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Examining the attitudes and usage levels of coaches towards technology in terms of athlete education

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Today, science and technological developments play a role in the field of sports, as in all domains of life. For this reason, coaches may use technology to improve the technical, tactical, condition, and psychological performance of their athletes. Besides, pandemic conditions such as COVID-19 bring about this obligation. The aim of the present study was to examine the attitudes and levels of use of technology by coaches working in individual and team sports in terms of athlete education. The study group consisted of 205 people accessed by convenience sampling method. The data collection tool, "Teacher Technology Acceptance Measure: T-TAM," which consists of 38 items and 11 sub-dimensions and has a reliability coefficient of α=0.94 for this study, developed by Ursavas et al. was used by participants using an online questionnaire. The data showed normal distribution, analyses were made using parametric tests. According to the results, it can be suggested that 3rd level coaches use technology more widely in training and competitions than their 1st and 2nd level colleagues. Additionally, there is a statistical difference in the sub-dimensions of compatibility and subjective norms in favor of male coaches compared to female colleagues. Consequently, it can be claim that the coaches have a positive attitude towards using technology and try to use it at the highest level.

Key words: Coach, technology, attitude, COVID-19.

INTRODUCTION

Sport is the sum of movements that individuals perform to increase their mental and physical health, protecting existing ones and increase their physical performance. The goal of all athletes and coaches is to maximize their performance (Fidan et al., 2016). In line with this objective, they can develop motor characteristics such as strength, agility, endurance, speed, skillfulness, and flexibility, thanks to specific training in their specialized sport (Karacabey, 2013).

Maximizing people"s physical performance is primarily the role of sport trainers. The concept of sports trainer first brings to mind the coaches. They are individuals with the ability to transmit their knowledge, social capacity, and dynamism to athletes most effectively, and they also

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possess leadership qualities (Sunay, 1998; Bayansalduz, 2012). In other words, a person who trains and exercises an athlete in a sports branch is defined as a coach (Turk Dil Kurumu, 1992). Therefore, the main goal of the coach is to help athletes maximize their potential.

Information and communication technologies (ICT) can be defined as identifying, processing, storing and transmitting electronic information (Heeks, 1999). Today, progress in science and technology has been spreading in the field of sports as in all domains of life. In order to keep up with this rate of change, coaches need to review and update their knowledge and skills more frequently than in the past.

Technology can provide coaches with timely quality information and potentially valuable tools to improve athlete performance. Thanks to computer and information technologies, such developments increase communication opportunities, and the quantity and quality of information can spread rapidly in all areas of life. Some researchers think that the use of computer information technologies allows individualization of the physical education process and increase the effectiveness of training (Kozina et al., 2016).

In this context it is reasonable to assume that the active use of ICT and their application in sports-orientated physical education facilities the efficiency of the education and training process (Kozina et al., 2016). It is predicted that this integration will make profound contributions, especially in improving sports performance.

Sport today is characterized by high performance and can be achieved by athletes with advanced training. With various analyses made, new methodological and technological programs in sports can be developed (Juravle, 2010).

Information technologies used differ by the sport speciality also make important contributions in terms of management. For example, information technologies are seen in areas such as automation systems used in sports centers, club management systems, and body analysis programs, as well as money transfer, data storage, product sales, data analysis, product purchasing, and sports facilities management software (Parks et al., 1998).

Although the technologies used differ by the branches, physical performance tracking systems are widely used in almost all team sports (Unlu et al., 2018). It is known that such technologies provide significant benefits in recognizing physiological or physical needs, both based on the specific sport and different components of the speciality (Edgecomb and Norton, 2006).

Thanks to technology, innovative developments are experienced in using artificial intelligence. The athlete tracking software makes it possible to follow the athletes‟ progress from the training day-by-day and make suggestions to the coaches for the next stage. With the help of artificial intelligence technology, for example, video recordings of football matches are analysed, and such recordings instantly offer coaches what needs to be done and expected situations such as field formation, traffic, and opponent defense (Murathan and Devecioglu, 2018). Joint movements, obtained by shooting more than 200 frames per second, can be converted into digital data very quickly by computers. With the kinematograph expression of the athletes‟ movements, throwing angle, speed, acceleration, weight trajectory, and velocities can be determined in a simple way (Acikada and Ergen, 1990).

Systems such as identifying the physiological contributions of altitude training, comparing the strength data of muscle groups to prevent injuries, and creating heat maps for individual and team sports, are used effectively today. Thanks to smart clothing in sports, much data such as the athlete‟s heart rate, breathing rate, hydration, and body temperature can be monitored in real-time. Coaches can measure variables such as athletes‟ acceleration, speed, and exact position (Ohio University, 2020). Thanks to technology, injuries have been reduced, and the speed of early diagnosis has increased. It also gives important results in terms of creating environments that are less prone to injury during training. This point that technology has reached in sports is considered an indispensable element in increasing the performance of athletes. Coaches can increase the performance of athletes by blending technology with their professional skills.This situation creates the opportunity the obligation of every coach to adapt to technology. This adaptation can be possible if individuals receive sufficient training to use computer technologies (Ulug, 2002). Furthermore constraints caused by diseases that cause pandemics, such as COVID-19, force coaches to use technology. By using remote information technologies, coaches may maintain the athlete‟s performance in the quarantine process. It seems to be an essential step for coaches to keep up with these technological developments to increase their athletes to the highest level of performance.

Since people use technology-containing devices (such as smart phones, tablets) in their daily lives, it can be expected that coaches will adopt technology in their work. At the very least, they may have embraced the use of technology in their work. In previous studies, coaches have a positive attitude to the use of technology in the field of sports. However, they do not want to transfer these positive attitudes into their training or competition (Lieberman et al., 2005). Especially during the COVID 19 epidemic, coaches had to use technology to train their athletes (that is, online training), thus their attitudes towards technology usage may have changed. Moreover, when the literature on technology usage habits and skill levels of coaches was reviewed, it is remarkable that the studies on this subject were limited. Therefore, the aim of the present study was to examine the attitudes and levels of use of technology by coaches working in individual and team sports in terms of athlete education.

Table 1. Descriptive statistics.

Variable		Number	Percent
Sex	Women	50	24.4
	Men	155	75.4
Seniority	1	42	20.5
	2	61	29.8
	3	68	33.2
	4	34	16.6
Branches	Individual	113	55.1
	Team	92	44.9
Total		205	100

METHOD

Research model

In line with the present study, conducted to determine coach behaviour and usage levels of technology, the instant scanning model as one of the general survey models and the relational survey model were used. The instant scanning approach aims to describe the situation as it is within the specified time (Karasar, 2002).

Research population-sample (study group)

The study population comprised of coaches belonging to different sport specialities. The sample group consisted of 205 participants, 155 men and 50 women, selected by the random sampling method, which is one of the convenience sampling methods.

Data collection tool

The “Teacher Technology Acceptance Measure: T-TAM” consisted of 38 items and 11 sub-dimensions developed by Ursavas et al. (2014) was used as the data collection tool for the study. The Cronbach"s alpha internal consistency values of the sub-dimensions of the scale for this study were determined as follows: α=0.94 for perceived usefulness, α=0.91 for perceived ease of use, α=0.90 for attitude towards use, α=0.91 for behavioral intention, α=0.86 for facilitating conditions, α=0.93 for perceived enjoyment, α=0.86 for self-efficacy, α=0.81 for technological complexity, α=0.91 for compatibility, α=0.88 for anxiety, and α=0.68 for subjective norms. The Cronbach"s alpha internal consistency values of the total scale were found as α=0.94. The data collected with the five-point Likert scoring system were scored as disagree 1 to strongly agree=5.

Research ethics

The authors study, entitled “The examination of attitudes of coaches towards technology and usage levels,” was evaluated ethically with the protocol number 2021/294 at the meeting of the Ethics Committee of Human Research in Social Sciences of Abant Izzet Baysal University, dated 30/06/2021 and 2021/07, and was found to be ethically appropriate.

Data collection

The scale form created for data collection was collected via the internet and delivered to the participants through various social media tools.

Data analysis

Data collected were analyzed statistically using IBM SPSS for Windows v.23.0 (SPSS, Chicago, USA). The normality test of the data collected from the participants for the dependent and independent variables was performed with the skewness and kurtosis tests, and it was determined that these values were less than +2 and -2. The skewness and kurtosis coefficients can be valued between -∞ and +∞. If these values are in the range of (+2 to -2) according to some authors and (+3 to -3) according to the other, it is accepted that the collected data show a normal distribution (Kalayci, 2010). Hence, data were analyzed by using a T-test to compare two groups from parametric hypothesis tests, One-Way Multivariate Analysis of Variance (MANOVA) for groups of more than two, and correlation analysis for continuous numerical data.

RESULTS

When Table 1 was examined a total of 205 coaches, 50 women and 155 men participated in the study. It was also determined that 33.2% of the coaches hd a third-level coaching certificate, and 55.1% were coaching in individual sports branches. When Table 2 is considered, it is indicated that there was a negative and low-level significant relationship between the sub-dimensions of technological complexity and anxiety and years of coaching.

When Table 3 was reviewed, a significant difference was found between the sex variable and the sub-dimensions of compatibility and subjective norms in favor of male coaches.

When Table 4 was examined, statistically significant

Table 2. Examination of the relationship between the age of the participants and the years of coaching and the sub-dimensions.

Variable		Perceived usefulness	Perceived ease of use	Attitude towards use	Behavioral intention	Facilitating conditions	Perceived enjoyment	Self-efficacy	Technological complexity	Compatibility	Anxiety	Subjective norms
Age	r	0.038	-0.074	-0.033	-0.067	0.047	-0.042	-0.090	-0.098	0.034	-0.059	0.050
Years of coaching	r	-0.001	-0.003	-0.021	-0.021	0.079	0.044	0.72	-0.178*	0.71	-0.172*	0.104

*: p<0.05

Table 3. Differences in gender and sub-dimensions of the scale (T-Test).

Variable	Group	N	x	Std.	t	df	p
Perceived usefulness	Women	50	4.33	0.688	1.64	203	0.102
	Men	155	4.51	0.651			
Perceived ease of use	Women	50	4.04	0.731	1.16	203	0.247
	Men	155	4.17	0.671			
Attitude towards use	Women	50	4.22	0.648	1.737	203	0.084
	Men	155	4.40	0.656			
Behavioral intention	Women	50	4.19	0.591	1.640	203	0.103
	Men	155	4.36	0.640			
Facilitating conditions	Women	50	4.12	0.554	-.613	203	0.541
	Men	155	4.05	0.695			
Perceived enjoyment	Women	50	3.96	0.780	1.938	203	0.054
	Men	155	4.18	0.657			
Self-efficacy	Women	50	4.25	0.727	.774	203	0.440
	Men	155	4.32	0.555			
Technological complexity	Women	50	3.42	0.954	-1.230	203	0.220
	Men	155	3.23	0.948			
Compatibility	Women	50	3.92	0.839	2.4033	203	0.017*
	Men	155	4.21	0.710			
Anxiety	Women	50	3.84	0.841	-1.485	203	0.139
	Men	155	3.61	0.946			
Subjective norms	Women	50	3.51	0.777	2.416	203	0.017*
	Men	155	3.79	0.683			

*: p<0.05.

Table 4. Differences between the seniority variable and the sub-dimensions of the scale (MANOVA).

Variable	Seniority	N	x	Std.	df	F	p	η 2	Difference between groups
Perceived usefulness	1	42	4.32	0.67	3-201	2.89	0.037*	0.041	LSD
	2	61	4.40	0.70					3>2
	3	68	4.65	0.46					3>1
	4	34	4.40	0.83					3>2>1
Perceived ease of use	1	42	4.14	0.70	3-201	0.22	0.880	0.003	
	2	61	4.10	0.71					
	3	68	4.20	0.63					
	4	34	4.12	0.75					
Attitude towards use	1	42	4.42	0.56	3-201	0.82	0.481	0.012	
	2	61	4.30	0.71					
	3	68	4.42	0.54					
	4	34	4.25	0.85					
Behavioral intention	1	42	4.36	0.60	3-201	0.71	0.545	0.011	
	2	61	4.23	0.66					
	3	68	4.39	0.56					
	4	34	4.28	0.73					
Facilitating conditions	1	42	4.06	0.67	3-201	0.76	0.518	0.011	
	2	61	4.09	0.56					
	3	68	3.99	0.70					
	4	34	4.19	0.75					
Perceived enjoyment	1	42	4.18	0.64	3-201	0.16	0.918	0.002	
	2	61	4.08	0.74					
	3	68	4.13	0.64					
	4	34	4.14	0.77					
Self-efficacy	1	42	4.34	0.54	3-201	0.27	0.844	0.004	
	2	61	4.26	0.62					
	3	68	4.34	0.56					
	4	34	4.28	0.71					
Technological complexity	1	42	3.27	0.85	3-201	1.27	0.285	0.019	
	2	61	3.46	0.80					
	3	68	3.22	1.01					
	4	34	3.10	1.15					
Compatibility	1	42	4.08	0.76	3-201	0.33	0.800	0.005	
	2	61	4.09	0.69					
	3	68	4.09	0.75					
	4	34	4.20	0.86					
Anxiety	1	42	3.56	0.99	3-201	0.41	0.745	0.006	
	2	61	3.76	0.79					
	3	68	3.67	0.94					
	4	34	3.64	1.03					
Subjective norms	1	42	3.73	0.60	3-201	1.61	0.188	0.023	
	2	61	3.65	0.74					
	3	68	3.66	0.71					
	4	34	3.96	0.77					

*: $p<0.05$.

Table 5. Differences between technology, frequency of use and the sub-dimensions of the scale (MANOVA).

Variable	Technology use frequency	N	x	Std.	df	F	p	η 2	Difference between groups
Perceived usefulness	Rarely	38	4.60	0.70	4-200	1.67	0.04*	0.032	LSD Very often > Frequently
	Occasionally	39	4.50	0.55					
	Moderately	83	4.39	0.74					
	Frequently	28	4.33	0.59					
	Very often	17	4.73	0.41					
Perceived ease of use	Rarely	38	4.03	0.81	4-200	.97	0.42	0.019	
	Occasionally	39	4.15	0.56					
	Moderately	83	4.11	0.70					
	Frequently	28	4.20	0.56					
	Very often	17	4.41	0.72					
Attitude towards use	Rarely	38	4.50	0.63	4-200	1.42	0.22	0.028	
	Occasionally	39	4.37	0.62					
	Moderately	83	4.27	0.72					
	Frequently	28	4.28	0.58					
	Very often	17	4.57	0.46					
Behavioral intention	Rarely	38	4.30	0.66	4-200	1.56	0.01*	0.030	LSD Very often > Moderately
	Occasionally	39	4.34	0.60					
	Moderately	83	4.24	0.68					
	Frequently	28	4.36	0.53					
	Very often	17	4.65	0.46					
Facilitating conditions	Rarely	38	4.17	0.59	4-200	1.75	0.02*	0.034	LSD Very often > Occasionally
	Occasionally	39	3.89	0.68					
	Moderately	83	4.03	0.70					
	Frequently	28	4.17	0.59					
	Very often	17	4.31	0.60					
Perceived enjoyment	Rarely	38	4.22	0.58	4-200	.61	0.65	0.012	
	Occasionally	39	4.09	0.77					
	Moderately	83	4.08	0.75					
	Frequently	28	4.10	0.57					
	Very often	17	4.31	0.61					
Self-efficacy	Rarely	38	4.31	0.54	4-200	1.59	0.01*	0.031	LSD Very often > Moderately
	Occasionally	39	4.32	0.50					
	Moderately	83	4.22	0.69					
	Frequently	28	4.37	0.51					
	Very often	17	4.61	0.50					
Technological complexity	Rarely	38	2.98	1.02	4-200	1.30	0.04*	0.025	LSD Moderately > Rarely
	Occasionally	39	3.34	0.87					
	Moderately	83	3.36	0.87					
	Frequently	28	3.43	1.02					
	Very often	17	3.21	1.18					
Compatibility	Rarely	38	4.11	0.83	4-200	.70	0.59	0.014	
	Occasionally	39	4.11	0.75					
	Moderately	83	4.08	0.75					
	Frequently	28	4.22	0.69					
	Very often	17	4.39	0.69					

Table 5. Cont'd Differences between technology, frequency of use and the sub-dimensions of the scale (MANOVA).

Anxiety	Rarely	38	3.50	1.09	4-200	1.37	0.03*	0.027	LSD Frequently > Rarely
	Occasionally	39	3.56	0.97					
	Moderately	83	3.70	0.84					
	Frequently	28	4.00	0.77					
	Very often	17	3.63	1.00					
Subjective norms	Rarely	38	3.75	0.71	4-200	2.26	0.01*	0.043	LSD Very often > Frequently. Frequently < Moderately
	Occasionally	39	3.64	0.73					
	Moderately	83	3.80	0.64					
	Frequently	28	3.41	0.76					
	Very often	17	3.98	0.84					

*: $p<0.05$.

differences were found in favor of the 3rd level coaches in the perceived usefulness sub-dimension according to the seniority variable of the coaches. Besides, it is concluded that the effect size of the perceived usefulness sub-dimension was larger than the other dimensions.

When Table 5 was examined, it is observed that according to the technology usage frequency variable of the coaches, significant differences were found in favor of those who use "very often" in the sub-dimensions of perceived usefulness, behavioral intention, facilitating conditions, self-efficacy, and subjective norms, "moderate" in the sub-dimension of technological complexity, and "frequent" in the anxiety sub-dimension. It was also inferred that the effect size of the subjective norm sub-dimension, which is one of the sub-dimensions with significant differences, was larger than the other dimensions.

When Table 6 was considered, statistically significant differences were found in favor of the coaches who had sufficient opportunity in facilitating conditions and self-efficacy sub-dimension based on the technological opportunity variable of the coaches. It is seen that the effect size of the facilitating conditions sub-dimension, among these sub-dimensions, in which a significant difference was detected, compared with the other dimension.

DISCUSSION

The research results, which was conducted to determine the attitudes and level of use of the coaches working in the Turkish leagues towards the use of technological equipment in training and competition, concluded that while there was no statistically significant relationship between the age of the coaches and the sub-dimensions of the technology usage scale, it was found that there was a negative and low-level significant relationship between the technological complexity and anxiety sub-dimensions and the variable of years of coaching (Table 2). The fact that the participants did not show a statistically significant difference in terms of sub-dimensions by the age variable can be attributed to the fact that the average age of 205 coaches, who participated in this study and were between 18 and 65 years old. To this end, it is known that young people adapt quickly to technological developments and also show a rapid change in the use and access of information through technological tools (Cakmak and Yalcin, 2013). Based on this result, it can be suggested that the young coaches included in the study adapt quickly to technological change and use technological opportunities easily. Based on the years of coaching, 40% of the participants had been coaching for 1-10 years and 60% had been coaches for 11-35 years. The negative relationship between the age of coaching and the sub-dimensions of technological complexity and anxiety in our study may be due to the advanced age of the coaches ($\geq$40 years). Studies on the subject revealed that although technological innovations increase the welfare of elderly individuals, they are the last group to adopt innovations involving products, services, or ideas when compared to young people (Ozkan and Purutcuoglu, 2010). The reason for this is that technology shows some complex features, problems related to skillfulness and mobility of the elderly, technical terms, and their perceptions that technology is dangerous, expensive, complicated, surprising, and difficult to learn (Blaschke et al., 2009). Due to these reasons it may cause coaches with many years of experience to feel confusion and or feel worried when using technology.

When the present study was considered in terms of sex, there is a statistical difference in the sub-dimensions of compatibility in favor of male coaches and subjective norms compared to female coaches (Table 3). In other words, it can be argued that male coaches use technology more than women, that it is a critical necessity for their profession, and that the people around them (athletes, managers, etc.) accordingly have high expectations from them. Nevertheless, some researchers

Table 6. Differences between the technological opportunity variable and the sub-dimensions of the scale (MANOVA).

Variable	Opportunity	N	x	Std.	df	F	p	η 2	Difference between groups
Perceived usefulness	Insufficient	61	4.54	0.63	2-202	0.56	0.567	0.006	
	Limited	107	4.45	0.71					
	Sufficient	37	4.40	0.57					
Perceived ease of use	Insufficient	61	4.04	0.78	2-202	0.92	0.399	0.009	
	Limited	107	4.17	0.67					
	Sufficient	37	4.22	0.54					
Attitude towards use	Insufficient	61	4.39	0.70	2-202	0.27	0.760	0.003	
	Limited	107	4.32	0.69					
	Sufficient	37	4.40	0.46					
Behavioral intention	Insufficient	61	4.27	0.66	2-202	0.27	0.760	0.003	
	Limited	107	4.33	0.65					
	Sufficient	37	4.36	0.50					
Facilitating conditions	Insufficient	61	3.93	0.70	2-202	2.62	0.**025***	0.025	LSD sufficient > insufficient
	Limited	107	4.08	0.67					
	Sufficient	37	4.25	0.52					
Perceived enjoyment	Insufficient	61	4.11	0.67	2-202	0.78	0.460	0.008	
	Limited	107	4.09	0.76					
	Sufficient	37	4.25	0.50					
Self-efficacy	Insufficient	61	4.18	0.69	2-202	2.47	**0.037***	0.024	LSD sufficient > insufficient
	Limited	107	4.34	0.57					
	Sufficient	37	4.44	0.47					
Technological complexity	Insufficient	61	3.27	0.96	2-202	0.22	0.803	0.002	
	Limited	107	3.32	0.94					
	Sufficient	37	3.20	0.99					
Compatibility	Insufficient	61	4.10	0.67	2-202	0.21	0.805	0.002	
	Limited	107	4.14	0.82					
	Sufficient	37	4.21	0.68					
Anxiety	Insufficient	61	3.51	1.06	2-202	1.60	0.203	0.016	
	Limited	107	3.69	0.88					
	Sufficient	37	3.85	0.79					
Subjective norms	Insufficient	61	3.77	0.69	2-202	0.18	0.831	0.002	
	Limited	107	3.70	0.74					
	Sufficient	37	3.70	0.70					

did not find a significant difference between woman and man coaches in the attitudes of technology usage in sports (Lieberman et al., 2005; Mohammadi et al., 2013). One of the reasons being a significant difference between female and male coaches in this current study may stem from being low number of female coaches working in the sports environments. This may have a negative impact on women‟s feelings of staying in the background and their attitudes towards technology. When the literature on the subject is examined, it is seen that female employees who have to work using technology are affected by gender discrimination and experience technostress and technophobia psychologically (Savci, 1999). In their study, Atilgan and Tukel (2021) concluded that female coaches and physical education teachers have lower individual innovative perceptions than men, and they tend to take fewer risks. When these results are analyzed together, we can suggest that female coaches tend to use technology less than male coaches and that they feel inadequate and incapable of technology due to gender-based social pressure.

According to the seniority variable, it can be suggested

that 3rd level coaching certificate differ statistically in the perceived usefulness sub-dimension and have a higher mean score than their colleagues with the 1st and 2nd level coaching certificates, and the effect size of the perceived usefulness sub-dimension is larger than the other dimensions (Table 4). According to this result, it can be indicated that 3rd level coaches use technology more widely in training and competitions than their 1st and 2nd level colleagues. Level 3rd coaches are head coaches whose leadership aspect is more prominent than lower-level coaches. For this reason, the main task of these coaches is to train, motivate, organize and provide the necessary knowledge and skill for individuals who want to participate in sport. A qualified coach should research the necessary information and technologies in light of science and use them for the success of his/her athletes to enable them to gain these skills (Sagsan et al., 2016). In the evaluation of the performance of the athletes, the analyzes of the matches they played and the training undertaken are generally used. In other words, making the right decision, applying the right skills, and acting together with teammates, that is, support activities, have become very important in the analysis of the matches, especially with the fact that the games have started to be played very quickly in today‟s sports (Cakit and Karadeniz, 2020). For instance, the performance of the AC Milan football team in the European Cup and World Cup of Soccer in 2005 and 2006 was examined by sports scientists and linked to NFB (Neuro Feedback) and BFB (Biological Feedback) training of initiatives that affect their success. Bruno Demichelis applied the Milan model, which he determined as the „Mind Room,‟ to the English Chelsea club football team. The Mind Room model aims to control the comfort, arousal, and focus on the field by using meditation, physiological relaxation, and imagery techniques (Perry et al., 2011). In light of this information, coaches can maximize their own and their athletes‟ performance by using technology frequently and continuously to achieve success.

According to the variable of frequency of use of technology by coaches, it is statistically significant in the perceived usefulness, behavioral intention, perceived ease of use, self-efficacy, and subjective norms sub-dimensions in favor of those who use it “very often,” in the technological complexity sub-dimension in favor of those who use it “moderately,” and in the anxiety sub-dimension in favor of those who use it “frequently.” It was seen that the effect size of the subjective norms sub-dimension, which is one of the sub-dimensions with significant differences, was higher than the other dimensions (Table 5). When these results are evaluated together, it can be asserted that the coaches who use technology very often use technology comfortably, their work becomes more manageable, they find it fun to use technology, and thus they can meet the expectations of the athletes and administrators around them. On the other hand, coaches who use technology moderately, emphasize that they experience anxiety due to the risk of making mistakes, while coaches who use technology at a moderate level emphasize that they experience difficulties in using technology and lose much time.

Today there are many expectations for high-level athletes preparing for global competitions and Olympic Games; such as increasing their technical capacity, preventing injury, creating safe training facilities and the desire of the athletes to attain a high level of performance – which requires the adoption of sport technology to attain the best results for the athlete. „Best results‟ combing traditional coaching methods with sports technology although the latter can be costly (Camkiran et al., 2021).

Statistically significant differences were found in favor of the coaches who had sufficient opportunities in facilitating conditions and self-efficacy sub-dimension according to the technological opportunity variable of the coaches (Table 6). According to the Technology Acceptance Model, the level of use of information technology is primarily affected by the behavioral intention factor. Perceived usefulness and ease of use have positive effects on an individual‟s behavioral intention (Civici and Kale, 2007). Based on these findings coaches with sufficient technological knowledge also use technology well and can also access technical support when needed.

According to Akpinar‟s (2003) study on teachers, it was determined that teachers who completed their higher education in major cities use technology more in their work for out-of-class education than those who completed their higher education in cities in the Eastern, South Eastern, and Central Anatolia Regions. In the study conducted by Yilmaz (2008), it was concluded that two-thirds of the teaching staff in Turkey do not find the institutions within which they work to be adequately equipped in terms of technology. A similar study was conducted by Uzum et al. (2020) on students studying at the faculty of sports sciences, and a significant difference in the use of technology was found between the students of the Coaching Department and the Sports Management Department students in favor of the Coaching students. According to these results, it was emphasized that it is necessary to develop computer and technology skills, and attitudes, for students in Faculties of Sports Sciences, to improve existing facilities on University sites, furthermore to develop the level of sports technology in school. From this point of view it can be suggested that University Departments that train coaches should also provide sufficient technological opportunities for coaches in their Educational Programs.

Conclusion

According to the findings of this study, it can be suggested that the coaches working at various levels in

individual and team sports in Turkey tend to use technology very often in line with the opportunities they have in competitions and training. It was determined that young coaches use technology more efficiently and adapt to change more quickly, whereas older coaches have difficulties and anxiety in learning to use technology. On the other hand, female coaches were not proficient in using technology, and they say that they are not expected to do so. Consequently, the authors can say that the coaches have a positive attitude towards the use of technology and try to use it at the highest level. It is highly recommended for sports federations and clubs to provide coaches with technological tools and equipment in the field they need and work to increase coaches‟ motivation to use technology, and provide more detailed training on the use of technology in coaching programs.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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