; Geçgel et al., 2020). Different from the previous studies carried out to date, the analysis of social media-specific epistemological beliefs and technology addiction together reveals the difference in this study. Especially for university students to become more qualified individuals in society, it is significant to have social media-specific epistemological beliefs, which are the platforms where university students constantly reach information. Investigating the relationship between university students' epistemological beliefs and different variables to ensure effective teaching and learning is also crucial. In this context, this study explores the relationship between university students' technology addictions and social media-

specific epistemological beliefs. The dependence of individuals, especially university students, on technology and social media in particular increases as technology improves. Since individuals can easily have information about any subject while spending time on social media, social media use for educational purposes is increasing from day to day. The prevalence of this situation brings up the relationship between individuals' technology addictions and social media-specific epistemological beliefs. Considering that social media is most common among high school and university students (Allen et al., 2014; Sahin, 2018; Saputri and Yumarni, 2023; Simsek et al., 2019; Tkacová et al., 2022), determining the relationship between university students' technology addictions and social media-specific epistemological beliefs will contribute to the literature.

Epistemological beliefs, which determine the attitudes and behaviors of individuals in learning and are influential in determining the learning approaches of students, have the power to predict academic success. In particular, epistemological beliefs are decisive for organizing learning, setting standards, and criteria, and evaluating what has been learned. The belief that the accuracy of the information is questionable and to support it from different sources is increasing. Epistemological beliefs increase students' comprehension skills and contribute to using and transferring information with different features (Mason et al., 2008). It is possible to determine epistemological beliefs for practical applications such as choosing a learning model suitable for subjects and concepts that will touch different points in a part of human life, applying prior knowledge, supporting it with applications, and presenting it to students. When the educational level increases, the epistemological perspectives of individuals become stronger (Hofer & Pintrich, 1997). Hence, it is significant to highlight the social media-specific epistemological beliefs of university students and to examine the university students' relationship with technology addiction and social media-specific epistemological beliefs.

The Significance of the Study

There are many studies on epistemological beliefs (Bråten et al., 2019; Chiu et al., 2013; Deng et al., 2014; Karaoğlan-Yılmaz & Kılıç-Çakmak, 2016; Lee et al., 2012). When the epistemological beliefs were examined in terms of demographic information, remarkably different results were obtained in the studies. For example, Topkaya (2015) found significant differences in the epistemological beliefs of social studies and science and technology pre-service teachers according to the variables of gender, department, and grade. Significant differences were found in favor of women according to gender, but social studies teacher candidates were found in favor of first graders between first and fourth grades. However, Conley et al. (2004) also found no significant interactions in terms of epistemological beliefs between gender Contrary to this, there were significant differences in the epistemological beliefs of undergraduate students in terms of gender and department (Hakan & Münire, 2012). These inconsistent findings regarding the epistemological beliefs of university students in the literature also revealed the motivation to conduct a study based on demographic variables. However, a limited number of studies examining social media-specific epistemological beliefs were found (Atman-Uslu & Yıldız-Durak, 2022; Celik, 2020; Celik et al., 2021; Geçgel et al., 2020). Different from previous studies, examining social media-specific epistemological beliefs and technology addiction together reveals the difference in this study. For university students to become more qualified individuals in society, they need to have social media-specific epistemological beliefs, which are the platforms they constantly use even in lessons and constantly access information. It is also significant to explore the relationship between university students' epistemological beliefs and various variables (gender, department, grade, longest place of residence before starting university, and mother's & father's educational level) to ensure effective teaching and learning.

The Aim of the Study

This quantitative study aims to investigate the relationship between university students' technology addictions and social media-specific epistemological beliefs. In line with these purposes, the current study aims to answer the following research questions guiding the study:

Research Questions

1) What are the technology addiction levels and social media-specific epistemological beliefs of university students?

2) What are the mean scores of the university students' social media-specific epistemological beliefs scale sub-dimensions?

3) What are the mean scores of the university students' regarding the sub-dimensions of the technology addiction scale?

4) Do university students' technology addictions and social media-specific epistemological beliefs differ according to gender, department, grade, longest place of residence before starting university, and mother's & father's educational level?

5) Is there a relationship between university students' technology addictions and social media-specific epistemological beliefs?

METHOD

Research Design

This study which aims to analyze the relationship between university students' technology addictions and social media-specific epistemological beliefs employs a correlational survey model. The correlational survey model is used to examine whether two or more variables have a relationship in a current situation without the intervention of the researcher (Fraenkel & Wallen, 2012). In this model, the researcher does not affect the process except for the application of the tools necessary to collect the data.

The sample consists of Computer Engineering, Food Engineering, Civil Engineering, Economics, Business Administration, Molecular Biology and Genetics, Nursing, and Anesthesia departments at Çanakkale Onsekiz Mart University, which are randomly identified. Considering the difficulty of reaching all the university students in the universe, the sampling method was used. In this context, 350 university students were identified by a simple random sampling method. Incorrect and incomplete data were excluded from the analysis and the data of 327 university students were analyzed. Participants' demographics are given in Table 1.

Table 1. Participant Demographics

Gender	f	%
Female	207	63.30
Male	120	36.69
Grade	**f**	**%**
English Preparation Class	57	17.43
1st	98	29.96
2nd	68	20.79
3rd	56	18.04
4th	48	14.67
The Longest Place of Residence before Starting University	**f**	**%**
Village	32	9.78
District	119	36.39
City center	174	53.21
Department	**f**	**%**
Computer Engineering	38	11.62
Food Engineering	44	13.45
Civil Engineering	35	10.70
Economics	51	15.59
Business Administration	38	11.62
Molecular Biology and Genetics	43	13.14
Nursing	44	13.45
Anesthesia	32	9.78

When the sample of the study is examined, 207 (63.30%) university students are female and 120 (36.69%) are male. 57 of the students were in the English preparation class (17.43%), 98 in the 1st year (29.96%), 68 in the 2nd year (20.79%), 56 in the 3rd year (18.04%), and 48 in the 4th year (14.67%). 32 (9.78%) of the university students were living in the village before starting to university, 119 (36.39%) in the district, and 174 (53.21%) in the city center. 38 (11.62%) of the university students are studying in the departments of Computer Engineering,

44 (13.45%) in Food Engineering, 35 (10.70%) in Civil Engineering, 51 (15.59%) in Economics, 38 (11.62%) in Business Administration, 43 in Molecular Biology and Genetics (13.14%), 44 in Nursing (13.45%), and 32 in Anesthesia (9.78%).

Data Collection

The data of the current study were collected using a three-part questionnaire including a personal information form with 7 questions about the participants' demographics. The "Social Media-Specific Epistemological Beliefs Scale" by Çelik (2020) was used in the second part. This scale is thought to represent social media-specific epistemological beliefs and consists of a total of 15 items and 3 factors. The scale, which consists of five questions in all dimensions, is a 5-point Likert. The Cronbach alpha reliability coefficient value for the mean score of the scale was .793. Cronbach alpha of reliability of the sub-dimensions of the scale was .634 for simplicity and certainty of social media-based knowledge (SCK), .691 for the source of knowledge (SK), and .694 for justification for knowing (JK). .60 and above is considered acceptable reliability (Çokluk et al., 2021).

In the third part, the "Technology Addiction Scale" by Güçlü (2015) was used to determine the variables that affect the technology addiction of undergraduate students. The technology addiction scale also consists of 4 sub-dimensions including "deprivation", "difficulty in control", "breakdown in functioning" and "social exclusion". The scale consists of 10 questions in the first dimension, 9 questions in the second dimension, 5 questions in the third dimension, and 8 questions in the fourth dimension. The Cronbach alpha reliability coefficient was found as .954. The reliability was found as .833 for the deprivation, .882 for the difficulty in control, .883 for the breakdown in functioning, and .897 for the social exclusion.

Data Analysis

Incomplete and erroneous data were removed from 350 data collected from university students, and 327 data were analyzed. The analyzes of the collected data were completed using the SPSS-23 program. Skewness and kurtosis values which were analyzed to explore whether the data showed a normal distribution is reported in Table 2.

Table 2. The Skewness, Kurtosis and Standard Deviation Values

	N	Kurtosis	Skewness	Std. Deviation
Social Media-Specific Epistemological Beliefs	327	-.142	.070	.65
Technology Addiction	327	-.409	-.939	.81

The skewness and kurtosis values in Table 2 show that the values for the Social Media-Specific Epistemological Beliefs scale range from -0.142 to 0.070, while the values for the Technology Addiction scale range from -0.409 to -0.939 and are among the values that show normal distribution (Tabachnick & Fidell, 2013). The Correlation (Pearson) technique was used to identify the relationship between university students' technology addictions and social media-specific epistemological beliefs. The independent sample t-test was conducted to test whether university students' technology addictions and social media-specific epistemological beliefs changed according to gender. In this context, university students and technology addictions and social media-specific epistemological beliefs were taken according to their department, grade, longest place of residence before starting university, and mother's and father's education levels, which are thought to be effective. These variables were examined with the ANOVA test (Aslan, 2017; Bacanlı-Kurt, 2010; Ekinci and Tican, 2017; Eroğlu and Güven, 2006; Işıksal et al., 2007; McGee et al., 2000; Sapancı, 2012; Taşdemir and Boysak, 2017).

Research Ethics

Participants were informed about data collection and analysis before participating in this study. They then signed consent forms stating that they agreed to participate in the study. Also, the participants were informed that the collected data and the information of the participants are kept confidential and participation in the research is voluntary.

FINDINGS

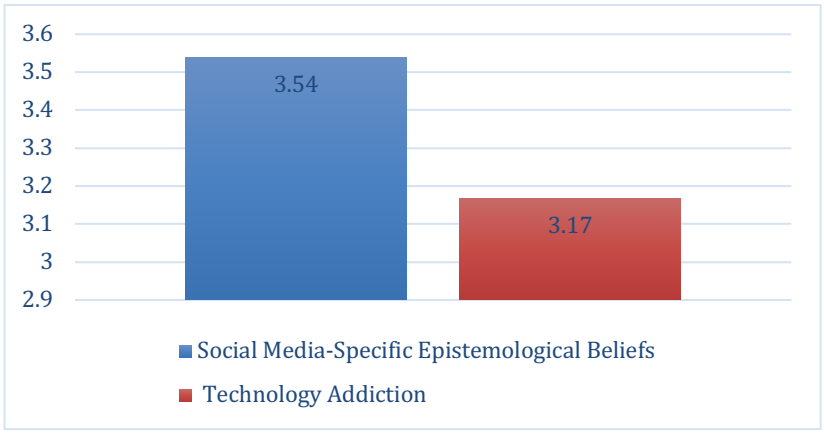

Figure 1. *Social Media-Specific Epistemological Beliefs and Technology Addiction Levels of University Students*

Technology addiction levels and social media-specific epistemological beliefs of university students are above average. The mean score of university students on the scale of social media-specific epistemological beliefs is ($\bar{X}$= 3.54) and the mean score on the technology addiction scale is ($\bar{X}$= 3.17).

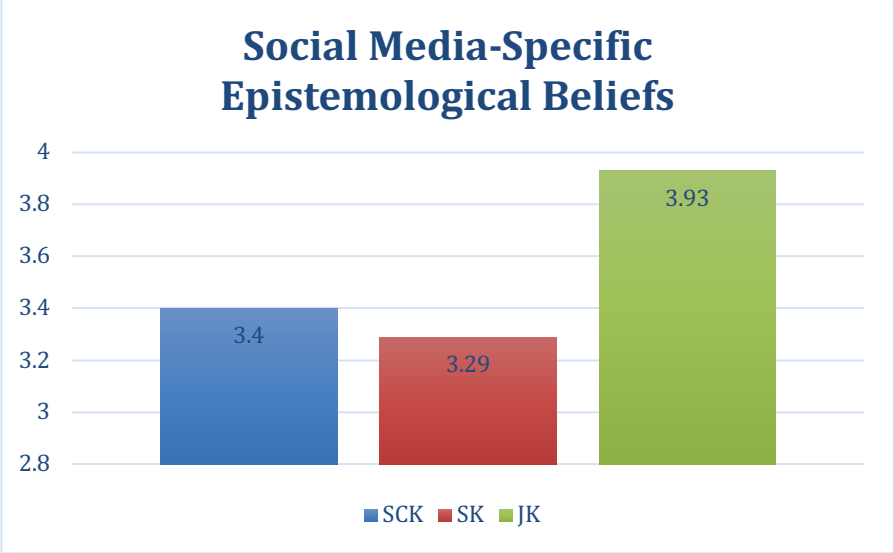

Figure 2. *University Students' Social Media-Specific Epistemological Beliefs*

The social media-specific epistemological beliefs of the university students were analyzed in three dimensions: "SCK, the SK, and JK". While university students had the highest average score in the dimension of JK ($\bar{X}$= 3.93) from the social media-specific epistemological beliefs scale, they had the lowest point average in the SK ($\bar{X}$= 3.29).

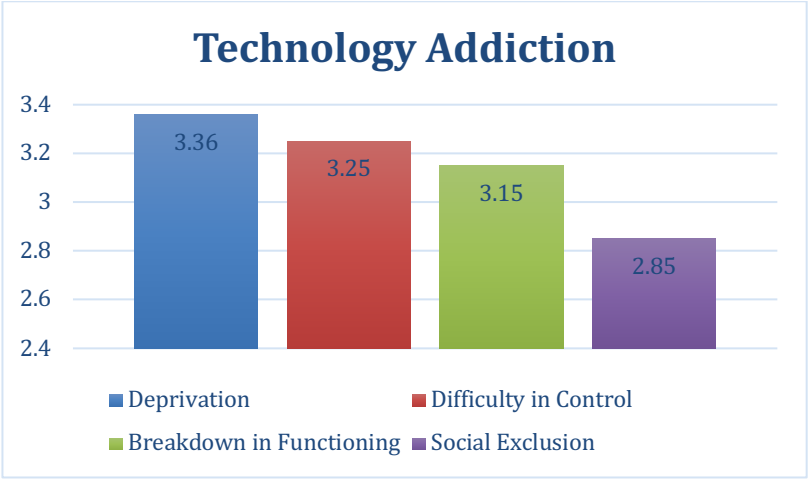

Figure 3. *Technology Addictions of University Students*

Technology addictions of university students participating in the research were analyzed by considering them as four dimensions: "deprivation, difficulty in control, breakdown in functioning, and social exclusion". University students had the highest mean score in the deprivation ($\bar{X}$= 3.36) dimension of the technology addiction scale, and the lowest score average in the social exclusion ($\bar{X}$= 2.85) dimension.

Table 3. T-test Results on Social Media-Specific Epistemological Beliefs and Technology Addictions of University Students by Gender

	Gender	N	$\bar{X}$	Std. Deviation	df	t	*p*
Social Media-SpecificEpistemological Beliefs	Female	207	3.63	.58	325	3.43	.001
	Male	120	3.38	.73	206,83	3.23	
Technology Addiction							
	Female	207	3.27	.85	325	2.44	.015
	Male	120	3.01	.97	223.45	2.35	

The t-Test results indicate a significant difference between the university students' social media-specific epistemological beliefs and their technology addiction scale scores according to gender ($p<.05$). Female university students' ($\bar{X}$= 2.82) scale mean scores of social media-specific epistemological beliefs are higher than male university students ($\bar{X}$= 2.56). Female university students ($\bar{X}$= 2.72) have higher technology addiction scale mean scores than male students ($\bar{X}$= 2.54).

Table 4. ANOVA Test Results on Social Media-Specific Epistemological Beliefs and Technology Addictions of University Students by Department

	Variance	Sum of squares	Mean of squares	df	F	*p*	Significance
Social Media-Specific Epistemological Beliefs	Between groups	21.65	3.09	7	14.52	.000	Economics
	Within groups	27.68	.213	130		.000	
	Total	49.33		137			
Technology Addiction	Between groups	28.90	4.12	7	6.20	.000	Economics

Within groups	86.48	.66	130	
Total	115.38		137	

Table 4 indicates a significant difference between university students' technology addictions and social media-specific epistemological beliefs according to the department ($p<.05$). The economics department students ($\bar{X}= 4.26$) have higher scale point averages of social media-specific epistemological beliefs and technology addictions ($\bar{X}= 3.88$) than other students. According to the results of the Tamhane test, social media-specific epistemological beliefs and technology addictions were high in favor of the university students of the Econometrics department.

Table 5. ANOVA Test Results on Social Media-Specific Epistemological Beliefs and Technology Addictions of University Students by Grade

	Variance	Sum of squares	Mean of squares	df	F	p	Significance
Social Media-Specific Epistemological Beliefs	Between groups	5.521	1.380	4	3.27	.012	1st grade / 4th grade
	Within groups	135.629	.421	322			
	Total	141.149		326			
Technology Addiction	Between groups	1.890	.473	4	.566	.687	---
	Within groups	268.753	.835	322			
	Total	270.644		326			

There is a significant difference in university students' social media-specific epistemological beliefs (p. >0.05), but no significant difference is found in technology addiction levels ($p>.05$). According to the results of the Scheffe test, the social media-specific epistemological beliefs were high in favor of fourth-grade students.

Table 6. ANOVA Test Results on Social Media-Specific Epistemological Beliefs and Technology Addictions by the Longest Place of Residence before Starting University

Variance	Sum of squares	Mean of squares	df	F	p	Significance

Social Media-Specific Epistemological Beliefs	Between groups	13.93	6.96	2	17.66	.000	City center/ village
	Within groups	127.04	.395	322			City center/ town
	Total	140.98		324			
Technology Addiction	Between groups	5.70	2.850	2	3.49	.031	City center
	Within groups	262.369	.815	322			
	Total	268.096		324			

Table 6 expresses a significant difference between the students' social media-specific epistemological beliefs and their scores in technology addiction according to longest place of residence before starting university ($p<.05$). According to the results of the Scheffe test, the social media-specific epistemological beliefs were high in favor of the students living in the city center for a long time. The technology addiction of university students is high in favor of students living in the city center before starting university.

Table 7. ANOVA Test Results on Social Media-Specific Epistemological Beliefs and Technology Addictions of University Students by the Mother's Educational Status

	Variance	Sum of squares	Mean of squares	df	F	p	Significance
Social Media-Specific Epistemological Beliefs	Between groups	.153	.051	3	.117	.950	---
	Within groups	140.99	.437	323			
	Total	141.14		326			
Technology Addiction	Between groups	5.557	1.852	3	2.257	.082	---

	Within groups	265.087	.821	323
	Total	270.644		326

In Table 7, the results of the One-Way Analysis of Variance (ANOVA) show no significant difference between the university students' social media-specific epistemological beliefs and the scores of the technology addictions according to the mother's educational level (p>.05).

Table 8. ANOVA Test Results on Social Media-Specific Epistemological Beliefs and Technology Addictions of University Students by the Father's Educational Status

	Variance	Sum of squares	Mean of squares	df	F	p	Significance
Social Media-Specific Epistemological Beliefs	Between groups	4.818	1.606	3	3.805	.011	Bachelor's degree/ secondary school
	Within groups	136.331	.422	323			
	Total	141.149		326			
Technology Addiction	Between groups	5.587	1.862	3	2.270	.080	---
	Within groups	265.056	.821	323			
	Total	270.644		326			

Table 8 shows a significant difference between the scale scores of university students regarding their social media-specific epistemological beliefs according to their father's educational level (p<.05). According to the results of the Games Howell test, the social media-specific epistemological beliefs were higher in favor of students with undergraduate fathers. According to the ANOVA results, there is a significant difference between the scale scores of university students regarding their technology addictions according to the father's educational status, a significant difference is not found (p>.05).

Table 9. Results of Correlation Analysis between University Students' Technology Addictions and Social Media-Specific Epistemological Beliefs

	Social media-specific epistemological beliefs	Technology addiction
Social media-specific epistemological beliefs	1	.654**
Technology addiction	.654**	1

According to Table 9, a linear correlation analysis was performed to determine whether there is a significant relationship between university students' technology addictions and social media-specific epistemological beliefs specific.

There is a significant and positive relationship between university students' technology addictions and social media-specific epistemological beliefs (r=.654, p<.01).

Table 10. Regression Analysis between the Sub-Dimensions of University Students' Social Media-Specific Epistemological Beliefs and Technology Addiction

Model	B	Standard Error	ß	t	p	Tolerance	VIF
Constant	.737	.227		3.243	.001		
SCK	.430	.064	.406	6.752	.000	.664	.353
SK	.355	.059	.357	6.019	.000	.655	.319
JK	-.049	.049	-.040	-.997	.320	.074	-.056
R= 0.708		R^2= 0.501					
(F(3-320) = 107.02)		p<0.01					

Table 10 shows how the simplicity and certainty of social media-based knowledge, SK, and JK predict technology addiction. SCK, SK, and JK show a significant relationship (R^2=.501, p<.00) with technology addiction (F (3-320) = 107.02, p<.01). These three variables together explain 50% of technology addiction. According to the technology addictions of university students and SCK, SK, and JK, the correlations are 0.66 with simplicity and certainty of social media-based knowledge, .65 with the source of the knowledge, and .07 for justification for knowing. When the correlation between the dimensions of students' technology addictions and social media-specific epistemological beliefs are examined separately, the correlation is .35 (p= .000) for SCK, .32 (p=.000) for the source of the knowledge and -.05 (p=.32) for JK. According to the standardized regression coefficients, the order of importance of the predictor variables on technology addictions is the simplicity and certainty of social media-based knowledge (β= .406), SK (β= .357), and JK (β= -.040). Considering the significance tests of the regression coefficients, SCK and SK are significant predictors of technology addiction. On the other hand, justification for knowing the sub-dimension has no significant effect on the technology addictions of university students.

DISCUSSION AND CONCLUSION

Social media-specific epistemological beliefs and technology addictions scale mean scores of university students were above the average and high. While the students had the highest mean score in the JK dimension from the social media-specific epistemological beliefs scale, they had the highest in the deprivation dimension in the technology addiction scale. Similar to these results, Yılmaz (2016) explored teachers' internet-specific epistemological beliefs in terms of various variables and teachers' internet-specific epistemological beliefs were at a moderate level. Tezci et al. (2016) investigated the influence of pre-sevice teacher's epistemological beliefs on teaching methods, and the results showed that epistemological beliefs based on effort and learning ability had a significant effect on constructivist teaching. In the study, there is a high level of a significant relationship between university students' technology addictions and social media-specific epistemological beliefs. In addition to the high-level relationship, a linear regression analysis was conducted. According to the results of the analysis, university students' social media-specific epistemological beliefs significantly predict students' technology addiction. Similar to this finding, Chiu et al. (2013) analyzed students' internet use purposes, as well as the relationships between internet-specific epistemological beliefs and related dimensions and self-regulated learning activities. According to the results, students' access to academic knowledge from the internet, readiness for self-regulated learning, and internet-based understanding of knowing were positively related to internet-specific epistemological beliefs. Also, internet-specific epistemological beliefs were negatively related to the simplicity of internet-based knowledge and the source of internet-based knowledge. In studies discussing the relationship between pre-service teachers' epistemological beliefs and academic achievement, epistemological beliefs differed

according to the department (Arslantaş, 2016; Chiu et al., 2016). Another study revealed a significant relationship between social media-specific epistemological beliefs and information-seeking strategies, and information literacy structure has a direct effect on information-seeking strategies (Atman-Uslu & Yıldız-Durak 2022). Kalaman et al. (2019) explored the internet-specific epistemological belief levels and internet usage patterns of secondary school students.

Chai et al. (2006) conducted a study to identify the epistemological perspectives of teachers in Singapore. Bråten et al. (2019) developed a scale to measure the epistemological beliefs about the justification of internet-based knowledge. Al-Menayes (2015), Hamissi et al. (2013), and Şimşek, et al. (2019) examined the relationship between technology addiction, and time spent in virtual environments, the emotional intelligence of university students. According to the findings of this study, 38.3% of the students had high technology addiction levels. Kırık et al. (2015) identified the social media addiction level of teenagers in Turkey and gave suggestions for the prevention of addiction by presenting the current studies on the subject in Turkey. The inverse relationship was found between the level of technology addiction and emotional intelligence. The importance of digital literacy education is emphasized in the study, which focuses on the importance of using technology correctly and efficiently. Altin & Kivrak (2018), Cao et al. (2020), Haand & Shuwang (2020), Köse & Doğan (2019), Liu & Ma (2020), Tutgun-Ünal & Deniz (2020), Zhao & Zhou (2021) highlighted that social media is effective in communication, well-being, and burnout level, and the results were revealed by comparing social media addiction levels according to various variables. Technology addiction is thought to be a determining factor because social media-specific epistemological beliefs have an impact on internet use and social media usage preferences.

When the social media-specific epistemological beliefs and technology addictions of university students regarding gender were examined in the current study, female students had higher scale scores. In the studies with similar results, gender was effective on technological addiction and women's technological addictions had a higher mean score, especially in the dimension of social media use (Balcı & Gulnar, 2009; Eryılmaz & Çukurluöz, 2018; Shaw & Black, 2008). Especially people's technology addictions are related to gender and time spent on the internet (Potas et al., 2022). Jamir et al. (2019) argued having a personal computer and mobile phone has a significant effect on the causes of technology addiction and stated that male students have higher technological addictions. Yorulmaz et al. (2017), on the other hand, highlighted that gender does not make a significant difference. Since women spend more time with social media and men use the internet more in the context of computer games, their epistemological beliefs in social media affect social media and internet use.

The social media-specific epistemological beliefs scale means scores of university students differ significantly according to their department. The epistemological beliefs of the students studying in the department of economics are higher; however, the 4th graders have higher scale mean scores than the other graders. Parallel to these results, Fail & Karasu-Avcı (2019), Kanadlı & Akbaş (2015), and Tumkaya (2012), revealed similar results. Depending on gender and grade, there is a significant difference between epistemological beliefs depending on effort and epistemological beliefs depending on ability. According to the longest place of residence before starting university, the social media-specific epistemological beliefs and technology addictions of the students living in the city center are higher. According to the mother's educational status, there is no significant difference between the social media-specific epistemological beliefs and technology addiction levels of university students. However, according to the father's educational status, the student's social media-specific epistemological beliefs are significant in favor of the students whose father's educational level is a bachelor's degree. Similarly, Paulsen & Wells (1998) explored that women have more sophisticated beliefs about the nature of learning, but men have more sophisticated beliefs about the nature of knowledge. Jheng et al. (1993) and Schommer (1990) also support the finding that epistemological beliefs increase as the level of education increases. The finding about the father's educational status may be related to the fact that men have more detailed beliefs about the nature of knowledge. Therefore, fathers can be the leading role models for children and child-rearing attitudes are effective on epistemological beliefs along with many gains that can be acquired within the family. In the study conducted by Özçelik-Demir (2021), the technology addiction of students whose parental education level increases, technology addiction is lower. On the other hand, Bulut & Yılmaz (2019) determined that the epistemological beliefs of the students studying at science high schools did not differ significantly according to the variable of parental education level.

Epistemological beliefs have different contextual characteristics, so it is crucial to support the literature and the data obtained as a result of the study with observations and interviews suitable for qualitative research to reach more comprehensive results. It can be useful to determine the models based on the epistemological understanding of societies with different cultural characteristics following our own cultural and social characteristics and to examine epistemological beliefs in this context. Belief and trust in the SK and authority have various

characteristics in different societies. Interdisciplinary studies can be carried out together to question the reasons that different epistemological beliefs can be found in different disciplines and the reasons behind them.

Limitations

The findings are limited to the students of Canakkale Onsekiz Mart University who participated in the study. The relationship between university students' social media-specific epistemological beliefs and technology addiction levels should be examined in detail through qualitative studies. Qualitative and quantitative studies can be carried out with various variables that are thought to affect epistemological belief. In addition, the study can also be carried out with students with different education levels.

Statements of Publication Ethics

We hereby declare that the study has no unethical issues and that research and publication ethics have been observed carefully. This research was conducted with the Ethics Committee approval of Canakkale Onsekiz Mart University Ethics Committee, dated 13/06/2022 with 12/32 decision no.

Researchers' Contribution Rate

Both authors contributed equally to the study.

Conflict of Interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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