

## INTRINSIC MOTIVATION OF DISTANCE LEARNERS IN HIGHER EDUCATION INSTITUTIONS

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### ABSTRACT

As information and communication technologies and learner characteristics in higher education develop, so do distance education methods, which are implemented at various levels by higher education institutions. The involvement of students in the learning process is one of the most crucial factors to consider throughout the distance education application transformation, which might change depending on the conditions. At this point, it can be stated that the intrinsic motivation levels of learners involved in distance learning play a decisive role in participating in learning processes. Therefore, examining the intrinsic motivation levels of distance learners is seen as an element that needs to be emphasized. This justifies the study's goal, which is to analyze the intrinsic motivation levels of students who get distance education from higher education institutions concerning factors including age, gender, employment, and educational status. The relational survey model, one of the general survey models, was utilized in this study, which included 327 distance learners. In terms of distance education applications, the findings of the study have a guiding nature for the administrators working in higher education institutions. The analyses carried out revealed that there were no significant differences in the intrinsic motivation levels of distance learners according to their gender, employment situation, or level of education. Furthermore, it has been found that as people get older, their intrinsic incentive for learning grows. A list of recommendations based on the data gathered within this study is provided at the end.

**Keywords:** Distance learning, distance learners, higher education, intrinsic motivation, survey model.

### INTRODUCTION

In distance learning, intrinsic motivation is a factor that starts and maintains the learner's self-directed learning (Moore, 1993), which is an important determinant of academic performance in distance learning environments and is needed by learners in these milieus (Alonso, Velez & Martinez-Monteagudo, 2023; Aydug & Altinpulluk, 2022; Cerasoli, Nicklin, & Ford, 2014; Zhou & Zhang, 2023). In addition, students participating in distance learning environments require greater levels of intrinsic motivation than students participating in face-to-face learning milieus (Alamri, Lowell, Watson, & Watson, 2020; Firat, Kilinc, & Yuzer, 2018; Malinauskas & Porien, 2020; Mendoza, Yan & King, 2023). For this reason, intrinsic motivation must be thoroughly researched across all domains, particularly in distance learning contexts (Chen & Jang, 2010; Firat et al., 2018).

There are many studies on the intrinsic motivation levels of learners in online environments (Borkowska, 2022; Cerasoli et al., 2014; Kilinc, 2020; Simons, Leverett, & Beaumont, 2020; Senocak, Buyuk, & Bozkurt, 2019; Yildirim et.al., 2023). In the studies, intrinsic motivation has been examined in terms of variables such as academic achievement (Nadile, 2019; Simons et al., 2020), satisfaction (Shonfeld & Magen-Nagar, 2020), engagement (Wei, Wang, Yang, Wang, & Cheng, 2019), perceived learning (Horzum, Kaymak, & Gungoren, 2015). However, the number of studies examining intrinsic motivation levels within the scope of the characteristics of learners in distance learning environments is insufficient (Alamri et al., 2020; Firat et al., 2018; Yildirim et.al., 2023). Considering that the element of intrinsic motivation in distance learning environments significantly affects the participation of learners in the learning processes (Firat et.al. 2018), it can be stated that it is necessary to examine this variable in more detail within the scope of the relevant literature. Examining the variables related to the intrinsic motivation of distance learners in detail is considered an important point so that learners can have more intrinsic motivation and richer learning experiences in distance learning environments (Alonso, Velez & Martinez-Monteaagudo, 2023). Otherwise, the intrinsic motivation of learners involved in distance learning environments may not increase. This situation may lead to learners showing drop-out behavior, poor learning outcomes, and an inability to actively participate in the learning processes. In addition, the demographic characteristics of learners affect intrinsic motivation (Alamri et al., 2020), examining intrinsic motivation in the context of demographic characteristics emerges as an area that needs to be studied. In support of this view, Keser (2019) emphasized that there are demographic factors that affect intrinsic motivation, such as age, gender, education level, marital status, seniority, status of the employee, and cultural and ethnic differences. Additionally, Kiroglu (2007) noted that one of the elements affecting intrinsic motivation is the fact that people have various demographic traits, which cause personal variations. Accordingly, it is believed that this study, which intends to evaluate intrinsic motivation in terms of factors like age, gender, employment, and educational status, which are among the demographic features of learners, will help to close the knowledge gap in the area. In addition, it can be noted that this study's findings have a guiding nature for administrators working in higher education institutions who are considering distance learning applications. In this context, the research questions identified in this study are as follows: Do the intrinsic motivation levels of distance learners show;

- a significant difference according to their age?
- a significant difference according to their gender?
- a significant difference according to their employment status?
- a significant difference according to their education level?

## THEORETICAL FRAMEWORK

Motivation, which is one of the most important factors affecting the speed, intensity, direction, and persistence of human behavior (Firat et al., 2018), is one of the most important components of learning processes (Chaiprasurt & Esichaikul, 2013). Motivation, which is defined as a process that initiates and sustains behaviors (McMillan & Forsyth, 1991), helps learners acquire knowledge, develop social qualities, participate more in learning processes, improve their performance, and develop a sense of discipline (Singh, Singh, & Singh, 2012). Schunk, Pintrich, and Meece (2008) define motivation, which has a positive relationship with academic achievement, academic performance, and willingness to learn (Frymier, Norris, Henning, Henning, & West, 1975), as the process of triggering and sustaining goal-oriented activity. Keller (1979) defines motivation as the process of stimulating, managing, and maintaining behaviors. According to this perspective, motivation can be thought of as the force that propels a person in the direction of a particular objective.

The process of teaching and learning heavily depends on the learners' motivation (Keller, 1979; Keller, 2010). From this vantage point, it can be concluded that factors that will favorably impact learners' motivation both throughout face-to-face and distance learning processes should be used. Motivation, however, explains one of the factors that contribute to a learner's success or failure in a learning environment (Fryer & Bovee, 2016). Motivation influences what, how, and when learners learn in distance learning settings (Barak, Watted, & Haick, 2016). According to conducted research, highly motivated students succeed in difficult learning conditions, like the learning process, engage in deep learning, and are dedicated and creative (Semmar,

2006). However, numerous research studies have demonstrated that learners' motivation levels in distance learning settings harm their ability to learn (Chen & Jang, 2010). In light of this, it can be claimed that motivation in distance learning settings is a factor that will boost ongoing interaction and engagement in these environments (Cerasoli, Nicklin, & Ford, 2014). However, some research has shown that preparedness for learning and perceived learning are strongly correlated with motivation (Ferreira, Cardoso, & Abrantes, 2011; Saeid & Eslaminejad, 2017). In this regard, it can be argued that understanding the variables that can favorably or unfavorably affect learners' motivation in distance learning environments—and building a learning environment in this direction—is crucial to the effectiveness of the learning process (Kilinc, 2020).

A person's motivation can be divided into three categories under the Self-Determination Theory, which was developed by Ryan and Deci (2000) and is based on learner autonomy: intrinsic motivation, extrinsic motivation, and demotivation. According to Ryan and Deci (2000), extrinsic motivation is expressed by external rewards like avoiding punishment, competing for rewards, and doing well in school, but intrinsic motivation, which enables the individual to behave willingly, constitutes the individual's reactions to internal demands. On the other hand, demotivation is defined as a circumstance in which the person has no intention of doing it (Ryan & Deci, 2000).

Intrinsically motivated students don't require outside rewards, in contrast to extrinsically motivated ones (Deci, Koestner, & Ryan, 2001). Moreover, intrinsic motivation is the interest in, and enjoyment of, an activity that cannot be attributed to external factors (Zheng, Janiszewski & Schreier, 2023). However, whereas extrinsically driven learners embrace elements of gain and loss that are purely instrumental (like rewards), intrinsically motivated learners embrace elements that they view as valuable (like enjoying the task) (Fishbach & Woolley, 2022). Extrinsically motivated learners prefer to be more passive, whereas highly intrinsically motivated learners frequently find sufficient reasons to continue with the work (Benware & Deci, 1984).

According to several research (Bonk & Khoo, 2014; Brophy, 2010; Keller, 2008; Zhou & Zhang, 2023), learner motivation is a required and even sufficient requirement for success in distance learning processes. It is thought that a motivated learner will have the opportunity to quickly overcome limitations such as space and time with distance learning to achieve the system's targeted learning outcomes and be successful. However, the extent to which people are intrinsically motivated predicts persistence and performance in the workplace, academics, health behaviors, and more (Fishbach & Woolley, 2022).

Learners' motivation in distance learning is influenced by numerous factors (Yildirim et.al., 2023). Both internal and extrinsic factors apply to these variables (Kim & Frick, 2011). The technologies utilized in the learning process, instructional design, learner support services, and the degree of teacher-learner interaction are examples of extrinsic variables. On the other hand, intrinsic factors make up the components in which the demand for learning and a sense of achievement emerge in particular situations (Firat et al., 2018; Yildirim et. al., 2023). Because they spend the majority of their learning time alone and lack the extrinsic motivational factors found in face-to-face learning environments, learners participating in distance learning environments need intrinsic motivation (Alamri et al., 2020; Firat et al., 2018). Additionally, as there is frequently no teacher or counselor present in distance learning environments to support and encourage the learner during the learning process, the intrinsic motivation element is crucial for students' performance in these settings (Firat et al., 2018; Zhou & Zhang, 2023). In addition, to increase students' intrinsic motivation in class, teachers relied on need-supportive teaching, which creates a learning environment that supports students' basic psychological needs for relatedness, competence, and autonomy (Mendoza, Yan & King, 2023).

One of the variables examined within the scope of the study is gender. Studies examining gender differences in students' intrinsic and extrinsic motivation have reported mixed results. Green and Foster (1986) found women to be more intrinsically motivated than men according to classroom curiosity levels. On the contrary, other studies have found women to be more extrinsically motivated (Davis, Winsler, & Middleton, 2006). With this, Makedonka, Elena & Snezana (2022) stated that there was no significant difference between gender and intrinsic motivation. Therefore, it can be stated that different results were obtained on this issue depending on the contexts of the studies and the participant groups.

Another variable examined within the scope of the study is education level. For this variable, as with the gender variable, it is not possible to reach a clear conclusion about its relationship with intrinsic motivation. In one of the studies conducted on this subject, Firat et al. (2018) concluded that there is no significant

difference between education level and intrinsic motivation. Similar to this situation, Liu and Fang (2010), Park and Choi (2009), and Wilkesmann, Fischer & Virgillito (2012) could not find a significant relationship between the two variables in their studies. In contrast, Keumala et al. (2019) states that learners' intrinsic motivation is related to their education level. According to this, the fact that the level of education is related to the experiences of the students and their ability to transfer the information they have learned during the education process can affect the motivation of the learners. Therefore, it can be stated that as the level of education increases, experiences become richer, and this may have an impact on intrinsic motivation.

Another issue examined within the scope of the study is employment status. Riggert et al. (2006) stated in their study that there was no significant relationship between employment status and intrinsic motivation. However, Cain (2008) found a significant relationship between intrinsic motivation and employment status. Accordingly, learners who have a job and do not experience financial difficulties have higher intrinsic motivation. This can be interpreted as an indication that learners who do not experience financial difficulties can devote more time to their learning processes.

Another variable examined within the scope of the study is age. Studies conducted in the literature (Borkowska, 2022; Chyung, 2007; Hoskins & Van Hooff, 2005; Inceoglu et al., 2012; Ransdell, 2010; Inceolu et al., 2012) state that intrinsic motivation increases with age. This situation is explained by the fact that learners give priority to extrinsic motivation elements such as title and seniority at a younger age. Based on this point, it is possible to say that as learners get older, they move away from extrinsic motivational elements and give more importance to emotional satisfaction and defending their own identities.

## **METHOD**

Descriptive research, a type of quantitative research, was employed in this study. The objective of the descriptive research approach, which is popular in the field of education, is to examine and ascertain the current state of a subject (Karasar, 2008). As stated by Buyukozturk, Akmak, Akgun, Karadeniz & Demirel (2016), it is crucial to shed light on a situation, make assessments that adhere to standards, and identify any potential connections between events while using the descriptive research approach. The event, person, or thing that is the focus of the inquiry is attempted to be characterized inside its context and as it is in this method (Karasar, 2008).

### **Research Model**

In this study, in which the descriptive research method was used, the relational survey model, one of the general survey models, was employed. The general survey model is a survey conducted on the whole universe or a group, sample or sample to be taken from it to make a general judgment about the universe in a universe consisting of a large number of elements (Karasar, 2008). This approach aims to depict a situation as it is in the past or present (Karasar, 2008). The relational survey model is a study design that tries to ascertain the existence and/or magnitude of change between two or more variables (Fraenkel & Wallen, 2009; Karasar, 2008). One of the general survey models, the relational survey model, was used in the context of this study to describe the relationship between intrinsic motivation and demographic factors like age, gender, employment status, and educational attainment of students in distance learning environments. The age, gender, employment situation, and level of education are independent variables in this study, whereas the intrinsic motivation of learners is the dependent variable.

### **Participants**

The participants in this study are continuing online students at the Anadolu University Open Education Faculty. 327 online students who willingly replied to the data collecting tool supplied to them through the learning management system employed by the Anadolu University Open Education Faculty make up the study's sample. In this sense, convenience sampling, one of the non-random sample techniques, can be said to have been applied. To gather information rapidly in some study fields, the convenient sampling method—which is based on accessibility and convenience—is preferred. With this sampling technique,

the researcher works with people who are accessible and willing to volunteer for the study (Erkus, 2005). Information about the sample of the study is given in Table 1.

**Table 1.** Demographic information of the participants constituting the sample of the study

<b>Variables</b>	<b>Frequency</b>	<b>Percentage</b>
<b>Age</b>		
15-24	60	18.348
25-54	230	70.336
55-64	37	11.316
<b>Total</b>	327	100
<b>University Status</b>		
I am studying at a second university	269	82.263
I'm studying at university for the first time	58	17.737
<b>Total</b>	327	100
<b>Employment Status</b>		
Not working	109	33.333
Retired	38	11.620
I work in the public sector	95	29.051
I work in the private sector	69	21.100
I am self-employed	16	4.896
<b>Total</b>	327	100
<b>Gender</b>		
Female	220	67.278
Male	107	32.722
<b>Total</b>	327	100

## Data Collection Tool

The intrinsic motivation measure created by Firat et al. (2018) was utilized as part of this study to examine the impact of various demographic factors on the intrinsic motivation status of distance learners. The relevant author of the study gave his consent for the use of the scale. A questionnaire was also used to obtain demographic data from the students, including their age, gender, employment, and education status.

## The Scale

A previously constructed scale, the intrinsic motivation scale employed in this study has been validated and shown to be reliable. A previously established and constrained structure is validated as a model using Confirmatory Factor Analysis (CFA), a technique from the family of structural equation modeling (Cokluk, Sekerciolu, & Buyukozturk, 2012). As a result, CFA was able to demonstrate the construct validity of the scale that was used to gather data for the study. As a result, the fit indices of the intrinsic motivation scale that was employed in the research. According to this, compliance values are respectively;  $\chi^2/sd$  as 3.30, RMSEA as .090, CFI as .98, TLI as .96, and SRMR as .026 obtained.

When the values are analyzed, it is seen that the  $\chi^2/sd$  value indicates good model-data fit (3.30). The SRMR value indicates excellent model-data fit (.026<.050). CFI (.98>.95) and TLI (.96>.95) also indicate excellent fit. The RMSEA value showed acceptable model-data fit (.090<1) at a mediocre level. Other statistics of the intrinsic motivation scale are reported in Table 2.

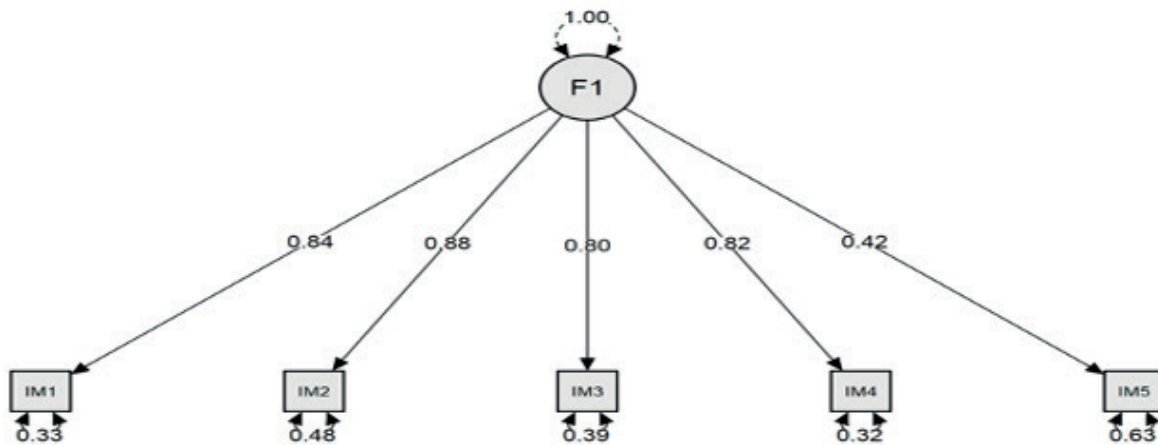
**Table 2.** Statistics of the intrinsic motivation scale

Item No	Factor Load	SH	p
1	.83***	.05	<.001
2	.87***	.05	<.001
3	.80***	.05	<.001
4	.81***	.05	<.001
5	.41***	.05	<.001

Cronbach  $\alpha$ : .85

As seen in Table 2, the factor loadings of the intrinsic motivation scale range between .41-.87, and these values are statistically significant at  $p < .001$  level. In this context, it can be interpreted that the factor loadings are quite high. In addition, the Cronbach  $\alpha$  coefficient obtained to determine the reliability of the intrinsic motivation scale in terms of internal consistency is .85. Considering that the lower limit for Cronbach  $\alpha$  coefficient is .70 (Takavol & Dennick, 2011), it was seen that the reliability of the intrinsic motivation scale in terms of internal consistency was achieved. In light of all these data and their interpretations, it can be concluded that the fit between the unidimensional model and the data is at an acceptable level. In other words, the unidimensional hypothetical structure was confirmed.

Figure 1 shows the standardized coefficients obtained as a result of CFA applied to the intrinsic motivation scale.



**Figure 1.** Standardized coefficients obtained as a result of CFA for intrinsic motivation scale

### Data Collection Process

Firstly, the study's conformity report from the ethics committee at a State University was acquired. The information was then gathered using the "Google Forms" application. The learning management system used by a State University was utilized to show the data collecting tool produced through Google Forms to the participants, who were first asked to consent to the voluntary participation form. This allowed researchers to contact participants who were willing to actively participate in the study. The participants' demographic data was initially gathered in the subsequent phases, and after getting their permission, scale items were presented to them.



## Data Analysis

The study's quantitative data were downloaded from Google Forms and opened in Microsoft Office Excel, and the appropriate preparations were done for SPSS 24.0 to process them. Since the type of tests to be performed in data analysis needed to be chosen before studying the research data, it was determined whether the data displayed a normal distribution. The data set's outliers were looked at in this situation. The intrinsic motivation scale collected 327 data, of which the skewness value was estimated as 0.54 and the kurtosis value as -.631. The acquired data are believed to be normally distributed because the distribution's skewness and kurtosis values fall within the range of -2 and +2 (George & Mallery, 2016; Tabachnick & Fidell, 2014).

The one-way analysis of variance (ANOVA) and independent samples t-test was utilized as parametric tests because the data were regularly distributed. Independent samples t-test was conducted for gender and university status variables; one-way ANOVA analysis was conducted for age and employment status variables. For the significance level of all statistical calculations, a value of .05 was accepted as a criterion. In addition, the effect size value, which is considered the perceived effect of the result obtained, was also calculated for the results with a significant difference. In analyzing the effect size, eta squared ( $\eta^2$ ) values were calculated. In the interpretation of the eta square value, 0 to 0.01 is considered a very small effect, 0.01-0.06 as a small effect, 0.06-0.14 as a medium effect, and 0.14 and above as a large effect (Cohen, 1988).

## Ethics Statement

This study is supported by the Ethics committee document received by A State University.

## FINDINGS

In this heading, the findings obtained for each research question of the study are presented under separate headings.

### Examination of Distance Learners' Intrinsic Motivation Levels Based on Their Age

A one-way ANOVA test was conducted to examine whether there is a significant difference between the intrinsic motivation levels of distance learners and their ages. The results of the analysis are presented in Table 3.

**Table 3.** Results of a one-way ANOVA between the age variable and the intrinsic motivation levels of distance learners

	KT	sd	KO	F	p	$\eta^2$
<b>Between Groups</b>	162.617	2	81.309	5.190	.006	.033
<b>Within Groups</b>	5076.319	324	15.668			
<b>Total</b>	5238.936	326				

As a result of the Levene test performed in the analysis, it was seen that the variances were equal ( $p=.491$ ). According to the results of the analysis, there was a differentiation between the groups ( $F=5.190$ ;  $p<.05$ ,  $\eta^2=.033$ ). The effect size was small ( $\eta^2=.033$ ). Tukey test was used as a post-hoc test to determine from which groups the statistically significant difference originated. The findings obtained as a result of the post-hoc test is presented in Table 4.

**Table 4.** Results of the post hoc test between distance learners' levels of intrinsic motivation and the age variable

(I) Age	(J) Age	Mean Difference (I-J)	sd	p	$\eta^2$	95% Confidence Interval Lower Limit	95% Confidence Interval Lower Limit
15-24	25-54	-.9428	.5738	.229		-2.294	-2.294
	55-64	-2.6626*	.8274	.004	.033	-4.611	-4.611
25-54	15-24	.9428	.5738	.229		-.408	-.408
	55-64	-1.7199*	.7011	.039	.021	-3.371	-3.371
55-64	15-24	2.6626*	.8274	.004	.033	.714	.714
	25-54	1.7199*	.7011	.039	.021	.069	.069

\*p<.05

According to the results of the Tukey test, it is seen that the significant difference is between the age range of 15-24 and 55-64 and between the age range of 25-54 and 55-64. Accordingly, the intrinsic motivation of learners aged 55-64 was significantly ( $p=.004$ ,  $\eta^2=.033$ ) higher than that of learners aged 15-24. The effect size obtained is at the level of a small effect size ( $\eta^2=.033$ ). In addition, it was also found that learners aged 55-64 had significantly ( $p=.039$ ,  $\eta^2=.021$ ) higher intrinsic motivation than learners aged 25-54. A small effect size ( $\eta^2=.021$ ) was also obtained here. No significant difference was found between learners aged 15-24 and learners aged 25-54 in terms of intrinsic motivation.

### Examination of Distance Learners' Intrinsic Motivation Levels Based on Their Gender

Independent samples t-test was conducted to examine whether there is a significant difference between the intrinsic motivation levels of distance learners and their gender. The results of the analysis are presented in Table 5.

**Table 5.** Results of an independent samples t-test between a gender variable and the intrinsic motivation levels of distance learners

Variable	Gender	n	$\bar{X}$	sd	t	sd	p
Intrinsic Motivation	Female	220	16.291	3.97	-.279	325	.780
	Male	107	16.159	4.10			

According to the results of the t-test analysis conducted in the context of gender variable, it was determined that the intrinsic motivation levels of distance learners did not differ statistically significantly in the context of gender ( $t(325)=.780$ ;  $p>.05$ ).

### Examination of Distance Learners' Intrinsic Motivation Levels Based on Employment Status

A one-way ANOVA test was conducted to examine whether there is a significant difference between the intrinsic motivation levels of distance learners and their employment status. The results of the analysis are presented in Table 6.



**Table 6.** Results of a one-way ANOVA between distance learners' intrinsic motivation levels and the variable of employment status

	KT	sd	KO	F	p
Between Groups	82.158	4	20.539	1.283	.277
Within Groups	5156.778	322	16.015		
Total	5238.936	326			

The Levene test used during the analyses revealed that the variances were equal ( $p=.118$ ). It was found that there was no discernible difference between the groups in accordance with the analysis's findings. It was shown that distant learners participating in distance learning environments did not differ in their degrees of intrinsic motivation based on their employment status.

### Examination of Distance Learners' Intrinsic Motivation Levels Based on Their Educational Status

The level of intrinsic motivation of distance learners and their educational status were compared using an independent samples t-test to see if there was a statistically significant difference. Table 7. displays the findings of the analysis.

**Table 7.** Results of an independent samples t-test between a variable measuring educational status and the intrinsic motivation of distance learners

Variable	Education Status	n	$\bar{X}$	sd	t	sd	p
<b>Intrinsic Motivation</b>	I am studying at a second university	269	16.279	4.03	.302	325	.763
	I'm studying at university for the first time	58	16.103	3.91			

According to the results of the t-test analysis conducted in the context of the educational status variable, it was determined that the intrinsic motivation levels of distance learners did not differ statistically significantly in the context of educational status ( $t(325)=.763$ ;  $p>.05$ ).

## DISCUSSIONS AND CONCLUSION

Within the parameters of the study, the relationship between learners' ages and levels of intrinsic motivation was the first research question that was intended to be addressed. It was determined in this situation that learners' intrinsic motivation levels rose with age. This result is similar to the results obtained in studies conducted by Borkowska (2022), Chyung (2007), Hoskins and Van Hooff (2005), Inceoglu et al. (2012), Ransdell (2010). Therefore, it can be concluded that intrinsic motivation grows stronger with age. This can be viewed as a circumstance that results from students placing a higher value on elements that will boost extrinsic motivation, such as careers, success, and beginning to earn money young. Similarly, it is thought that turning learners' attention away from career, success, and money-making elements that they have acquired in the process as they grow older is a situation that may be effective in the formation of this

situation. Similar to this perspective, Inceolu et al. (2012) claimed that as students get older, they place a greater emphasis on emotional fulfillment and defending their own identities, which highlight intrinsic motivation. Super (1980) asserts that young learners exhibit higher levels of extrinsic motivation than older learners since they are just starting their jobs and are motivated to advance in them. According to Ryan and Deci (2000), intrinsic motivation is formed as a result of the individual's reactions to internal needs, while extrinsic motivation is formed as a result of external factors such as avoiding punishment, competition, reward, and getting good grades. Similarly, Borkowska (2022) stated that older learners are more advanced in terms of intrinsic motivation.

The second research question sought to be answered within the scope of the study was whether the intrinsic motivation levels of distance learners vary according to gender. In this direction, an independent samples t-test was conducted. According to the results of the t-test, it was determined that the intrinsic motivation levels of distance learners did not differ statistically significantly in terms of gender ( $t(325)=-.780$ ;  $p>.05$ ). This finding agrees with findings from studies by Hoskins and Van Hoof (2005), Makedonka et al. (2022), Park and Choi (2009), and Spinath et al. (2014). In light of this, gender is not a factor that influences students' intrinsic motivation. However, certain studies in the relevant literature (Chyung, 2007; Ferssizidis et al., 2010; London, 2016; Song, 2006; Yoo & Huang, 2013) discovered a significant difference between learners' levels of intrinsic motivation and gender. Accordingly, whereas other studies suggest that women have greater intrinsic motivation than men, London (2016) asserts that men have higher intrinsic motivation than women. However, Makedonka et al. (2022) stated that there was no significant difference between gender and intrinsic motivation. In this context, it is clear that studies in the pertinent literature examining the connection between gender and intrinsic motivation have not been able to reach a consensus conclusion. This viewpoint allows us to say that the relationship between gender and intrinsic motivation level may change depending on the participant's characteristics and the contexts of the studies.

The intrinsic motivation levels of distance learners and their employment status were the third research question that the study set out to address. In this case, a one-way ANOVA test was utilized to determine whether the employment status of distance learners in different professions had a significant impact on their intrinsic motivation levels. The findings indicate that there is no noteworthy distinction between the groups. As a result, it was found that the intrinsic motivation levels of distance learners participating in distance learning settings were unaffected by their employment status. This outcome is consistent with what Riggert et al. (2006) found in their study. Therefore, employment status is not a reliable indicator of intrinsic motivation for distant learners. Additionally, a study by Cain (2008) with distance learners found a substantial relationship between intrinsic motivation level and employment status. The intrinsic motivation levels of students who are employed and do not have financial difficulties are higher as a result. From this vantage point, it is possible to assert that students who do not have financial challenges can concentrate more on their own personal growth during the learning process, which has a beneficial impact on intrinsic motivation. The participants' wages are unknown for the purposes of this study. It is possible that the near similarity of the participants' income levels contributed to the outcome within the parameters of the study. Again, in the same study by Cain (2008), it was noted that studies on employment status and higher education students yielded erratic results.

In order to assess whether distance learners' educational status has an impact on their levels of intrinsic motivation, the study's last, fourth research question sought an answer. In this situation, the independent samples t-test was used. The findings of the t-test analysis conducted in relation to the educational status variable showed that there was no statistically significant difference between the intrinsic motivation levels of distance learners and on-campus students ( $t(325)=-.763$ ;  $p>.05$ ). This outcome resembles that of Bopp's (2007) research. As a result, it is claimed that factors like educational attainment and gender have little bearing on students' motivation. Additionally, Firat et al. (2018) came to the conclusion that there were no appreciable differences in the intrinsic motivation of distance learners based on gender, educational status, mode of instruction (distance-blended), or academic discipline. Additionally, it was stressed by Liu and Fang (2010), Park and Choi (2009), and Wilkesmann, Fischer & Virgillito (2012) that motivation is unrelated

to one's level of education. On the other hand, Keumala et al. (2019) came to the conclusion that learners' levels of intrinsic motivation are influenced by their educational status. Currently, it is believed that the activities and goals in the learning process, rather than the educational status, play a more effective role in the context of intrinsic motivation than the educational status, despite the fact that there is no consensus in the studies on the subject. Despite all this, it can be stated that as the level of education increases, experiences can be enriched and this situation can have an impact on intrinsic motivation.

### **Limitations and Recommendations**

This study examined the intrinsic motivation levels of distance learners involved in distance learning environments in terms of various variables,

- With a distance learning environment,
- With distance learners,
- With the intrinsic motivation scale,
- Participants' age, gender, employment, and educational status variables are limited.

The following recommendations are offered for future studies after the study done within these constraints:

- Within the parameters of this investigation, it was determined that the research examining the connection between gender and intrinsic motivation in the pertinent literature was unable to reach a consensus conclusion. From this, it can be concluded that additional research on the gender and degrees of intrinsic motivation of distance learners is necessary. This will make it easier to see how the gender variable affects intrinsic motivation.
- Given that studies on employment status and higher education students have produced mixed results (Cain, 2008), it may be concluded that qualitative research should be done on this subject. In this way, answers can be sought to the questions of how distance learners work in which fields of study, what their employment status is, and what role these situations play in their intrinsic motivation.
- In the context of the study, it was discovered that similar to the gender variable, there is no agreement in the relevant literature regarding the relationship between the educational status variable and intrinsic motivation. This conclusion suggests that additional research is required to fully understand how intrinsic motivation levels in distance learning settings relate to learners' educational status. It may be possible to more clearly understand the relationship between educational attainment and intrinsic motivation in this situation by performing studies using the mixed research method and asking students for their own thoughts as well as the findings of the student survey.
- More demographic information can be used in studies on the intrinsic motivation of distance learners, and learning environments can be designed differently in light of the results to be obtained, taking into consideration the importance of designs that will increase intrinsic motivation, which is a necessary element for learners to have richer learning experiences in distance learning environments, whose importance in learning processes has come to light with the post-pandemic process we are in.
- -Some suggestions can be made in the context of issues not covered in this study. Accordingly, implementing the teaching techniques applied in the distance learning process in accordance with the wishes and needs of the participants can be considered as a factor that will increase intrinsic motivation.
- -In addition, it can be said that the instructional designs applied in the teaching processes should appeal to the participants in order to increase intrinsic motivation in distance learning environments.
- -Another issue that can increase intrinsic motivation is learning materials. At this point, designing learning materials interactively is an important point so that learners can participate in the distance learning process more willingly.

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