




## Examining the Individual Innovativeness and Online Learning Attitudes of Academic Staff in Institutions Providing Sports Training at the Level of Bachelor Degree

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### Abstract

The purpose of this study was to examine the individual innovativeness and online learning attitudes of academic staff carrying out duty in institutions providing education at the level of bachelor degree in Turkey. The study was conducted online across Turkey via the correlational survey model between September 2020 and November 2020. The population of the study comprised academic staff carrying out duty in faculties of sports sciences in state universities in Turkey. The sample group consisted of 104 academicians who carry out duty in faculties of sports sciences in state universities chosen randomly from the seven regions in Turkey and agreed to participate in the study. The data of the study were collected using the "Personal Information Form", "Individual Innovativeness Scale (IIS)" and "Online Learning Attitude Scale (OLAS)". The findings of the study showed that the participants obtained medium mean scores from the general acceptance subscale of online learning attitude scale, lower mean scores from the individual awareness subscale, medium mean scores from the perceived usefulness and application effectiveness subscale, and medium mean scores from the overall online learning attitude scale. On the other hand, the individual innovativeness scale mean scores of the participants were evaluated in the innovator category. As a consequence, it was observed that there was a statistically significant, positive, and high correlation between the online learning attitude and individual innovativeness levels of the participants. Accordingly, as the individual innovativeness levels of the participants increased, their online learning attitude levels increased.

**Keywords:** Individual innovativeness, Online learning attitude physical education and sports, Academic staff.

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**Ethical:** This study follows all ethical practices during writing.

### Contents

1. Introduction .....	164
2. Material and Method.....	164
3. Findings .....	165
4. Discussion.....	167
References.....	167

### Contribution of this paper to the literature

The purpose of this study was to examine the individual innovativeness and online learning attitudes of academic staff carrying out duty in institutions providing education at the level of bachelor degree in Turkey. The study was conducted online across Turkey via the correlational survey model between September 2020 and November 2020.

## 1. Introduction

In a globalising world, the role of information technologies in education has considerably increased. As of 2020, the COVID-19 virus has created the need for a new modelling in education and the concept of online learning has become important for students and teachers to realize effective, continuous and useful educational processes. In parallel with this modelling, individual innovativeness which is among primary concepts having importance in adapting to technological developments, is defined by Yuan and Woodman (2010) as developing, adopting or applying an innovation. The literature has studies suggesting that there is a need for work (following, adapting, developing) to integrate the current one into the relevant area. Ayhan (1999) states that the concept of innovativeness affects the formal education process from preschool until university and is in interaction with lifelong education which comprises the professional experiences of employees and administrators.

It is seen that the internet, which is increasingly used every passing year, also has a significant effect on education life. Especially together with the inclusion of the internet in daily lives; democratisation in access to information, dictionaries, articles and archives, digital private and public libraries, electronic encyclopaedias, digital books, blogs that are presented as web products, discussion forums enabling information exchange, social networks and web pages have become just a click away. This digital transformation radically changes the information access and sharing (Taşkıran, 2017). When evaluating the desire of human beings, who play a major role in the change of the world, to reach the new at individual level, this desire has brought out the concept of individual innovativeness which is an important concept. Individual innovativeness is the individual's application of new and useful opinions by using his/her technical knowledge and experience at the right time on condition that his/her circumstances and all opportunities he/she has obtained are under his/her control. In communities where individual innovativeness has gained importance, the desire of exploring the new, developing the innovation and increasing the competition has also increased instead of the desire of just using the new (Akay & Gürkan, 2021).

Rogers (2003) summarised basic characteristics related to innovativeness as follows:

- Innovators: Individuals who are willing to try new opinions and take risk and have a vision.
- Early Adopters: Technology-oriented and guiding individuals who inform other individuals in society about innovations.
- Early Majority: Individuals who are cautious against innovations and are not so willing to take risk.
- Late Majority: Individuals who display a sceptical and timid attitude toward innovations.
- Laggards: Individuals who approach change with prejudice and tend to adopt innovations as a final step.

Innovativeness as a process begins with defining the problem, continues with developing suggestions and opinions aimed at the solution of the problem and ends with creating innovations to be prepared for the application. One of the resources of this process is to what extent the individual possesses this characteristic (Yılmaz & Bayraktar, 2014). Based on all these primary characteristics, it is possible to define an innovative trainer as a person who develops himself/herself in his/her profession, organizes activities in line with his/her curriculum, investigates and examines student-centred new methods, updates his/her behaviours and adapts new capabilities into his/her education life (Ritchhart, 2004). Web-based learning environments like online learning environment are easily accessible systems which offer both users and instructors independence of time and space and solve the capacity problem (Guzley, Avanzino, & Bor, 2001). Although these systems solve the time and space problems of departments providing theoretical education, it is thought that they do not fully meet the education needs of practice-content departments like sports departments. Technological developments have brought along many positive/negative changes in our way of learning as in our commercial, marketing and shopping habits. In our era, the most important change is experienced in the area of communication. Technological developments manifest primarily in the area of communication and they make their presence felt in society (Güçdemir, 2015).

Considering both in pedagogical and technical terms, the area of online teaching is rapidly changing and developing. Technological developments not only facilitate developing new software and hardware, but also direct researchers to constantly analyse the success of theories and concepts between the media, technology and teaching strategies. However, researchers have a difficulty in extending the concepts concerning what knowledge, skills and attitudes are necessary for the success of online teaching (Watkins, Leigh, & Triner, 2004).

In Turkey, concepts like open university, online learning, e-learning, distance education, internet education, distance teaching, web-based teaching, internet-based teaching, informal education, flexible learning and virtual education are encountered frequently. Although there are little differences between the concepts, these concepts can be interchangeably used in the universal literature (Ozkul & Aydin, 2012). Today, online learning processes close to these concepts have begun to be seen in the field of sports sciences. The fact that most state universities include sports sciences departments in their open university and distance education programs stresses the importance of this study. It is because the gradually decreasing physical capacity of physical education and sports department students (Ocak, 2016) indicates the place of the concepts of online learning and application in the field of sports sciences.

## 2. Material and Method

### 2.1. Type of the Study

This is a correlational survey study.

### 2.2. Time and Place of the Study

The study was conducted online across Turkey between September 2020 and November 2020.

### 2.3. Population and Sample of the Study

The population of the study comprised academic staff working in faculties of sports sciences in state universities in Turkey. The sample group consisted of 104 academicians working in faculties of sports sciences in state universities chosen randomly from the Mediterranean, Eastern Anatolia, Aegean, South-eastern Anatolia, Central Anatolia, Black Sea and Marmara regions in Turkey and were voluntary to participate in the study.

### 2.4. Data Collection

The data were collected in an online environment by the researcher from the people who met the inclusion criteria and were voluntary to participate in the study between September 2020 and November 2020.

### 2.5. Data Collection Tools

The data of the study were collected using the “Personal Information Form”, “Individual Innovativeness Scale (IIS)”, and “Online Learning Attitude Scale (OLAS)”.

#### 2.5.1. Personal Information Form

It is a 2-question questionnaire prepared by the researcher containing questions related to age and academic title.

#### 2.5.2. Individual Innovativeness Scale (IIS)

The Turkish adaptation of the Individual Innovativeness Scale, which was developed by [Hurt, Joseph, and Cook \(1977\)](#), was conducted by [Kılıçer and Odabaşı \(2010\)](#). The five-point likert scale comprises a total of 20 items. The lowest and highest scores of the scale are 14 and 94, respectively. According to the scores calculated on the basis of the scale, individuals can be categorized in the context of innovativeness. Accordingly, individuals are interpreted to be; “Innovator” if the score is above 80, “Early Adopter” if the score ranges from 69 to 80, “Early Majority” if the score ranges from 57 to 68, “Late Majority” if the score ranges from 46 to 56 and “Laggard” if the score is below 46. In addition, it is usually possible to make an evaluation concerning the innovativeness level of individuals according to the score calculated with the help of the scale. Accordingly, individuals getting a score above 68 points are evaluated to be highly innovator, while individuals getting a score below 64 points are evaluated to be less innovator. In this study, the Cronbach’s alpha coefficient of the scale was found to be .84.

#### 2.5.3. Online Learning Attitude Scale (OLAS)

The scale was developed by [Usta, Uysal, and Okur \(2016\)](#). The 20-item scale is a five-point likert scale with 4 subscales (general acceptance, individual awareness, perceived usefulness and application effectiveness). In this study, the Cronbach’s alpha coefficient of the scale was found to be .89.

#### 2.5.4. Data Assessment

The SPSS 26 package program was used to assess the data. After transferring the data which was collected via the data collection tool, in the electronic environment, the normality testing was performed first. Upon detecting that the data were not normally distributed, non-parametric analyses were performed.

## 3. Findings

**Table-1. Information about Demographic Variables of the Participants.**

		n	%
Age	25-29	8	7.7
	30-34	10	9.6
	35-39	32	30.8
	40-44	24	23.1
	45-49	16	15.4
	50+	14	13.5
Title	Research Assistant	24	23.1
	Lecturer	28	26.9
	Assistant Professor	22	21.2
	Associate Professor	24	23.1
	Professor Dr.	6	5.8
Total		104	100

Examining the [Table 1](#), it was observed that most of the participants were aged between 35 and 39 years and were working in the lecturer staff.

**Table-2. The Online Learning Attitude Scale and Individual Innovativeness Scale Mean scores of the Participants.**

		N	Min	Max	X±SD
Online Learning Attitude	General Acceptance (GA)	104	1	5	3.20±.715
	Individual Awareness (IA)				2.04±.866
	Perceived usefulness (PU)				2.83±1.226
	Application Effectiveness (AE)				2.87±1.063
	Online Learning Attitude Scale Total Score				2.73±.745
Individual Innovativeness		104	14	94	72.06±9.324

When examining the [Table 2](#), it was observed that the participants’ general acceptance subscale mean score of online learning attitude scale was medium, individual awareness subscale mean score was low, mean scores of perceived usefulness and application effectiveness subscales were medium and online learning attitude scale total

mean scores were medium. On the other hand, the individual innovativeness scale mean scores of the participants were evaluated in the innovator category.

**Table-3.** Comparison of the online learning attitude scale and individual innovativeness scale mean scores of the participants according to their academic titles.

Factor	Variable	N	Mean Rank	sd	X <sup>2</sup>	p	Difference
General Acceptance	Research Assistant	24	66	4	20.981	.000	3<1,4
	Lecturer	28	54.89				
	Assistant Professor	22	49.43				
	Associate Professor	24	32.27				
	Professor Dr.	6	79.5				
Individual Awareness	Research Assistant	24	74.42	4	37.578	.000	2<1,5 3<1,5 4<1,5
	Lecturer	28	41.96				
	Assistant Professor	22	34.3				
	Associate Professor	24	48.69				
	Professor Dr.	6	96				
Perceived usefulness	Research Assistant	24	68.33	4	22.677	.000	4<1,5
	Lecturer	28	46.79				
	Assistant Professor	22	57.39				
	Associate Professor	24	32.85				
	Professor Dr.	6	76.5				
Application Effectiveness	Research Assistant	24	71.33	4	25.719	.000	4<1,3 2<1
	Lecturer	28	40.89				
	Assistant Professor	22	61.64				
	Associate Professor	24	34.83				
	Professor Dr.	6	68.5				
Online Learning Attitude Scale Total Score	Research Assistant	24	73.44	4	11.513	.000	4<1,5 2<1,5 3<5
	Lecturer	28	41.57				
	Assistant Professor	22	51.84				
	Associate Professor	24	35.17				
	Professor Dr.	6	91.5				
Individual Innovativeness	Research Assistant	24	53.79	4	33.385	.021	3<5
	Lecturer	28	45.48				
	Assistant Professor	22	42.48				
	Associate Professor	24	62.58				
	Professor Dr.	6	76.5				

When examining the Table 3, it was observed that there were statistically significant differences between the online learning attitude and subscale mean scores and individual innovativeness scale mean scores of the participants according to their academic titles.

**Table-4.** Comparison of the online learning attitude scale and individual innovativeness scale mean scores of the participants according to their age groups.

Factor	Variable	N	Mean Rank	sd	X <sup>2</sup>	p	Difference
General Acceptance	25-29	8	54.81	5	13.704	.018	2>5
	30-34	10	74.95				
	35-39	32	53.69				
	40-44	24	55.33				
	45-49	16	31.53				
	50+	14	54.54				
Individual Awareness	25-29	8	70.56	5	21.474	.001	2>3,4,5
	30-34	10	83.25				
	35-39	32	49.33				
	40-44	24	38.5				
	45-49	16	44.16				
	50+	14	61				
Perceived usefulness	25-29	8	82.13	5	42.043	.000	4<1,2,3 5<1,2,3
	30-34	10	82.45				
	35-39	32	62.86				
	40-44	24	30.42				
	45-49	16	32.75				
	50+	14	50.93				
Application Effectiveness	25-29	8	74.38	5	37.159	.000	4<1,2,3 5<1,2,3
	30-34	10	68.85				
	35-39	32	69.13				
	40-44	24	34.67				
	45-49	16	27.03				
	50+	14	50				
Online Learning Attitude Scale Total Score	25-29	8	71.75	5	39.586	.000	4<1,2,3 5<1,2,3
	30-34	10	80.6				
	35-39	32	61.36				
	40-44	24	34.75				
	45-49	16	32.41				
	50+	14	54.57				
Individual Innovativeness	25-29	8	71.88	5	30.338	.000	4>2,3,5,6 5<1,3
	30-34	10	44.05				
	35-39	32	50.27				
	40-44	24	78.				
	45-49	16	21.53				
	50+	14	44.25				



When examining the Table 4, it was observed that there were statistically significant differences between the online learning attitude and subscale mean scores and individual innovativeness scale mean scores of the participants according to their age groups.

**Table-5. Correlation between the individual innovativeness and online learning attitude levels of the participants.**

	Online Learning Attitude	
	r	p
Individual Innovativeness	738**	.000

Note: \*\* (p<0.01).

When examining the Table 5, it was observed that there was a statistically significant, positive and high correlation between the online learning attitude and individual innovativeness level of the participants. Accordingly, as the individual innovativeness level of the participants increased, their online learning attitude level increases.

#### 4. Discussion

The level of technological facilities affects the person's motivation. The level and value of the benefit to be obtained from the use of technology may make a contribution as an additional motivation in learning and teaching (Sadeck, Chigona, & Cronjé, 2020). In this study examining the online learning attitude and individual innovativeness level of academicians in faculties of sports sciences in state universities in Turkey, the following results were obtained. It was observed that the participants' general acceptance subscale mean score of online learning attitude scale was medium, individual awareness subscale mean score was low, mean scores of perceived usefulness and application effectiveness subscales were medium and total mean score of online learning attitude scale was medium. In the study conducted by Krzyszkowska and Mavrommati (2020) with teachers in Norway, they stated that the individual innovativeness level of teachers played a key role in the development of practical knowledge and skills. On the other hand, the individual innovativeness scale mean scores of the participants were evaluated in the innovator category. Accordingly, it can be stated that the results of the present study are compatible with the inference acquired at the end of the study conducted by Lu, Yao, and Yu (2005) suggesting that the acceptance of technology-oriented innovativeness is one of the most important factors in the effective use of technology.

When examining the online learning attitude and individual innovativeness level of the participants according to their academic titles, it was observed that the participants with associate professor title had lower mean ranks compared to the participants with research assistant and professor doctor title, at a statistically significant level. In the online learning attitude individual awareness subscale, it was seen that the participants with research assistant and professor doctor title had higher mean ranks compared to the participants with lecturer, assistant professor, and associate professor title, at a statistically significant level. In the perceived usefulness subscale of online learning attitude scale, the participants with associate professor title had lower mean ranks compared to the participants with research assistant and professor doctor title, at a statistically significant level. In the application effectiveness subscale of online learning attitude scale, the participants with associate professor title had lower mean ranks compared to the participants with research assistant and assistant professor title, at a statistically significant level and the participants with research assistant title had higher mean ranks compared to the participants with lecturer title, at a statistically significant level. When examining the total mean scores of the online learning attitude scale, it was determined that the participants with professor doctor title had higher mean ranks compared to the participants with lecturer, assistant professor and associate professor title and the participants with research assistant title also had higher mean ranks compared to the participants with lecturer and associate professor title, at a statistically significant level. On the other hand, upon examination of the individual innovativeness scale scores of the participants, it was found that the participants with professor doctor title had higher mean ranks compared to the participants with assistant professor title, at a statistically significant level.

When the online learning attitude and individual innovativeness level of the participants according to their age groups were analysed, it was found that in the general acceptance subscale of online learning attitude scale, the participants from age range of 30- 34 years had higher mean ranks compared to the participants from age range of 45 - 49 years, at a statistically significant level. In the individual awareness subscale of the online learning attitude scale, the participants aged between 30 and 34 years had higher mean ranks compared to the participants from age ranges of 35 and 39 years, 40 and 44 years and 45 to 49 years, at a statistically significant level. In the perceived usefulness and application effectiveness subscales of the online learning attitude scale and in the online learning attitude scale total score, the participants from age ranges of 40 and 44 years and 45 to 49 years had lower mean ranks compared to the participants from age ranges of 25 and 29 years, 30 and 34 years and 35 and 39 years, at a statistically significant level. On the other hand, when examining the individual innovativeness scale scores of the participants, it was observed that the participants from age range of 40 and 44 years had higher mean ranks compared to those from age ranges of 30 and 34 years, 35 and 39 years, 45 and 49 years and 50 years and above, at a statistically significant level and the participants aged 45 to 49 years had lower mean ranks compared to the participants from age ranges of 25 and 29 years and 35 and 39 years, at a statistically significant level.

It was seen that there was a statistically significant, positive and high correlation between the online learning attitude and individual innovativeness level of the participants.

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