

Article

ICT Skills of University Students from the Faculty of Sport and Physical Education during the COVID-19 Pandemic

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Abstract: (1) Background: The COVID-19 pandemic has generated significant changes in teaching methods around the world, and the ideal of online education has become a reality. (2) Methods: A questionnaire was modified for this study in order to determine the following levels of Information and Communication Technologies (ICT) skills: file creation, file management, the use of emails, the use of the internet, and online communication. In total, 360 students from the Faculty of Sports and Physical Education (FSPE), University of Novi Sad, participated in the study. (3) Results: The results show that there are differences between the estimated level of ICT skills and the ICT skills used in online education, such that students estimate their level of ICT skills as being higher than is necessary for online education ($p < 0.05$). There is also a correlation between the satisfaction with online education and ICT skills, showing that students with higher ICT knowledge are more satisfied with online education ($p < 0.05$). There is another correlation between the satisfaction with online education and the frequency of ICT use—the more ICTs are included, the more satisfied the students will be ($p < 0.05$). (4) Conclusions: The results of this study can serve as a recommendation for the implementation of FSPE students' training in ICT skills, as well as an important basis for the systematic creation, improvement, and sustainability of online education in universities.



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Keywords: ICT skills; COVID-19; pandemic; higher education; communication

1. Introduction

Numerous changes have occurred in the social, political, economic and technical-technological life of people during the COVID-19 pandemic. In order to reduce the spread of the pandemic, Governments around the world have implemented measures such as the shutting down of schools and education centers, and the transition to online education [1–5], necessitating that the students, as well as the professors, have a satisfactory level of computer literacy [6]. Following the implementation of the emergency measures, online learning has become a necessary strategy for adequate teaching in this period of the pandemic [7]. Accordingly, the proper electronic education of the students can contribute to the improvement of their skills in analyzing, contextualizing and articulating their knowledge [8]. Some studies have shown the positive sides of online learning, such as the shorter length of courses, which is achieved by simplifying the curriculum and making tasks easier to complete [9]. Even though some universities used E-learning as an additional method before the Coronavirus pandemic, most of them were not ready for a full online experience [10]. Online education has been implemented in almost every educational institution in Serbia since the start of the 2020/21 school year. By the resolution of the Government of the Republic of Serbia, it is possible to combine online education with classroom learning if safety precautions are taken, and educational institutions can choose whether they want to do so [11]. Physical education in school systems should have also been adjusted to the new technologies, as well as the classes in higher institutions which provide education for the staff, and this has raised numerous questions and problems. Accordingly, several barriers have been reported by educators concerning the usage of ICT

in schools. One study reported time as one of the important barriers to the usage of ICT in the classroom and the integration of ICT into teaching curricula (Tearle [12]). The educators needed more time to set up lessons with ICT, to prepare resources, and to deal with different technical problems (Thomas) [13]. Moreover, Cuckle and Clarke (2002) [14] found that a lack of ICT pedagogical training at their colleges was also a significant barrier to the use of ICT in the classroom. Physical education was adapted to the new technologies in schools, and also in the University. Considering the curriculum of the FSPE in Novi Sad, it can be noted that students have no computer science classes [15], which raises the question of whether and to what extent students have satisfactory computer skills. In PE classes, movements must be performed properly. The situation with COVID-19 and the changes in the teaching process showed a possible window of opportunity through modern methods of communication. Moreover, this emphasizes the importance of ICT skills for educators in sports and physical education, so that they can significantly improve and sustain education and solve the mentioned problems. Therefore, it is of great importance to investigate the ICT skills in FSPE students, keeping in mind their importance in the new teaching process. The aim of this study is to determine the level of specific ICT skills among students of FSPE, to identify ICT skills in online education during the COVID-19 pandemic, and to determine the elements of online education that students find satisfying.

1.1. COVID-19 and Education

The World Health Organization proclaimed COVID-19 infection as a pandemic on 11 March 2020. By 28 November 2020, more than 62 million people in 220 countries were infected; 151,783 people died, while 32,900,656 people recovered from the virus [16]. According to the information posted on the Government of the Republic of Serbia's website, between 6 March and 25 November 2020, 155,994 people in the country were infected by the virus [17].

One of the measures the government declared was to shut down all educational institutions, and to switch to online education. This was in accordance with the measures in other countries [18], as the research of Prem et al. [19] proved that COVID-19 spreads easier and faster among the younger population. According to the information posted on the UNESCO (United Nations Educational, Scientific and Cultural Organization) website, measures like online education at home cause psychological consequences in children due to social isolation, the difficulty of accessing food and necessary nourishments, and the lack of physical activity [20]. UNESCO also reported the possibility of a higher drop-out rate, along with many consequences caused by the adaptation to classes, and switching to a network modality without the necessary time to provide authentic planning and modifications to the curriculum. In relation to this, a study by Means et al. [21] cited a meta-analysis of The Ministry of Education of the USA, in which virtual learning was compared to live learning. The analysis showed that the standard deviation in virtual learning was 28% higher than that in live learning. Hodges et al. [22] presented the differences between online education and so-called 'remote education', stating that online education requires planning from the start, and the conduction of online classes, while remote education requires urgent distant classes and the finding of alternative methods of delivery because of the crisis. This could mean that the entire school management system might encounter a crisis situation, and that every educational institution will rely on the knowledge and capabilities of not only its staff but also of its students.

1.2. Remote Education

Distance learning and e-learning are not the same, as previously mentioned. If online classes are observed and adjusted strategically—for example, according to the type of education, methods of communicating, analysis, and evaluation of knowledge and passive teaching, one- or two-way communication, and the communication medium, etc. [23]—they can be successful and considered to be online education.

Different pieces of research confirm that most educational institutions only transferred classroom education to online platforms [24]. Therefore, the FSPE has been using the platforms that had already been proven to be effective, such as Google Classroom, Zoom, Skype, or some of the retroactively created platforms.

Some studies state that every institution must consider technological, pedagogical, and organizational aspects [24]. This means that the relationships should be observed and found between information and communication technologies (ICT); between pedagogy and digital learning, digital competencies, innovations in education, and the knowledge of the technologies (ICT skills); and between organization and organizational and collaborative technologies [25]. With this in mind, the professors had to adjust their lectures and pedagogy methods. According to some researchers, the students were highly satisfied with the teaching content and the help from the professors, as they were given the right information at the right time [26].

Lorente et al. [27] emphasized the problem of faculty infrastructure and the technologies students have access to. The authors provided research in which they compared schools from almost all around the world. There is an enormous gap between the most advanced and the most vulnerable economies, and it is stated that, compared to the rest of the world, almost 70% of elementary schools in sub-Saharan Africa do not have electricity, while in South Asia, almost 50% of elementary schools do not have electricity.

The situation is somewhat different in Serbia. According to the information posted on the Ministry of Education, Science and Technological Development's website, all educational institutions organize their curriculum on three levels, in accordance with their infrastructure [11]. Level one includes the use of a selected system for learning management combined with the tools of communication, primarily through online meetings, but also through the exchange of messages and forum discussions. Level two includes schools that cannot achieve level one, but are able to provide remote education using some video conference tools (Google Meet, Microsoft Teams, Skype, Viber, etc.).

Level three includes schools which cannot achieve either level one or level two, in which the teachers apply systems for learning management through phone calls, and in which they communicate regularly with all of their students. The individuals who come from lower socio-economic backgrounds, as well as all of the other students who have no access to electronic means of communication, are provided with the teaching materials in paper form, and the teacher's feedback is required.

1.3. ICT Skills and Sport and Physical Education

Händel et al. [28] emphasized the support that higher education students need in order to successfully cope with the challenges of emergency remote education, because of increased stress, living and working balance, and social and emotional distancing. The research by Aristovnik et al. [29] included 30,383 students from 62 countries, and it was established that the students are mostly satisfied by the support they got from the faculty staff, but they also emphasized their lack of computer skills, which they considered to be a burden, because they were unable to notice their own progress. They raised concerns about their future professional careers, and mentioned anxiety and frustration as negative side effects of this situation. Similar research was presented by Händel et al. [30]; however, they investigated how well the students were equipped with digital devices, and their own assessment of E-learning competency. The study concluded that males are technologically better-equipped than females, and that the students living in shared households are better equipped than those living on their own; also, the students think that they do not have the necessary level of ICT skills, and that support should be provided for all of those who are computer illiterate. Considering FSPE students, information and communication technologies have become an integral part of the curriculum for physical education and sports sciences in the world [31]. Different hardware and software solutions are used to analyse students' performance [13], the internet is used for collaborative projects [32], and multimedia education software can be used for teaching sports skills [33], etc.

In a piece of research conducted in the USA, Liang et al. [31] investigated how confident 145 P.E. teachers (Physical Education teacher) were in using their ICT competencies, and they discovered that most of them evaluated their competency level as minimal—only 11.7% of the participants considered themselves to be computer literate—and these conclusions are alarming. The ICT skills in FSPE graduates show that they have a positive attitude towards computers, but that they lack confidence in their own ICT skills, and they think they need appropriate training to improve their ICT competencies [34]. A study by Kocak [35] investigated attitudes towards computers and computer competencies in 25 sports managers, 30 P.E. teachers, 28 coaches, and 27 university students of P.E. and SS (Sport Students) in Turkey, and the conclusion was that, even though every group had a positive attitude towards computers and felt competent enough to edit text and use of the internet, they were less competent in operative systems, presentation software, and teaching software, etc.

This information requires the testing of ICT skills in FSPE students, and the self-estimation of ICT skills and the attitude towards ICT on one hand, and the design and application of the appropriate courses on computer literacy on the other hand, which will be described and presented in this study.

2. Materials and Methods

2.1. Research Design and Research Questions

This study aims to investigate the levels of specific ICT skills (Figure 1) of physical education students, and to identify the ICT skills used in online classes during the COVID-19 pandemic. The central focus of this study is to determine whether there is a gap between the levels of students' ICT skills and the level of ICT skills that are used during online teaching. Based on the literature review, we developed several research questions:

- RQ1: What is the estimated level of ICT skills in FSPE students?
- RQ2: Which ICT skills were most often used in online education during the COVID-19 pandemic?
- RQ3: Is there a discrepancy between the estimated ICT skills in students and the ICT skills used in online education?
- RQ4: Is there a correlation between the satisfaction with online education and the estimated level of students' ICT skills?
- RQ5: Is there a correlation between satisfaction with online education and the frequency of the use of ICT?

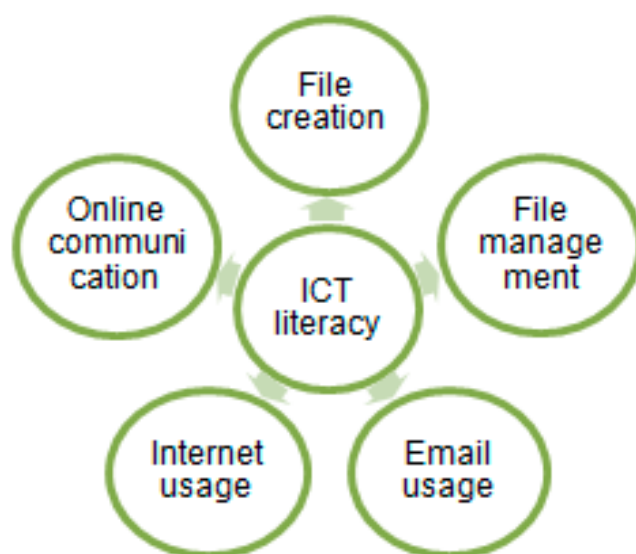


Figure 1. ICT literacy components.

The variables for ICT skills were grouped using the following criteria:

- (1) File creation: text edits, spreadsheets, presentations, graphics, video;
- (2) File management: deleting files, copying files, editing files, downloading files, compressing files;
- (3) Email usage: mail attachments, searching mail, forwarding mail;
- (4) Internet usage: internet searches, downloads, installation;
- (5) Online communication: group chats, video calls, video call muting, sharing screens;

2.2. Participants

The participants were the students of the Faculty of Sport and Physical Education, University of Novi Sad. The respondents were randomly selected and contacted by email. A total of 480 students were randomly selected, of which 360 completed the questionnaire (the percentage of completion of the questionnaire was 75%). The data collection was conducted during October and November 2020. The questionnaire was distributed digitally to students through the Google Forms platform.

The students' age ranged from 19 to 25 (Mean \pm SD = 21.84 \pm 1.63). There were more male (58%) than female (42%) students in the sample. Almost every student reported that they own a smartphone (99%), most of them stated that they own a computer (96%), and 37% of them reported that they own a tablet.

2.3. Data Collection

For the purposes of this research, an existing questionnaire for the assessment of students' ICT skills was modified [36]. In previous research, the instrument showed good measures of internal consistency, with a Cronbach's alpha value of 0.977. Out of a total of 37 questions, we selected 20 questions that—according to their content—relate to the ICT skills that students use during online classes. The questionnaire consisted of three parts. The first part of questionnaire covered basic demographic information and information on ICT usage. The second part consisted of 20 questions for the self-assessment of the level of the students' ICT skills. These questions were rated on a scale from 1 for 'insufficient', to 5 for 'excellent' (example question: "I know how to write and/or edit text in a word processing program such as MS Word"). In the third part of the questionnaire, we reformulated the questions for the ICT skills assessment in order to investigate the use of ICT skills during online teaching. The questions for the assessment of the use of ICT skills during online classes were rated on a scale of 1 for 'never' to 5 for 'in all online classes (example question: "During online classes I had the opportunity to write or edit text in a word processing program such as MS Word").

In this research, the Cronbach's alpha coefficient for the whole instrument was 0.961 (0.953 for the set of 20 questions related to ICT skills, and 0.972 for the set of 20 questions related to the ICT skills used in online classes). These results indicate the high value of internal consistency of the instrument.

In order to examine the proposed factor structure of ICT skills, we performed an exploratory factor analysis for both sets of questions. We employed a principal components factor analysis with Promax rotation, and extracted a five-factor structure. In both factor analyses, the value of Kaiser-Meyer-Olkin (KMO) was high (0.950 and 0.958), indicating the excellent factorability of the matrix. The Bartlett test of sphericity had a small significance level ($p < 0.001$), indicating a low probability that the population matrix was an identity one. By means of the factor analysis, we extracted a five-factor structure explaining 77% of the total variance for the first set of questions, and 86% for the second set. The analyses yielded a five-factor solution of the considered ICT skills, confirming our suggested structure (file creation, file management, using emails, using the Internet, online communication) in both sets of questions. No pure factor solution was obtained; some of the items saturated (load) multiple factors, which indicates potential shortcomings of the instrument, and possible room for improvement. The Pattern matrices obtained by the factor analysis are presented in Appendices A and B.

2.4. Data Analyses

The summary statistics are presented as mean, median and standard deviation for the ordinal variables, and as frequencies for the categorical variables. A Kolmogorov–Smirnov normality test was used to examine the normality of the variables of interest Mann–Whitney U-test. In order to compare the differences between them, two independent groups were used. A Spearman correlation coefficient was used to test the association between the two ranked variables. The Wilcoxon test was used to compare the two groups, i.e., to determine if two or more sets of pairs were different from one another in a statistically significant manner. A Kruskal–Wallis H Test was used to determine whether the medians of three or more groups were different.

p -values of <0.05 were considered to have statistical significance. All of the statistical analyses were performed using IBM SPSS Statistics (v19.0, SPSS Inc., Chicago, IL, USA).

Before the analysis started, the database was inspected, and the entries were checked for atypical and missing cases. After the data inspection, the ICT skills scores and ICT use in online education scores were created.

3. Results

First, the students were asked how often they used ICT (Figure 2). The highest percentage of students (57.2%) stated that they use ICT on a daily basis outside the faculty for other purposes. Almost one third of the students stated that they had never used ICT at the faculty for the purpose of studying.

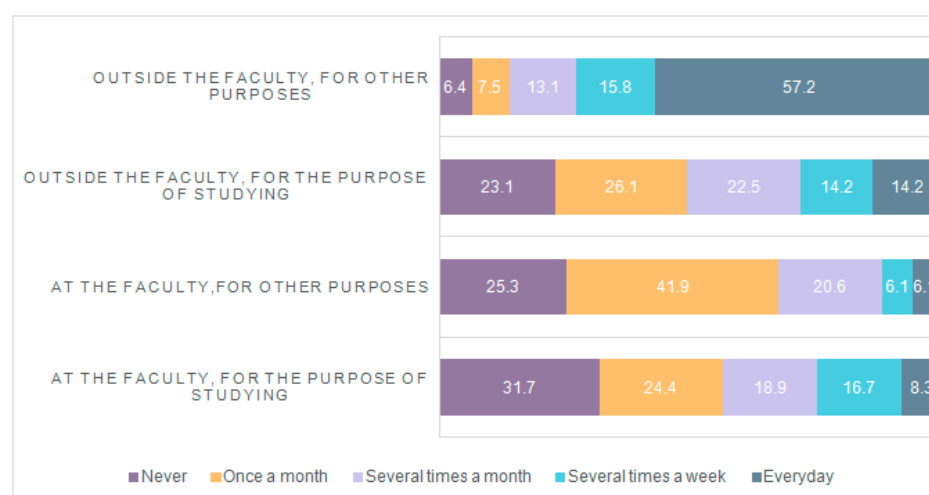


Figure 2. How often do you use ICT skills? (%).

After that, the students were asked from whom they learned most of their ICT skills. The results in Figure 3 show that the students learned the skills related to creating and editing content (tables, files, presentation) from teachers/professors, while they learned about internet communication and finding information online mostly by themselves.

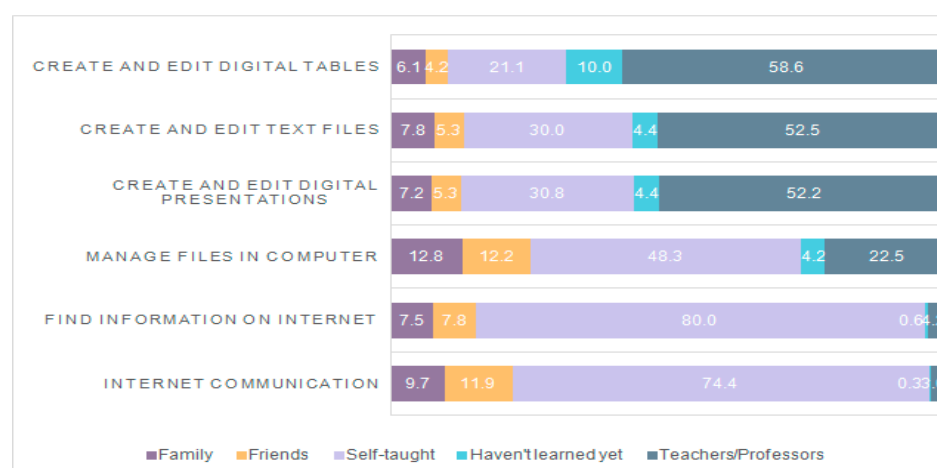


Figure 3. Who did you learn to use ICT from? (%).

When it comes to conducting classes during the COVID-19 pandemic, the students reported that, in the most frequent scenario—i.e., 60.3% of cases—some of the classes were held online, some in person, and some were not held at all. In 27.5% of cases, all of the classes were conducted online, or the teachers sent learning materials through online learning platforms. In 12.2% of cases, the classes were held as a combination of online and live learning, i.e., some classes were held online, and some in person. Slightly more than a half of the students (55%) declared that they would like to attend training to improve their ICT skills.

The satisfaction with the online classes conducted is rated as average (mean = 2.95, median = 3, standard deviation = 1.46, minimum = 1, maximum = 5). There is a significant difference between the satisfaction with online education and the way it is organized and conducted (Kruskal–Wallis $H = 16.671$, $df = 2$, $p = 0.000$). The most satisfied students were those whose classes were conducted as a combination of classes online and in person (mean = 3.51), while the least satisfied students were the ones whose classes were conducted partially as a combination of online and onsite classes, but the rest of the classes were not conducted.

Next, we examined whether there were any gaps between the levels of each of the ICT skills considered and the frequency of use of those skills in online classes. There was a statistically significant difference on every level (file creation, file management, using emails, using the Internet, online communication) between the students' level of skills and the frequency of use of those skills in online classes (Table 1).

Table 1. Skill level vs use of skills in online classes.

	File Creation	File Management	Email Usage	Internet Usage	Online Communication
Z ¹	−14.406 ^b	−14.808 ^b	−13.433 ^b	−14.406 ^b	−14.315 ^b
p ²	0.000	0.000	0.000	0.000	0.000

¹ Z statistic; ² statistically relevant for the value; $p \leq 0.05$; ^b based on positive ranks.

The descriptive statistics of the results are given in Table 2. As we can see, the students estimated their levels to be much higher than needed in online classes for each considered skill. In other words, there is a gap between the students' level of skills and the skills used in online classes, meaning that students' ICT literacy is more advanced than is necessary for the attendance of online classes.

Table 2. Descriptive statistics of skill level vs use of skills in online classes.

		Mean \pm SD ¹	Min. ²	Max. ³
File creation	Skill	17.37 \pm 5.08	5.00	25.00
	Online classes	20.61 \pm 4.50	5.00	25.00
File management	Skill	12.42 \pm 3.44	3.00	15.00
	Online classes	13.18 \pm 2.59	3.00	15.00
Email usage	Skill	16.28 \pm 4.34	4.00	20.00
	Online classes	9.95 \pm 6.14	5.00	25.00
Internet usage	Skill	12.06 \pm 6.97	5.00	25.00
	Online classes	7.78 \pm 4.51	3.00	15.00
Online communication	Skill	7.81 \pm 4.34	3.00	15.00
	Online classes	9.71 \pm 5.89	4.00	20.00

¹ standard deviation; ² minimum; ³ maximum.

From the results given in the same table, we receive an impression of the self-estimated level of ICT skills in FSPE students. The descriptive statistics reveal that the students are mostly comfortable with internet usage. Then, the remaining self-estimated skill levels are ordered in the following way: email usage, file management, online communication, and file creation (the latter being the least comfortable). In order to provide more clear representation, instead of a sum, we considered mean-based scores for each of the five skill factors. The results on the 1–5 scale represented by the respective mean and standard deviation are as follows: file creation, 3.47 ± 1.01 ; file management, 4.12 ± 0.9 ; email usage, 4.14 ± 0.86 ; internet usage, 4.39 ± 1.08 ; and online communication, 4.07 ± 1.08 .

According to the students' estimates, the ICT skills used in online education during the COVID-19 pandemic can be sorted by the frequency of their usage as follows: internet usage, email usage, online communication, file management, and file creation (see Table 3). Similarly, we can verify the results by considering their mean scores: file creation, 1.99 ± 1.23 ; file management, 2.41 ± 1.39 ; email usage, 2.59 ± 1.50 ; internet usage, 2.60 ± 1.44 ; and online communication, 2.52 ± 1.47 .

Table 3. Spearman's rho correlation between the levels of skills and satisfaction with online teaching.

		Skills				
		File Creation	File Management	Email Usage	Internet Usage	Online Communication
Satisfaction	Correlation	0.294	0.241	0.228	0.188	0.181
	p ¹	0.000	0.000	0.000	0.002	0.003

¹ statistically relevant for the value; $p \leq 0.05$.

We examined the relationship between the students' level of skills and their satisfaction with online classes. The correlation is positive, statistically significant, and of moderate strength for each skill. These results indicate that the students with higher proficiency in ICT skills are more satisfied with online education than the students with lower levels of ICT literacy.

We also tested the correlation between the students' satisfaction with online education and their frequency of ICT use in online classes (Table 4). The correlation is positive, statistically significant, and of medium strength for each frequency score. These results indicate that the students are more satisfied with online teaching if it involves the frequent use of ICT.

Table 4. Spearman's rho correlation between the ICT use during classes and satisfaction with online teaching.

		Usage during Online Classes				
Satisfaction		File Creation	File Management	Email Usage	Internet Usage	Online Communication
	Correlation	0.386	0.375	0.353	0.396	0.402
	p ¹	0.000	0.000	0.000	0.000	0.000

¹ statistically relevant for the value $p \leq 0.05$.

4. Discussion

The information that 57.2% of students use ICT regularly outside of the faculty is not surprising. The prevalence of the internet, social networks, and even photo, video and text editing software for a more organized online presence, require the knowledge and management of different technologies. Furthermore, the study by Sun [37] shows students' tendency to generate new ideas, which could be useful for production and service implementations, and also for the interactive exchange of the information, all of which require fine knowledge of ICT skills.

In September 2011, the Statistical Office of the Republic of Serbia [38] published the information that 51.2% of households owned a computer, while 41.2% of households had internet access. The data from 2012 showed a significant rise: 55.2% of Serbia's population owned a computer, while 47.5% had internet access. For comparison, in 2006, only 26.5% of the households owned a computer, while 18.5% had internet access. According to the information from 2018, 72.9% of Serbian households had internet access, which was a 4.9% increase compared to 2017. As such, the fact that students learn internet browsing on their own is not surprising, because, as stated by McQueen [39], children who grew up in the 2000s had direct contact with digital technology from the first days of their lives.

The comparison between the information from this study and the information provided by Zimbardo [40] is interesting. Zimbardo states that today's youth, who are used to the digital world, and used to permanent interaction, multidimensionality, multifunctionality and speed, has difficulties with traditional forms of learning, which could be related to this study's information that the students with higher proficiency in ICT skills were more satisfied with online education than those with lower ICT skills. Although the transition to online teaching, on the one hand, is a great challenge for the learning process [7,41], on the other hand, these results indicate that it should be seen as a positive opportunity to change traditional learning methods and adapt to new educational needs [42]. Considering the relationship between students' estimated ICT skills and those needed for online education, this study shows that the students estimate their ICT skill level as being higher than is needed, so it is not surprising that they are mostly satisfied with the combination of classes online and in person.

4.1. Implications for Theory and Practice

Howe and Strauss [43] presented the students of the so-called 'Net Generation' as people who have tendencies towards group activities, who believe that being smart is trendy, who are fascinated by technological innovations, who direct their attention towards grades and success, and who use their spare time for extracurricular activities.

Different sources show that today's students are digitally literate, because, as they grow up in a world of technological and computer revolution, they intuitively use all technological benefits [44]. However, the author indicates that their understanding of the technology is often quite superficial. Recent research on teaching in the context of the COVID-19 situation emphasizes that students must become more autonomous in reading and in understanding guidance in online learning [45].

The literature emphasizes some of the Net students' characteristics, such as connectivity, because of networking and the potential of the social networks [46]; directness [44], as a result of their doing multiple things quickly; expertise [47], as a result of their preference to learn by experiences, instead of by directions; and friendliness [44], which represents the

temperament of someone to involve some other person in an activity, regardless of the fact they know each other in person or only online.

Given the fact that traditional face-to-face teaching is increasingly disappearing, and that most Universities offer all students an online platform for teaching [48], the focus should be on the systematic creation of online education, and not simply on the adjustment of traditional education to a digital environment, because the research shows that students have a satisfying and sustainable knowledge of ICT skills, which they consider to be higher than necessary.

On the one hand, it is important to have an insight into the ICT skills that students possess, so that they can be fully and sustainably utilised during online classes. On the other hand, it is important to adapt the teaching process in higher education institutions to the digital environment. As a positive example, medical students are cited, given that they enjoyed the online teaching of anatomy, and the lectures were well received [49–51]. The results of this research show that the classes conducted were not adapted to the digital environment, and were thus are obsolete, which is confirmed by the results of research into higher education institutions in Romania [10]. On the other hand, the Italian education system shows reasonable maturity, and can be a good indicator to all other educational institutions facing problems and teaching [26].

Finally, the results of this study could be used to indicate the areas in which students' ICT skills training might be improved. Namely, those ICT skills which the participants said they had learned on their own should be enlisted in training programs for the students' ICT skills improvement, but their implementation in the curricula should also be considered.

4.2. Limitations and Future Research

This study was carried out among students of the Faculty of Sports and Physical Education in Novi Sad. The study is transversal by nature, and it included the self-estimation of the ICT skills of the students, but not of the professors. Furthermore, this research has not provided any insights into the process, nor the quality of the online classes. If the ICT skills of the professors could be compared to those of the students, and then monitored during a certain period of time, we could gain better insights into the nature of the ICT skills, which could, combined with the pedagogic knowledge of the online education, serve as an important basis for the creation of a clear strategy for online education.

5. Conclusions

Although the current pandemic is encouraging the reformation of the current methods of existing teaching modes [7], based on the analysis of the collected data, it can be concluded that FSPE students have a satisfactory knowledge of ICT skills, and it can be said that their sustainability and adaptation to the new requirements of online teaching are not worrying. However, this questionnaire did not test advanced computer literacy.

Funding: This research received no external funding.

Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by the Ethics Committee of the Faculty of Sport and Physical Education, University of Novi Sad (protocol code 46-12-06/2020-2, 23.12.2020).

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest: The author declares no conflict of interest.

Appendix A. Pattern Matrix—Skill Level

Item	Factor				
	1	2	3	4	5
I know how to communicate in group chat within programs such as e.g., Edmodo, Skype, Zoom, MS Teams, etc.	1.030				
I know how to communicate via video call using programs such as Edmodo, Skype, Zoom, MS Teams and others.	0.980				
I know how to set the sound and microphone option on my computer—turn the microphone or speakers on and off during an internet call.	0.821				
I know how to share the content of my screen or watch the content of the interlocutor's screen.	0.750				
I know how to write and / or edit text in a word processing program such as MS Word.		1.011			
I know how to use spreadsheets to calculate, store data, or create charts in a program like MS Excel.		0.977			0.378
I know how to create presentations in a program like MS PowerPoint.		0.871		0.303	
I know how to use programs for graphics or drawing such as MS Paint, Adobe Photoshop and others.		0.692			0.409
I know how to create or edit video content.		0.687			
I know how to change file information.			0.489		
I know how to delete files that are no longer needed.			1.060		
I know how to copy files.			1.012		
I know how to store files downloaded from the Internet in certain locations on my computer.			0.465		
I know how to compress or decompress files using programs like WinRar, WinZip, etc.			0.987	0.311	
I know how to install programs on my computer.				0.669	
I know how to download programs from the Internet.				0.346	
I know how to search for certain terms on the Internet using search engines like Google.				0.872	
I know how to search an email by sender or subject.					0.425
I know how to change the content of an email before forwarding it to another address.					0.451
I know how to add attachments to email.		0.327			0.414

Appendix B. Pattern Matrix—Usage of Skills in Online Classes

Item	Factor				
	1	2	3	4	5
During online classes, I had the opportunity to delete files that I no longer need.	0.950				
During the online classes, I had the opportunity to save files that I downloaded from the Internet in certain locations on my computer.	0.946				
During online classes I had the opportunity to copy files.	0.849				
During the online classes I had the opportunity to change the information about the file.	0.729				
During online classes I had the opportunity to compress or decompress files using programs such as WinRar, WinZip, etc.	0.864				
During online classes, I had the opportunity to adjust the sound and microphone options on my computer—turn the microphone or speakers on and off during an Internet call.		1.006			
During online classes, I had the opportunity to communicate with teachers and colleagues via Internet calls using applications such as Edmodo, Skype, Zoom, MS Teams and others.		0.945			
During online classes I had the opportunity to communicate in group chat within applications such as Edmodo, Skype, Zoom, MS Teams and others.		0.909			
During online classes, I had the opportunity to share the content of my screen or watch the content of the screen of my teachers or colleagues.		0.764			
During online classes I had the opportunity to use programs for creating graphics or drawing such as MS Paint, Adobe Photoshop and others.			0.917		
During the online classes I had the opportunity to create or edit video content.			0.912		
During online classes I had the opportunity to create presentations in a program such as MS PowerPoint.			0.717		
During online classes I had the opportunity to write or edit text in a word processing program such as MS Word:	0.336		0.622		
During online classes, I had the opportunity to use spreadsheets to calculate, save data or create charts in a programs such as MS Excel.			0.610		0.392

During online classes, I had the opportunity to change the content of the email before forwarding it to another address.		0.820
During online classes I had the opportunity to find an email from a specific sender or with a specific subject.	0.370	0.658
During the online classes, I had the opportunity to add an attachment to my email.		0.465
During the online classes I had the opportunity to download programs from the Internet.	0.315	0.454
During online classes, I had the opportunity to search for certain terms on the Internet using a search engines like Google.	0.367	0.625
During the online classes, I had the opportunity to install programs on my computer.		0.338

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