

The Use of Digital Technology and its Relationship to Perceived Self-Efficacy Among University Students in the United Arab Emirates. From a Digital Sociology Perspective

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Abstract

The present study aimed to investigate the use of digital technology and its relationship with self-perceived competence among university students in the United Arab Emirates A digital sociology perspective. The study is a descriptive study and the sample consisted of 100 participants from the University of Sharjah, including 50 males and 50 females. The study used the Digital Technology Scale and the Self-Perceived Competence Scale. The results of the study revealed a positive correlation between the use of digital technology and self-perceived competence among university students in the UAE. Additionally, statistically significant differences were found between the average scores of males and females in the use of digital technology in favor of males. However, no statistically significant differences were found between the f males and females in self-perceived competence. The study recommended enhancing students' self-perceived competence as a factor contributing to their success in life.

Keywords: *Digital technology, perceived self-efficacy, university students, United Arab Emirates, digital sociology.*

Introduction

Most current university students have grown up in an era characterized by rapid technological advancement and can be described as "digital citizens." This generation of college students is accustomed to using smartphones, tablets, or laptops. They review educational materials and take notes using laptops or tablets instead of relying on traditional note-taking methods such as paper and pen.

They have become adept at using digital technology and its various applications. The use of this technology provides many benefits to university students, both inside and outside the lecture hall (Wang et al., 2022, 1).

In the modern era, digital technology undergoes significant development and exhibits great diversity in this rich field of knowledge, characterized by achievements, innovations, and creativity. This progress is reflected in the daily lives of individuals and societies, and perhaps the notable digital revolution, representing one aspect of the widespread use of digital technology in human life and societies, has resulted in the use of technological communication media and digital interaction. This includes the

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widespread use of media, the increased utilization of social networks on a broad scale, with variations in interactive links and communication (Nehal Al-Bayl, 2021, 2).

One of the main aspects of self-perceived competence is academic self-efficacy, which involves the belief in one's ability to organize and execute activities that contribute to academic success. This dimension represents a variable closely associated with student success. Academic self-efficacy is a key factor directly influencing academic performance in various subjects. It is evident that individuals with a high level of academic self-efficacy seamlessly integrate into learning environments effectively. Conversely, a decrease in the level of self-efficacy can lead to a decline in academic achievement (Dale W., 2002).

Based on the above, it can be affirmed that this is the era of digital technology. There is a necessity to adapt this technology to enhance the self-perceived competence among university students and prepare them for future life.

First: Study Problem

The university stage is considered a vital and pivotal period in an individual's life, holding great importance on both personal and professional levels. It contributes to the development of skills and knowledge, aiding in expanding one's perspectives and understanding of the world. It plays a role in building character, contributing to personal development and psychological growth. The university stage provides opportunities for challenges and interaction with a diverse community, contributing to the formation of leadership and social qualities.

Moreover, the university phase paves the way for achieving professional goals, and the university itself can be an ideal environment for building a robust network of social and professional relationships. It offers individuals the chance to excel in their preferred fields and develop skills to become distinguished members in their communities and workplaces. Therefore, the university stage is a significant focus of study due to its importance in shaping an individual's future.

The rapid transformations in the field of digital technology raise questions about how these technologies impact the self-perceived competence of university students. The increasing reliance on smart devices and digital applications in educational processes is evident, but understanding how this interaction affects the improvement of students' self-perceived competence remains somewhat unclear.

The findings of previous studies have been somewhat contradictory. Some studies have identified positive aspects of digital technology, such as the study conducted by (Prifti, 2022, Al Rawashdeh, A.Z., & Al Arab, A.R., 2021), which concluded that technological advancements have a significant impact on the field of education. However, other studies have revealed negative aspects of technological development and the world of technology. For instance, Chris Yellis' study (2016) aimed to explore the dark side of technology, identifying three main dimensions: security risks on the internet, the impact of digital applications on attention distraction and time wastage, the negative effects of distraction resulting from the excessive use of digital applications and information-seeking. Additionally, (Annansigh, 2016, 147), (Al Rawashdeh, A.Z., & Al Arab, A.R., 2023) aimed to investigate teenagers' interaction in the online space, their use of web technologies, and the perceptions of parents and teachers regarding internet risks and electronic safety measures. The results indicated a crucial need for parents' education on safe internet practices.

Based on the previous presentation, the study's problem becomes evident in the contradicting results of previous studies regarding the impact of digital technology on social and psychological variables related to university students. Hence, this study emerged as an attempt to uncover the nature of this relationship because self-perceived

competence can determine an individual's success academically, professionally, socially, emotionally, and athletically.

Based on the previous points the study problem, can be formulated in the following main question:

What is the relationship between the use of digital technology and self-perceived competence among university students in the United Arab Emirates?

There are also two sub-questions derived from this main question:

1. Are there any differences between males and females in the scale of digital technology usage in favor of males?
2. Are there statistically differences between males and females on the scale of self-perceived competence between genders?

Literature has revealed that digital technology has an impact on individuals' lives, and there are factors influencing self-perceived competence among university students, as outlined below:

1. The study conducted by Khrasat et al. (2022) aimed to examine the impact of a practical education program on enhancing self-perceived competence among 50 university students and improving their personal skills. The study adopted a semi-experimental approach, and the results demonstrated a statistically significant effect of the practical education program in increasing the self-perceived competence of the participants. Additionally, the findings indicated a statistically significant impact of the practical education program on improving the personal skills of the respondents.
2. A study by Creely & Southcott (2020) affirmed the correlation between a sense of self-competence and productivity, creativity, excellence, and the presence of meaning in life. The study employed strategies such as examining experiences of high achievers, modeling, social influence, and positive learning environments as primary sources for enhancing self-competence among participants.
3. Among the studies confirming that the use of technology by older adults can contribute to reducing social isolation is the research conducted by Sen et al. (2022). This study analyzed 25 previous studies to identify indicators of life quality associated with technology use and well-being. The results confirmed that technological devices are used to meet cognitive, visual, and auditory needs, enhancing self-competence through digital use among older adults.
4. The study by Bakioğlu (2020) aimed to explore whether loneliness serves as a mediator between internet addiction and social self-efficacy among university students. The sample included 325 university students (57.8% females; 42.2% males). Data for the study were collected using the "Internet Addiction Test - Short Form" by Young, the "Social Self-Efficacy Scale and Social Outcome Expectations," and the "Loneliness Scale." The results indicated that internet addiction had an indirect effect on social self-efficacy through its impact on loneliness.
5. The study by Agbaria and Bdier (2022) aimed to uncover the prevalence of internet addiction and its associated factors among teenagers. The participants included 451 students, and this study adopted a cross-sectional design and a structured questionnaire comprising demographic characteristics, the Young Internet Addiction Test, the Center for Epidemiological Studies Depression Scale, the General Self-Efficacy Scale, and the Rosenberg Self-Esteem Scale. The results indicated that male participants addiction is due to, high financial budgets, a poor family atmosphere, parents who did not set internet usage limits, high levels of depression, low self-efficacy, and low self-esteem.
6. The study by Berte et al. (2021) aimed to explore the relationship between levels of addictive internet use (specifically social media) and perceived self-competence among

university students. The sample consisted of 505 university students, and the results revealed a strong negative correlation between excessive internet use and perceived self-competence. The study confirmed that low self-competence leads to depression and suicidal ideation, and therefore recommended further research on perceived self-competence.

7. The study by Rawashdeh, A.Z.A et al (2021) The architecture of a learning system implies a heavy task for e-learning to be integrated into a complicated system that is flexible, time scalable, and capable of lasting, even though there are many diverse tools. Currently, higher education in United Arab Emirates is experiencing a major transformation, considering increased accessibility. Therefore, the study aims to identify the advantages and disadvantages of e-learning in university education in United Arab Emirates. A descriptive study design was used to randomly select students from Ajman university, who were enrolled in 2018/2019 academic year. A close-ended structured questionnaire was constructed to collect data from students. Frequencies and percentages were used to analyse the data collected. 81% students stated that e-learning provides scientific material in an interesting way. Similarly, 80% students have responded that e-learning increases the possibility of contact between students among themselves and between the students and the teacher. 73% students indicated that due to increasing social isolation, they spend more time in front of the technical means of social interaction account and face-to-face with others. 70% students have indicated that there is a presence of electronic illiteracy among parents, which reduces their ability to follow their children electronically. It is essential for potential e-learners to understand the differences between an e-learning classroom setting and a conventional classroom setting as there are both advantages and disadvantages of e-learning to both environments that can probably influence their overall performance as a student.

8. The study by Ju et al. (2019) aimed to investigate the impact of stress, self-efficacy, and self-control among university students on smartphone addiction. The study involved 440 university students, and the results indicated that the most influential variables on smartphone addiction were self-control, followed by stress. Self-efficacy had a positive impact on self-control, while stress had a negative impact. Both variables had an indirect effect on smartphone addiction through self-control.

9. The study by Li et al. (2020) attempted to reveal the relationship between smartphone addiction, academic procrastination, and the influence of academic self-efficacy on this relationship. The opinions of 483 university students were surveyed using the Smartphone Addiction Scale - Short Version, the College Academic Self-Efficacy Scale, and the Tuckman Academic Procrastination Scale. Correlation analysis showed a positive association between smartphone addiction and academic procrastination, while it was negatively associated with academic self-efficacy. Simultaneously, there was a negative relationship between academic self-efficacy and academic procrastination. Smartphone addiction had a direct predictive effect on students' academic procrastination and an indirect predictive effect through academic self-efficacy. Academic self-efficacy was identified as a partial mediator and played a buffering role between smartphone addiction and academic procrastination.

Based on the preceding presentation, the present study concluded the following:

- 1 .There is a lack of consensus among the results of previous studies regarding the use of digital technology and its various effects on university students. It is noteworthy that none of the previous studies directly addressed the current research topic.
- 2 .Some previous studies emphasize the positive impact of digital technology, aligning with the findings of the current study.
- 3 .The current study differs from previous research that highlights certain negative aspects of technology.

- 4 .Some studies recommended completing the research framework in this field.
- 5 .The perceived self-competence varied in emphasis from one study to another.
6. The present study benefited from previous studies in identifying research tools and selecting the research methodology.

Second: Study Objectives:

The current study aims to achieve the following main objective:

exploring the use of digital technology and its relationship with self-perceived competency among university students in the United Arab Emirates.

There are some sub objectives:

- 1 .Investigating the prevalence of digital technology use among university students in the UAE.
- 2 .Determining the average use of digital devices and technological applications in learning and academic review processes.
- 3 .To analyze the impact of digital technology on the level of self-perceived competency among students.
- 4 .To measure the influence of reliance on digital technology in enhancing students' academic skills.
- 5 .To identify the relationship between the quality of technology use and the level of self-perceived competency.
- 6 .To uncover the relationship between students' patterns of digital technology use and the development of social competency skills.
8. To provide recommendations for improving the use of technology to enhance self-perceived competency among students.

Thirdly, Study Hypotheses:

The main Hypothesis "There is a positive correlational relationship between the use of digital technology and self-perceived competency among university students in the United Arab Emirates."

The sub-hypotheses in the study are defined as follows:

- 1 .There are statistically significant differences in the mean scores between males and females on the scale of digital technology use in favor of males.
2. There are no statistically significant differences in the mean scores between males and females on the scale of self-perceived competency between genders.

Fourthly, Study Concepts

1- Digital Technology

Digital technologies are defined as electronic tools, systems, devices, and resources that generate and store data within the context of education and learning. It also includes educational materials that utilize technology in various curriculum areas, with examples such as online games, multimedia, cloud computing, 3D printing, and mobile computing (Kumi-Yeboah, et al., 2020, p 43).

The procedural concept of digital technology:

Digital technology is a set of technical tools and systems that rely on computation and electronics to process and transmit information efficiently. These technologies include smart devices, software, electronic networks, web applications, information management systems, and multimedia. They aim to enhance communication and information

exchange, facilitate daily operations, and enable interaction among students at the University of Sharjah.

2 -Self-Perceived efficacy

Self- efficacy is a multifaceted phenomenon that refers to the perceived ability to successfully complete a task, and self-perceived efficacy is considered a fundamental element explaining human behavior. It has a significant impact on important variables in four categories of cognitive, emotional, and motivational processes. Therefore, it affects problem-solving, decision-making, perseverance, effort resistance, coping with pressure, anxiety, goal achievement, and performance positively through beliefs related to individual efficacy (Santi, E. et al., 2023, p. 687).

The procedural concept of self-perceived efficacy:

Self-perceived efficacy refers to the ability of university students in the United Arab Emirates to understand and assess their skills and capabilities in a conscious and clear manner. This awareness enables them to achieve their goals and meet their personal and social needs. Self-perceived efficacy is considered fundamental to achieving personal, social, and emotional success, as it empowers individuals for personal growth and sustainable development in various aspects of their lives.

Theoretical Framework

Firstly: Perceived Self-Efficacy:

Perceived self-efficacy is one of the crucial variables that explain university students' behavior in engagement, perseverance in university activities, and facing academic challenges. Perceived self-efficacy involves a high level of confidence in personal competencies and the ability to successfully complete a specific task or achieve a specific goal. It serves as a motivator for psychological resources (cognitive, emotional, motivational, volitional) and contributes to students' success. In the context of higher education, the development of self-efficacy can be a means to enhance academic achievement; however, the development of perceived self-efficacy can also be a goal in itself (Santi, E. et al., 2023, p. 687).

The term "perceived self-efficacy" is a fundamental element in the Social Cognitive Theory. This theory suggests that an individual's ability to control their behavior and the way they practice their skills is influenced by their personal beliefs about themselves. The theory posits that humans have a system composed of several imagined beliefs about themselves, enabling individuals to control their feelings and attitudes towards learning. In other words, the individual's thought processes, beliefs, and feelings influence their learning approach. For instance, a learner seeks to explain their achievements based on their perceived abilities, motivating them to exert maximum effort to achieve success (Khrasat et al., 2023, p. 391).

Perceived self-efficacy is manifested in students' ability to make evaluative judgments about their cognitive, emotional, and practical competencies that contribute to their performance in certain tasks (Blândul & Bradea, 2022, p. 290). Perceived self-efficacy is defined as the beliefs and perceptions of an individual about their specific abilities. It also indicates an individual's ability to perform tasks (Imer-Çetin & Timur, 2021, p. 238).

Self-efficacy is considered an individual's assessment of their ability to perform a task or achieve a desired goal (Semilarski et al., 2021, p. 2). It is the belief we hold in our personal capabilities, particularly in facing anticipated challenges and successfully completing tasks. General self-efficacy refers to our overall belief in our ability to achieve success. However, there are various forms of self-efficacy, such as academic and sports self-efficacy (Ackerman, 2023, para 1).

The social cognitive development theory by Bandura advances the human development and adaptation perspective from an active standpoint. Bandura's concept of self-efficacy has been referenced in various educational contexts as it reflects students' beliefs about their self-competence and its relationship to performance (Warren et al., 2021, 103).

Bandura identifies four sources of self-efficacy: previous experiences (successful achievement in a similar activity, especially if determination is required to accomplish it); vicarious experiences (seeing peers successfully complete an activity); verbal persuasion (confirmation from others that the individual can succeed); and emotional states (how the individual interprets and reacts to feelings of tension) (Warren et al., 2021, 103).

Self-efficacy is an individual's belief in their ability to organize and execute actions required to achieve the desired outcome. Bandura affirmed that self-efficacy is linked to academic competence. Academic competence refers to an individual's conviction that they can successfully perform a specific academic task at the required level (Suprayogi et al., 2019, 1).

At its core, Bandura's self-efficacy theory revolves around a key idea that "individuals' belief in their ability to achieve desired outcomes is manifested through their individual behaviors." These beliefs are a critical factor that determines the behaviors individuals choose to engage in, reflecting their willingness to exert effort to overcome obstacles and challenges. The theory suggests that these beliefs also play a prominent role in psychological adaptation and have effects on psychological issues, physical health, as well as guiding self-directed professional behavioral change strategies. (Maddux, & Kleiman, 2021)

The formation of students' perceived self-efficacy is linked to self-assessment in the university environment and the students' ability to make value-based decisions about their academic performance. The development of such skills is strongly influenced by various internal and external psychological and educational factors, including chronological age, learning motivation, cognitive development level, teaching style of the instructor, the student's family social situation, and group membership (Blândul & Bradea, 2022).

The concept of perceived self-efficacy is considered a fundamental concept that influences students' motivation and academic excellence. Beliefs and thoughts about an individual's ability to perform required tasks shape this concept, consequently impacting the level of psychological satisfaction and the individual's ability to cope with life pressures. Conversely, a low level of perceived self-efficacy exposes students to daily pressures and negatively affects their psychological and social harmony, resulting in decreased psychological well-being. Psychological well-being plays a crucial role in an individual's satisfaction with their life and relationships. Academic success is considered one of the factors contributing to raising students' well-being levels, achieved through outstanding academic performance facilitated by a high level of self-efficacy (Blândul & Bradea, 2022).

Several dimensions of perceived self-efficacy can be distinguished, as follows:

1 -Social Dimension:

Refers to the ability to engage in meaningful interactions with others. It is a crucial skill that can be positively shaped through interactions. This dimension involves an individual's awareness of possessing the necessary skills to participate in social activities and interact within the community, as well as the ability to integrate effectively into groups. This awareness is manifested in the person's confidence in their behavior and is also evident in their ability to establish strong friendships and feel social acceptance (Junge, et.al., 2020, 1).

It involves the ability to demonstrate social and emotional behavioral skills, which are crucial during adolescence, with wide-ranging effects extending across various life

stages. However, the development of social competence is significantly influenced by social disparities (Lateef, 2023, 325).

Physical appearance efficacy means an individual's perception that they have a unique appearance and body shape, where they feel comfort and satisfaction with themselves, enjoying happiness while accepting their body as it is, without any feelings of embarrassment or shame when appearing in front of others (Holm-Denoma, & Hankin, 2010, p. 537).

Perceived self-efficacy has essential components, including:

1- Cognitive Processes:

Cognitive processes are an integral part of perceived self-efficacy. Understanding cognitive processes contributes to shaping and developing a person's self-awareness of their skills and abilities. This contributes to accurately conceptualizing and committing to goals, predicting events, developing effective control strategies, and requires effective cognitive processing of information that is ambiguous and uncertain. Learning these skills requires leveraging previous knowledge to build choices and weighing predictive factors, integrating them (Hussein Awad Mohamed, 2023, 208).

Cognitive processes include General Academic efficacy: the perception that one has intelligence and cognitive skills enabling them to achieve good and effective academic performance, both inside and outside the classroom (Sannicandro & D'Elia, 2022, 349).

2- Motivational Processes:

Motivational processes strengthen and stimulate human motivation toward learning. Individuals proactively direct their actions through reflection, forming beliefs about what they can do and anticipating the possible outcomes of anticipated actions. Cognitive motivators include causal attributions, outcome expectations, and recognized goals (Hussein Awad Mohamed, 2023, p. 208).

Emotional Attraction Competence encompasses a person's perception of their fame and attractiveness, as well as their sense of humor and self-control, making those who admire them reciprocate the same admiration (Sannicandro & D'Elia, 2022, 349).

3- Decision-Making Processes:

Individual beliefs in personal efficacy influence shaping the life path through activities and environments they choose for themselves. Some activities and situations are avoided if they are believed to exceed their adaptation capabilities. The choice of a specific job reflects the impact of personal beliefs on influencing the individual's path and life. Higher perceived self-efficacy widens career choices considered seriously, increasing interest and determination to succeed in qualifying for them (Hussein Awad Mohamed, 2023, 209).

The physical activities a person chooses for themselves reflect their ability to perform physical activities with distinguished skill, creating a sense of pride and pride, making them feel like an athlete, while avoiding feelings of burnout (Sannicandro & D'Elia, 2022, 349).

Secondly, Digital Technology:

Various digital techniques are utilized in online teaching on a daily basis, employing diverse digital technologies, including computers, iPads, smartphones, etc. A study conducted by Chao, Robles, and Dörnyei (2010) found that multimedia tools such as audio, video, and documents with embedded hyperlinks in PowerPoint slides provide educational materials that engage students' attention and encourage their thinking processes (Kumi-Yeboah, et.al., 2020, p. 44).

Digital technology refers to technologies covering the internet, systems, software, applications, and tools, such as laptops, tablets, and mobile phones. It encompasses tools,

systems, devices, and digital resources that generate, store, or process data, including social media, online games, multimedia, and mobile phones (IGI-Global, 2022).

Advantages of using digital technology in higher education (Ngo & Eichelberger, 2021, 421):

- 1) Enhancing interest and motivation for learning.
- 2) Achieving individualized learning.
- 3) Activating learning through the use of engaging forms and rapid changes in presenting information.
- 4) Shaping abilities and skills to support creative activities.
- 5) Promoting information literacy
- 6) Acquiring decision-making skills in complex situations.
- 7) Facilitating students' access to databases for quick information retrieval.
- 8) Intensifying students' self-directed work.
- 9) Increasing the volume of completed tasks.
- 10) Enhancing motivation and cognitive activity due to the diversity of exercises, including gamification.
- 11) Enhancing the flow of information.
- 12) Providing new opportunities for students to participate more effectively in the learning process.
- 13) Creating a more interactive experience .
- 14) Providing unlimited resources.
- 15) Assisting in building skills necessary for the future.
- 16) Updating information instantly.
- 17) Not requiring a large physical space.

However, there are some drawbacks to digital technology, particularly regarding the disadvantages of information technology in education. Galle (2023) indicates that:

- 1) It may disconnect students from personal relationships and face-to-face communication.
- 2) It may make cheating easier.
- 3) It may cause inequality among students.
- 4) It may lead students to use unreliable sources for learning.
- 5) It may make curriculum planning more challenging or costly.
- 6) It may replace the role of the teacher.
- 7) It may create privacy issues.
- 8) It may cause health problems.
- 9) It may make children lose the concept of time.
- 10) It is often limited.
- 11) It may foster dependency (Galle, 2023).

Fifth: Methodological Procedures of the Study:

1- Study Type:

This study is considered a descriptive study that investigates the relationship between the use of digital technology (independent variable) and its impact on self-perceived competence (dependent variable) among a sample of university students in the United Arab Emirates.

2.-Study Design:

This study employed a descriptive approach based on relationship studies, which is a research approach that focuses on describing phenomena and relationships between variables in a detailed and comprehensive manner, providing explanations.

3 -Study tools:

The present study utilized some instruments, including a self-perceived efficacy scale developed by the researcher and a digital technology usage competence scale, also developed by the researcher.

A. Self-Perceived efficacy Scale:

1 .The present study reviewed several previous scales in the field of self-perceived efficacy, such as:

- Riggs Scale(1991)
- Shujja et al.'s (2015) scale for social competence, including internal dimensions such as leadership, social adaptation, self-confidence, social initiative, and social interaction.
- The General Self-Efficacy Scale, one of the most famous measures of self-perceived competence, developed by Schwarzer and Jerusalem in 1995, referenced in hundreds of articles. (Ackerman, 2023, para,2).
- Another notable scale for self-perceived competence by Chen, Julie, and Eden in 2001, providing an enhanced measure compared to the original General Self-Efficacy Scale developed by Sherer and colleagues in 1982. (Ackerman, 2023, para,4).
- A scale focusing on social competence dimensions, including social encoding, problem-solving ability in social situations, emotional and affective control, communication, and empathy (Junge et al., 2020).
- El-Deghaidy's scale (2006), which addressed the self-perceived competence of science teachers.

2 .The present study then identified four main dimensions:

- First Dimension: Social Dimension
- Second Dimension: Cognitive Dimension
- Third Dimension: Academic Dimension
- Fourth Dimension: Emotional Dimension

3. Phrases expressing each dimension were determined, with seven phrases under each dimension, resulting in a total of 28 phrases.

4 .Scale Validity and Reliability:

A) Scale Validity: The present study utilized face validity, presenting the scale to 13 social education professors in Arab universities. The statements that received agreement rates exceeding 85% were retained.

B) Scale Reliability: The scale was administered to 50 university students.

- Cronbach's Alpha Reliability Coefficient:

The reliability of the scale was calculated using the Cronbach's alpha coefficient. The reliability was computed from the same individuals' scores in the validity and reliability sample during the first application. The computed reliability coefficient using the Cronbach's alpha method was 0.9, indicating a high level of reliability.

Split Half Method:

This method involves administering the test once and then calculating the correlation coefficient between individuals' responses on the two halves of the scale. The validity and reliability sample scores were used to calculate the scale's reliability using the split-half method. The scores for the first half and the second half were computed, and the correlation coefficient between the halves was calculated. The length was then adjusted using the Spearman-Brown Coefficient formula. The reliability coefficients before adjustment were 0.7, and after adjustment, they were 0.85, indicating that the scale has a very high level of reliability.

Table(1)

Reliability Coefficients of the Perceived Self-Efficacy Scale Using the Split-Half Method

		Reliability Coefficient	
12	First part of scale	(0.85)	
	second part of scale	(0.75)	
	The whole scale	(0.85)	

Test- Retest method

The reliability of the scale was calculated using the test-retest method by applying it initially and then retesting after a two-week period. Table (2) illustrates the test-retest reliability coefficient.

Table (2)

Test-retest reliability coefficient.

	The dimensions of the scale	reliability coefficient.	Significance
1	Social Dimension	(0.85)	Significant
2	Cognitive Dimension	(0.75)	Significant
3	Emotional Dimension	(0.85)	Significant
4	Academic Dimension	(0.85)	Significant

5- The scale consists of (28) statements, with (3) points assigned for "always," (2) points for "sometimes," and (1) point for "rarely" in responses.

B- Digital Technology Usage Scale:

1 -Several scales and previous studies related were reviewed to the use of digital technology.

2 -The present study then identified (3) main dimensions, namely:

- The first dimension: Digital Technology Culture
- The second dimension: Internet Resources Usage Proficiency
- The third dimension: Digital Technology Integration

3- Phrases expressing each dimension were determined, with (10) phrases under each dimension, totaling (30) phrases.

4 -Scale Validity and Reliability:

A) Scale Validity: The present study relied on face validity, where the scale was presented to (13) social education professors in Arab universities, and only the statements with agreement rates exceeding (85%) were retained.

B) Scale Reliability: The scale was administered to (50) university students, and the reliability coefficient was calculated.

Table (3) illustrates the reliability coefficient using the test-retest method.

	The dimensions of the scale	reliability coefficient.	Significance
1	Digital Technology Culture	(0.87)	Significant
2	Competence in Using Internet Resources	(0.85)	Significant
3	Digital Technology Deployment	(0.82)	Significant

5 -The scale consisted of (30) statements, with (3) points assigned for "Always," (2) points for "Sometimes," and (1) point for "Rarely" responses.

4 -Study Fields:

1 -Place: The study was conducted at the College of Arts and Humanities - University of Sharjah, United Arab Emirates.

2- Participants: The reliability and validity sample consisted of (50) students who were administered the study's scale to ensure its stability. They were excluded from the final analysis. The original study sample comprised (100) university students, evenly split between males and females.

3- Application time: The study procedures commenced in February 2023, with the scale applied as an initial assessment. Re-tests were conducted two weeks later to calculate the scale's stability. The actual application of the study tools took place in April 2023.

Seventh: Study Results:

Within the framework of verifying the relationship between the use of digital technology and perceived self-efficacy, the current study's results will be presented, derived from the field study and the statistical analysis of these results. They will be discussed and interpreted in light of the theoretical framework and the studies and research conducted in this field.

First: Testing the main hypothesis and interpreting its results:

The main hypothesis states that "there is a positive correlation between the use of digital technology and perceived self-efficacy among university students in the United Arab Emirates." To test the validity of the results of this hypothesis, the Pearson correlation coefficient was calculated. Table (4) illustrates the results.

Table(4)

Correlation coefficients between the use of digital technology and perceived self-efficacy

R	Significance
** 361.0	Significant at 0.01

R =**,361 ; n = 100 ; p < 0.01 ; Significant .

From the above table, it is evident that the correlation coefficients between the use of digital technology and perceived self-efficacy are significant at the 0.01 level. This indicates a positive correlation between the use of digital technology and perceived self-efficacy among university students in the United Arab Emirates.

This result suggests that digital technology can support perceived self-efficacy as it provides numerous possibilities to enhance self-efficacy. It facilitates access to information, allowing individuals to use the internet and applications to search for information that enhances their understanding of various topics. Additionally, there are available digital applications and tools that assist individuals in organizing and managing their time and daily tasks, contributing to personal efficiency.

Digital technologies, such as digital calendars and task management applications, can be used to enhance personal efficiency. Online learning provides educational resources that make it easy for individuals to develop skills and increase their knowledge in a self-directed manner. The use of technology can contribute to tracking individual performance in different areas, such as physical fitness or professional advancement. This can help individuals understand their strengths and weaknesses and work on improving them.

Social media and digital communication tools facilitate communication and interaction with others, enabling individuals to build strong relationships and receive support from the community. There are applications and resources that work to enhance personal development, whether by providing advice and guidance or offering opportunities to interact with professionals and experts in specific fields.

Therefore, the current study confirms that digital technology plays a crucial role in supporting perceived self-efficacy by providing tools and resources that help individuals develop themselves and enhance their understanding of skills and abilities.

The results of this study align with the findings of a study by Khrasat et al. (2022), Semilarski et al. (2021), Creely & Southcott (2020), and Sen et al. (2022), Rawashdeh, A.Z.A. et al(2021).

Secondly: Testing the Validity of the First Sub-Hypothesis and Interpreting its Results:

This sub-hypothesis suggests "There are statistically significant differences between the average scores of males and females on the digital technology usage scale in favor of males." To verify the validity of the sub-hypothesis, the (t) value was calculated between the average scores of the male and female samples on the digital technology usage scale, as illustrated in Table 5.

Table 5

(t) Value for Significance of Differences between the Average Scores of Male and Female Participants in the Study Sample on the Digital Technology Usage Scale.

Male		Females		T	Significance
N= 50		N= 50			
Main	SD	Main	Significance	779.3	Significant at 0.05
097.73	97708.20	092.66	63895.23		

The validity of this hypothesis is evident through the results presented in Table (4), where statistically significant differences were found between genders at a significance level of (0.05) in terms of digital technology usage. It is also clear that the average scores for males are significantly higher than those for females in digital technology usage. A plausible explanation for these results could be related to the nature of males, who tend to have an affinity for the world of technology and a desire to explore everything new. There is a variation in individuals' interests in technology, with males possibly being more inclined towards this field compared to females.

Possible interpretations also consider career guidance, leading to different choices in technology usage. If males feel encouraged to choose information technology or engineering fields, they may excel in these areas. Cultural orientations may play a role in encouraging males more than females to pursue technological paths. In some cases, there might be challenges in accessing technology adequately, with males having more opportunities or means to access technical devices and software. The results of this study align with the findings of a study Al Rawashdeh, A.Z et al(2023)

The validity of the second sub-hypothesis was tested, which states that "There are no statistically significant differences between the mean scores of males and females on the perceived self-efficacy scale." To verify this hypothesis, the t-value was calculated between the average scores of the male and female samples on the perceived self-efficacy scale, as shown in Table.(6)

Table(6)

t-values indicating the significance of differences between the mean scores of male and female study participants on the perceived self-efficacy scale

Male		Females		t	Significance
N= 50		N= 50			
Main	SD	Main	Significance	0.6	Not Significant
096.	977.20	096.66	638.21		

The results presented in Table (6) confirm the validity of this hypothesis, as there were no statistically significant differences between genders at a significance level of 0.05 in the perceived self-efficacy scale. This can point to the absence of differences between genders in the level of perceived self-efficacy. There may be a balance in the skills possessed by men and women in this context, leading to no significant differences in the level of self-efficacy. Additionally, the UAE provides equal educational opportunities between genders, contributing to achieving a balance in self-efficacy.

In Emirati culture, both males and females are encouraged to acquire similar skills or engage in similar activities, which is reflected in the level of self-efficacy. Moreover, cultural changes or social transformations that expand the roles of women in various fields may contribute to reducing differences in self-efficacy between genders. This result indicates a similar level of self-awareness and the ability to accurately assess skills, leading to a convergence in self-efficacy levels. The results of this study align with the findings of a study Al Rawashdeh, A.Z et al(2021)

The Perceived Self-Efficacy Scale (Developed by the Researcher)

	First Dimension: The social Dimension	Always	sometimes	Rarely
1	I'm able to maintain strong relationships with others.			
2	I understand the needs of others.			
3	I enjoy effective interaction with others.			
4	I can express myself clearly and confidently.			
5	I show flexibility in adapting to social circumstances.			
6	I always try to demonstrate respect			
7	I actively listen to the opinions of others.			
	Second Dimension: Cognitive Dimension	Always	sometimes	Rarely

8	I set specific goals for the future.			
9	I recognize areas of my intellectual capacity.			
10	I can leverage my abilities to solve problems.			
11	I am aware of the importance of developing my cognitive and intellectual skills.			
12	I regularly evaluate my personal progress.			
13	I continuously learn from my intellectual mistakes to improve my future performance.			
14	I possess the ability to prioritize the development of my cognitive skills.			
	The third dimension: Academic Dimension	Always	sometimes	Rarely
15	I excel at my university.			
16	I understand and comprehend everything my professors say at the university.			
17	My memory is strong.			
18	I have extensive general knowledge.			
19	I excel in completing assignments given by professors at the university.			
20	I find it easy to answer professors' questions at the university.			
21	I am always working to improve my academic performance.			
	The fourth dimension: Emotional Dimension	Always	sometimes	Rarely
22	I express my feelings clearly.			
23	I can understand the feelings of others.			
24	I feel self-confident.			
25	I easily control my nerves in stressful situations.			
26	My friends admire me.			
27	I can persuade others about my point of view.			
28	My relationship with professors is built on respect.			

Digital Technology Usage Scale(Developed by the Researcher)

		Always	sometimes	Rarely
	The First Dimension: Digital Technology Culture			
1	I can efficiently use digital devices for daily tasks.			
2	I understand and effectively use office software and internet applications.			
3	I can stay safe on line.			
4	I use social media responsibly and effectively.			

5	I master the use of email and online communication effectively.			
6	I can create and edit digital content .			
7	I understand digital security concepts .			
8	I have the ability to use digital tools to solve problems and make decisions.			
9	I leverage technology to enhance learning opportunities and develop new skills.			
10	I stay updated on the latest technologies.			
	The Second Dimension: Competence in Using Internet Resources	Always	sometimes	Rarely
11	I use email and digital communication to interact effectively.			
12	I know how to use digital technologies for self-learning.			
13	I can search efficiently online to find the information I need.			
14	I understand how to assess the credibility and quality of content I find on the internet.			
15	I use search engines in an advanced way to improve my search results.			
16	I use social media smartly and responsibly.			
17	I know how to organize and save the information I find online.			
18	I can use cloud services to easily save and share files.			
19	I understand how to protect my privacy when interacting online.			
20	I learn many skills through the internet			
	The third dimension: Digital Technology Utilization	Always	sometimes	Rarely
21	I leverage digital technology in my academic studies.			
22	I communicate with classmates through various technological applications.			
23	I use digital tools and applications efficiently in my daily work.			
24	I utilize information technology systems to enhance my performance.			
25	I continuously use essential software to facilitate daily tasks.			
26	I use modern techniques to creatively prepare reports and presentations.			
27	I leverage smart systems to analyze data and extract crucial connections.			

28	I possess the ability to solve problems using digital tools and technologies.			
29	I know how to use technology in my work to enhance efficiency.			
30	I benefit from modern technologies to improve academic achievement.			

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