Undergraduate Students' Critical Evaluations of University Education

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Abstract

Universities have been at the center of educational debates since their inception. Their functions, aims and products have been questioned in the context of social, cultural, economic and technological changes. In this context, the aim of this study is to critically examine university education from the perspectives of undergraduate students. The study was conducted with a quantitative design by analyzing the data collected with the "Critical University Education Scale" developed by the researcher with 236 undergraduate students studying at Kafkas University. During the development of the scale used in the study, factor analysis, which is a principal component analysis for validity, KMO (Kaiser-Meyer-Olkin) value, which is a test of sphericity, was calculated and the Cronbach Alpha Coefficient formula was used to ensure reliability. In the data analysis of the study, descriptive statistics, independent t-test and One-Way ANOVA were used, and it was examined whether there was a difference in the thoughts of the undergraduate students participating in the study regarding university education according to their age group, gender, program, year of study and their father's education status. As a result of the research, it was seen that undergraduate students were more critical of the statements in the dimension of teaching practices than in the dimension of innovation and creativity, free thought and inquiry. It was concluded that undergraduate students' critical thoughts regarding university education differed according to age, gender, program, year of study and father's education status.

Keywords: undergraduate students, university education, innovation and creativity, free thought and inquiry, teaching practices

1. Introduction

The transformation that university establishments have undergone since their inception has prompted the necessity to revisit its meaning and functions, and many researchers (Barnett, 2011; Brooks, 2021, 2022; Scholz, 2020; Timur, 2000) have redefined the university in this process. A study of the critique of university education may be better understood by investigating what university is and should be in terms of its function and what it does. Thus, it is crucial to begin this article with a discussion of what the university is, without delving too much into the history of the university. The university, an educational institution that has existed for almost a millennium, will be explored in terms of its current manifestation and anticipated future prospects.

1.1 The Concept of University and the Stages of University

The term “university” originates from the Latin word "universitas" and etymologically derives from the meaning of "whole", "universal" (Tekeli, 2003; Yıldırım, 2012). The guild, which preserves the meaning of forming the whole, coming together, has also evolved into the meaning of unity (Narin, 2017). In 1088, the University of Bologna, the first university established in the Western world, was organized in the form of faculties. Students and professors were allowed more freedom of thought and speech than others in society (Montague, 2013). In Turkey, on the other hand, the first Western-style University started teaching in 1863 under the name of Darülfünun during the imperial period (Timur, 2000). Darülfünun was opened and closed six times for various reasons from its first opening until the establishment of the republic (Günay, 2006). Until 1933, the university continued education under the name of Istanbul Darülfünun and was closed in 1933 and replaced by Istanbul University (Akyüz, 2008; Tunçay & Özen, 1984). Since then, Turkish universities have undergone four additional reorganisations in the years 1946, 1960, 1971, and 1981 (Günay, 2006). Consequently, the institutional structure of universities in Turkey has undergone continuous

change and this change has generally been brought about by external interventions. The stages of the university can be classified differently. The metaphysical university (Barnett, 2011) or the medieval university represents the first universities that functioned as a specialization based on local community with limited freedom of academic thought. The Enlightenment-oriented University, a structure that serves the development of technical knowledge, prioritizes utility, and links teaching and research, has evolved into the research university, which produces knowledge for its own sake, that is, the university itself (Scholz, 2020). The entrepreneurial university, which produces knowledge that generates income and is referred to as the performative university, has been at the center of a process that started with the commercialization of knowledge, particularly in the 1980s (Barnett, 2011). The market-orientation of universities has caused them to focus mostly on profit-oriented fields and to train mechanical people instead of critical and inquisitive individuals (Anwaruddin, 2013). Over time, the fluid university, signifying a lack of a specific direction, has been transformed into a therapeutic university that infantilizes students and fosters passive citizens. In our age, there is a transition from the authentic university that encourages questioning and inquiry on a universal scale, which tries to revitalize its own ideal in contemporary conditions, to the ecological university that is both authentic and responsible, encompassing hope and criticism (Barnett, 2011).

Universities are currently undergoing a digital transformation, where they are perceived as catalysts for change agents, and where research is being conducted on the needed transition of the resilient human and environmental systems (Scholz, 2020). The university is an academy that recognizes its interdependent relationship with society and uses its resources for the development of social and personal well-being (Barnett, 2011). In Turkey, on the other hand, universities, whose management style, teaching practices, research and dissemination functions have been the subject of debate for many years according to different paradigms, are still relatively new compared to other examples in the world.

1.2 Changing Missions of the University and University Education

The missions of universities are generally understood as teaching, research, community service and certification (Vincent-Lancrin, 2004). Traditionally, universities enhance and support learning by producing widely available knowledge (Van De Bunt-kokhuis, 2004). Throughout their history, universities have been responsible not only for education and research but also for establishing normative (exemplary) codes of ethics and morality. Over the last century, these institutions have also been initiators and players in significant ethical debates related to the civil rights movement, gender equality, affirmative action and equal opportunity, the moral aspects of science, and so on (Sadlak & Ratajczak, 2004). The transformation of universities, which have come to be seen as a central institution in an economic system where the labor market's demand for highly educated personnel continues to grow and knowledge production is directly linked to regional and national economic growth (Jones, 2006), has led to a shift in expectations in education. These include functions such as creating innovation by developing creativity, independent research on technology development sponsored by public and private initiatives, and contributing to the solution of societal issues (Scholz, 2020). These brief assessments show that the university has also led to differentiations in its missions for students. These missions are innovation and creativity, free thought and inquiry, and teaching practices.

Producing new knowledge and maintaining or revitalizing advanced knowledge are among the research missions of universities (Vincent-Lancrin, 2004). In order for innovation and creativity to take place in the university, it is necessary to implement incentives that encourage creativity away from dogmas, to implement development-oriented encouraging practices where new ideas are put into practice and student potentials are revealed, and to support the search for innovation that provides different solutions to different problems. In this context, the university should realize Barnett's (2011) 'creative production' that will train individuals who are actively engaged in society to create a better world.

It is necessary to develop social criticism as well as individual freedom of criticism in universities (Vincent-Lancrin, 2004). To promote widespread free thought and inquiry in universities, open and transparent communication channels should be maintained, subjectivizing rather than objectifying educational practices should be prioritized, an understanding that respects the rights of the other should be fostered, inquiry should be encouraged and an environment that is free from dependency relations should cultivated. Unless there are elements in universities that foster inquiry and free thought in students, as Barnett (2011) states, it is likely that unquestioning passive citizens who are unable to distinguish valid information and lack critical reasoning will emerge because they meet the current demands. A critical, inquisitive and developmental university is a university that is aware of its interdependencies with society and that uses its resources for the positive impact of social and personal well-being.

Teaching at the university level involves the transmission of a certain type of knowledge and the training of people to produce or maintain advanced knowledge themselves, with a commitment to research and truth (Vincent-Lancrin,

2004). There is a need for changes in university education, such as the continuous development of programs, the emphasis and prioritization of practice over theory, collaborative learning, teaching based on interests and abilities, continuous social and cultural engagement via activities, expanding learning beyond the classroom, and teaching to develop analytical thinking skills. Barnett (2011) refers to this reformed version of the institution as The University of Today, which would be an active, engaged university at local, regional and often world levels. This involvement of the university can be realized through the implementation of effective teaching practices to benefit students, who are indispensable components of the institution. In studies concerning the institute of university, it is generally seen that the opinions of service providers are consulted rather than service recipients (Alparslan, Polatcı & Yastıkoğlu, 2021; Aybek, 2023; Çakmak & Kayabaşı, 2023; Öztekin, et al., 2020; Telli, 2020). In this context, there are studies examining the innovation and creativity functions of universities (Ödemiş Keleş & Sezgin, 2024; Yaman & Esen, 2021) and the critical and free-thinking tendencies of academics (Boratav, Oran & Timur, 2016; Kanbay, Işık, Aslan & Özdemir, 2012; Ördek, 2016; Paker, 2012). Studies examining university students' thoughts on university generally examine students' adaptation to university life (Daşkın & Öğülmüş, 2022; Ertem, 2020; Gökyer, 2017; Özaydın Özkara & Özkara, 2022; Özkan & Yılmaz, 2010), their satisfaction with university (Biswas, Bose, Chang & Shams, 2023; Kalfa & Çakır, 2020; Karadağ & Yücel, 2017; Yücel, 2023), their views on a certain type of education or the courses they take (Berk & Güven Akdeniz, 2023; Müdüroğlu Arısoy, Arısoy & Boydak Özkan, 2023; Yıldırım & Acarlıoğlu, 2023), and there are not enough studies evaluating universities in general. From this point of view, in order to understand and explain the transformation of the university in a self-reflexive context, it is crucial to examine the internal dynamics of the institution and seek insights from students' critical perspectives regarding university education can fill an important gap.

As structural, institutional and organizational reforms and changes in higher education continue in many nations, there is a large body of literature and research on the idea, functions and objectives of higher education (Brooks, 2021; Mergner, Leišytė, & Bosse, 2019). However, the scrutiny of universities from the student perspective remains incomplete (Cuellar, Bencomo Garcia & Saichai, 2022) and requires a re-examination of changing conditions. What this paper attempts to do is to consult students' opinions as a stakeholder on what a university is, how it functions and whether it fulfills its purposes, in short, on university education. According to Brooks (2022), examining the views of students, who are the group most affected by the conditions of the university, the functioning of education and its goals, is essential in terms of revealing their expectations.

The conception of higher education varies across countries, depending on societies' own histories, educational traditions and policies. This research paper focuses on higher education in Turkey. The main purpose of the research is to examine how undergraduate students perceive the university they study at. In line with this purpose, through a Likert-type scale developed in line with the quantitative research approach, it was examined whether the students' perceptions of the university they studied in the dimensions of innovation and creativity, free thought and inquiry, and teaching practices differed according to age, gender, program and year of study, as well as the level of education of their fathers.

2. Method

2.1 Research Model

The research, which employs the survey model, aims to make a critical inquiry of university education from the perspective of students who fulfill their undergraduate education at Kafkas University, and to analyze university education in detail and comprehensively based on their opinions and evaluations, and as Fowler (2009) states, to define the views of the research population quantitatively or numerically by working with a sample from this population.

2.2 Study Group

The study group of the research consists of undergraduate students studying in preschool teaching, classroom teaching and guidance and psychological counseling (GPC) programs at Kafkas University. The study was conducted with undergraduate students who were continuing their education in the fall semester of the 2022-2023 academic year and who voluntarily agreed to participate in the study. A total of 236 scales answered by these students and suitable for analysis were included in the evaluation. The scales answered by 142 undergraduate students in preschool teaching, 48 undergraduate students in classroom teaching, and 46 undergraduate students in guidance and psychological counseling programs were used in the study.

2.3 Data Collection Tools

A personal information form was developed by the researcher to obtain information about the independent variables of the study and the "Critical University Education Scale" was developed by the researcher to determine and compare the critical views of the undergraduate students constituting the study group.

2.3.1 Critical University Education Scale

A scale was developed by the researcher in order to determine and compare the views of undergraduate students, who constitute the study group of the research, on university education. This scale consisted of a literature review, personal information in line with the opinions of students and professionals, and 41 statements regarding university education. The part of the scale that includes university education statements was prepared in a Likert-type five-point scale. The scale consisted of “Strongly Disagree” (1), “Disagree” (2), “Undecided” (3), “Agree” (4) and “Strongly Agree” (5) options. The lowest score in the scale is 1, while the highest score is 5. The highest score that can be obtained from the measurement tool is 205 and the lowest score is 41. The pre-application was conducted in different years of the programs that constitute the main study group of the research. The draft scale was applied to 120 undergraduate students in the pilot study. In order to reveal the construct validity of the instrument, principal component analysis, one of the factor analysis techniques, was performed to determine whether the university education scale was single or multi-factor. For the reliability study, the Cronbach Alpha Coefficient formula, which is an internal consistency approach, was used. In addition, the discrimination of each item was examined by item-total correlations. The results of the validity, reliability and total variance explained by the factors are given in Appendix Table A.

The KMO value, which is one of the sphericity tests calculated for the suitability of the data structure of the Critical University Education Scale for factor analysis, is .906. According to Field (2000), and the lower limit of the KMO value should be .50 for a data set to be factorized. A KMO value between .90 and .100 indicates that the data can be factorized at a high level. While the draft Critical University Education Scale consisted of 58 items, 17 items with factor loadings below .30 and/or close values in different factors were removed from the scale and the analyses were repeated. As Büyüköztürk (2002) emphasized, a factor loading value of .30 and above is a valid criterion for removing items. The results of the factor analysis showed that the scale consisted of three factors. The dimensions are named as innovation and creativity, free thought and inquiry, and teaching practices within the scope of the literature. For reliability studies, the 'Cronbach Alpha Coefficient' formula, which is an internal consistency approach, was used. In addition, the discrimination of each item was analyzed using item-total correlations (Appendix Table A).

In the innovation and creativity dimension of the scale, item factor loadings ranged between .416 and .749, item-total correlations ranged between .456 and .838. The Cronbach Alpha Coefficient was .935, and the total variance explained by the factor was 19.02%. Accordingly, it can be said that the items in the innovation and creativity dimension are very discerning. In the free thought and inquiry dimension, item factor loadings ranged between .511 and .783, item-total correlations ranged between .575 and .832, the Cronbach Alpha Coefficient was .920, the total variance explained by the factor was 17.110%, and the cumulative variance explained by the factor was 36.13%. Accordingly, it can be said that the items in this dimension have a high degree of discrimination. In the teaching practices dimension, item factor loadings ranged between .439 and .648, item-total correlations ranged between .441 and .772, the Cronbach Alpha Coefficient was .941, the total variance explained by the factor was 15.337%, the cumulative variance explained by all factors was 51.471%, and the Cronbach Alpha Coefficient for the whole scale was .963. Accordingly, it can be said that the items in all dimensions have a high degree of discrimination. Considering these findings, it is accepted that the "Critical University Education Scale" is a valid and reliable measurement tool across the three dimensions. Accordingly, an analysis can be made based on the total scores for the three dimensions in the scale. A high score indicates that there are many criticisms of university education, and a low score indicates that there are few criticisms (Appendix Table A).

2.3.2 Personal Information Form

In order to conduct comparative analyses with the data collected from the Critical University Education Scale, the researcher developed a personal information form. The personal information form includes the age, gender, name of the program, year of study and father's education level of the participants in accordance with the sub-objectives of the study.

2.4 Research Process

The data used in the study were obtained from undergraduate students continuing their education at Kafkas University in the fall semester of the 2022-23 academic year. The Critical University Education Scale was administered face-to-face to undergraduate students by the researcher with those who agreed to fill out the scale. During the application, the researcher stayed in the classrooms to solve the possible problems of the undergraduate students in filling out the scale and to make the necessary explanations. Undergraduate students completed the scale in 15 to 25 minutes and all scales were completed in ten working days.

2.5 Data Analysis

The views of the undergraduate students, who constitute the study group of the research, on university education were analyzed digitally with the help of the SPSS Statistical Program. In the study, personal information was analyzed and interpreted with percentages and frequencies, and the adoption levels of undergraduate students regarding university education statements were analyzed and interpreted with arithmetic mean and standard deviation. The t-test and One-Way ANOVA were used to determine whether there was a difference between undergraduate students' views on university education according to their age group, gender, program they were studying, the year of study and their father's education level. The ages of the undergraduate students participating in the study were grouped as 21 and below and 22 and above, their genders as male and female, and their father's education levels as middle school and below and high school and above, and analyzed with t-Test. The programs they were studying were grouped as preschool teaching, classroom teaching, and guidance and psychological counseling, and the year of study were grouped as 1st, 2nd, 3rd, and 4th year, and One-Way ANOVA was used in the analysis. All analyses were conducted with a significance threshold of .05.

3. Results

Under the title of results, firstly, the opinions of undergraduate students on university education were interpreted by calculating the arithmetic mean and standard deviation values for the statements in each dimension. Then, the variables related to the age groups of university students, gender, program, year of study, unit of residence for the longest duration and father's education status were analyzed and each of them was interpreted under a distinct heading.

3.1 Descriptive Statistics (Arithmetic Mean and Standard Deviation Values) Results of Undergraduate Students' Opinions on "Critical University Education Scale" Statements

Under this title, the opinions of undergraduate students on the Critical University Education Scale were analyzed in terms of arithmetic mean and standard deviation values, and the dimensions of innovation and creativity, free thought and inquiry, and teaching practices were examined and interpreted separately.

According to the undergraduate students, the statements that they agree with the most in the dimension of innovation and creativity in university education are "In university education, it is accepted to maintain the existing functioning instead of seeking innovation." ($\bar{x}$=3.53), "In university education, rules remain fixed when they should be revised according to the characteristics of the times" ($\bar{x}$=3.41) and "In university education, instead of encouraging people to innovate, it discourages them" ($\bar{x}$=3.31). In the dimension of innovation and creativity, the least problematic statement criticized by university students was "In university education, the idea of the absolute immutability of science is given instead of the idea that science is constantly evolving and changing" ($\bar{x}$=2.54) (Appendix B Table 1).

According to undergraduate students, the statements that they agree with the most in the dimension of free thought and inquiry in university education are "In university education, the information given objectifies the individual instead of subjectivizing them" ($\bar{x}$=3.57), "In university education, instead of a democratic way of life, an authoritarian environment is adopted" ($\bar{x}$=3.52) and "In university education, instead of individuals who think critically, individuals who accept everything they are told are raised" ($\bar{x}$=3.47). In the dimension of free thought and inquiry, the statement that university students criticized as the least problematic was "In university education, instead of respecting the rights of the other, it is oriented towards excluding the other" ($\bar{x}$=2.71) (Appendix B Table 2).

According to undergraduate students, the statements that they agree with the most in the dimension of teaching practices in university education are "In university education, more emphasis is placed on lectures rather than social and cultural activities." ($\bar{x}$=4.14), "In university education, instead of students choosing courses that suit their interests and abilities, there are compulsory choices." ($\bar{x}$=4.03) and "In university education, students are asked to comply with the decisions taken instead of participating in decisions about themselves" ($\bar{x}$=3.87). In the dimension of teaching practices, the statement "In university education, competition dominates instead of cooperation" ($\bar{x}$=3.12)

was the least criticized by university students. Considering all dimensions of the scale, undergraduate students criticized the statements in the dimension of teaching practices the most ($\bar{x}$=3.62), followed by free thought and inquiry ($\bar{x}$=3.25) and innovation and creativity ($\bar{x}$=3.18) (Appendix B Table3).

3.2 T-test Results of Undergraduate Students' Opinions on the Statements of the "Critical University Education Scale" According to Age

Table 1 shows the t-test results of undergraduate students' views on the Critical University Education Scale according to their ages.

Table 1. T-test Results of Undergraduate Students' Views on the Critical University Education Scale According to Age

Dimensions	Age	N	$\bar{x}$	sd	df	t	P
Innovation and Creativity (IC)	21 and under	127	44.13	10.80	234	.662	.509
	22 and over	109	45.13	12.50			
Free Thought and Inquiry (FTI)	21 and under	127	39.14	10.37	234	.115	.908
	22 and over	109	39.98	10.95			
Teaching Practices (TP)	21 and under	127	55.73	10.44	234	2.083	.038*
	22 and over	109	52.80	11.10			
Total	21 and under	127	139.00	28.67	234	.533	.594
	22 and over	109	136.92	31.24			

*P<.05

According to Table 1, undergraduate students' views on university education do not differ significantly in the dimensions of innovation and creativity and free thought and inquiry according to age groups, but they differ significantly in the dimension of teaching practices [t(234)=2.083, p<.05]. In the dimension of teaching practices of undergraduate students, the opinions of those aged 21 and less ($\bar{x}$=55.73) are more critical than the opinions of those aged 22 and over ($\bar{x}$=52.80) regarding university education.

3.3 Results of t-test of Undergraduate Students' Opinions on the Statements of "Critical University Education Scale" According to Gender

Table 2 shows the t-test results regarding whether the undergraduate students' views on the Critical University Education Scale differ according to gender.

Table 2. T-test Results of Undergraduate Students' Views on the Critical University Education Scale According to Gender

Dimensions	Gender	N	$\bar{x}$	sd	df	t	P
IC	F	158	43.48	11.83	234	2.11	.035*
	M	78	46.85	10.84			
FTI	F	158	53.83	11.17	234	1.10	.271
	M	78	55.48	10.08			
TP	F	158	38.29	10.76	234	1.59	.113
	M	78	40.62	10.22			
Total	F	158	135.61	30.63	234	1.79	.075
	M	78	142.97	27.70			

*P<.05

As shown in Table 2, undergraduate students' views on university education do not differ significantly in the dimensions of free thought and inquiry and teaching practices according to their gender, but they differ significantly in the dimension of innovation and creativity [t(234)=2.11, p<.05]. In the innovation and creativity dimension, the opinions of male students ($\bar{x}$=46.85) are more critical than the opinions of female students ($\bar{x}$=43.48) regarding university education.

3.4 One-Way ANOVA Results of Undergraduate Students' Opinions on the Statements of "Critical University Education Scale" According to the Program of Study

Table 3 shows the results of the One-Way ANOVA on whether the undergraduate students' views on the Critical University Education Scale differ according to the program they study.

Table 3. One-Way ANOVA Results of Undergraduate Students' Views on the Critical University Education Scale According to the Program They Study

Dimensions	Source of Variance	SS	df	MS	F	P	Significant Difference LSD
IC	Between Groups	2158.79	2	1079.39	8.525	.000*	1-3
	Within Groups	29501.96	233	126.61			2-3
	Total	31660.75	235				
FTI	Between Groups	1550.54	2	775.27	7.228	.001*	1-3
	Within Groups	24992.37	233	107.26			
	Total	26542.91	235				
TP	Between Groups	2487.14	2	1243.57	11.548	.000*	1-3
	Within Groups	25090.53	233	107.68			2-3
	Total	27577.67	235				
Total	Between Groups	18139.24	2	9069.62	11.056	.000*	1-3
	Within Groups	191143.24	233	820.35			2-3
	Total	209282.48	235				

*P<.05

As shown in Table 3, the results of the analysis show that there is a significant difference in undergraduate students' views on university education statements in the dimensions of innovation and creativity [F(2;233)=8.525;p<.05], free thought and inquiry [F(2;233)=7.228;p<.05], teaching practices [F(2;233)=11.548;p<.05] and in the total scale [F(2;233)=11.056;p<.05] according to their programs. According to the results of the LSD test conducted to find out which groups the difference between the programs is between, the opinions of the students in the guidance and psychological counseling program differ significantly from the opinions of the students studying in the preschool teaching and classroom teaching programs.

3.4.1 Descriptive Statistical Results of Undergraduate Students' Opinions on the Statements of the "Critical University Education Scale" According to the Program of Study

Table 4 shows the descriptive statistics results of undergraduate students' views on the Critical University Education Scale according to the program they study.

As shown in Table 4, when the dimensions related to the Critical University Education Scale are evaluated independently of each other, the mean of the opinions of the students in the guidance and psychological counseling program regarding innovation and creativity, free thought and inquiry, and teaching practices are higher than the mean of the opinions of the students in the preschool teaching and classroom teaching programs. In the total scale, as in all dimensions separately, the mean of the opinions of the students in the guidance and counseling program about the university education of undergraduate students ($\bar{x}$=155.67) is higher than the mean of the opinions of the students in the preschool teaching and classroom teaching programs ($\bar{x}$=132.95, $\bar{x}$=136.22). These findings demonstrate that the views of students in guidance and psychological counseling programs are more critical than those of students in other programs.

Table 4. Descriptive Statistics Results of Undergraduate Students' Views on the Critical University Education Scale According to the Program They Study

Dimensions	Program Name	n	$\bar{X}$	sd
IC	Pre-school teaching	142	42.68	11.46
	Classroom teaching	48	44.54	12.91
	GPC	46	50.56	8.35
	Total	236	44.59	11.60
FTI	Pre-school teaching	142	37.45	10.91
	Classroom teaching	48	39.00	10.22
	GPC	46	44.13	8.54
	Total	236	39.06	10.62
TP	Pre-school teaching	142	52.81	10.83
	Classroom teaching	48	52.68	11.36
	GPC	46	60.97	7.42
	Total	236	54.38	10.83
Total	Pre-school teaching	142	132.95	30.37
	Classroom teaching	48	136.22	30.39
	GPC	46	155.67	19.79
	Total	236	138.04	29.84

3.5 One-Way ANOVA Results of Undergraduate Students' Opinions on the Statements of the "Critical University Education Scale" According to the Year of Study

Table 5 shows the ANOVA results of the undergraduate students' views on the Critical University Education Scale according to their year of study.

Table 5. One-Way ANOVA Results of Undergraduate Students' Views on the Critical University Education Scale According to Their Year of Study

Dimensions	Source of Variance	SS	df	MS	F	P	Significant Difference LSD
IC	Between Groups	2263.43	3	754.47	5.954	.001*	1-2
	Within Groups	29397.32	232	126.71			2-3
	Total	31660.75	235				2-4
FTI	Between Groups	2694.31	3	898.10	8.737	.000*	1-2
	Within Groups	23848.60	232	102.79			2-3
	Total	26542.91	235				2-4
TP	Between Groups	2561.04	3	853.68	7.917	.000*	2-3
	Within Groups	25016.63	232	107.83			2-4
	Total	27577.67	235				
Total	Between Groups	20692.58	3	6897.52	8.485	.000*	1-2
	Within Groups	188589.90	232	812.88			2-3
	Total	209282.48	235				2-4

*P<.05

When Table 5 is examined, the results of the analysis show that there is a significant difference between undergraduate students' views on the statements of university education in the dimensions of innovation and creativity [F(3;232)=5.954;p<.05], free thought and inquiry [F(3;232)=8.737;p<.05], teaching practices [F(3;232)=7.917;p<.05] and in the total scale [F(3;232)=8.485;p<.05]. According to the results of the LSD test

conducted to identify between which groups the difference is according to the year of study, the opinions of the students attending the 2nd year differ significantly from the opinions of the students attending the 1st, 3rd and 4th years.

3.5.1 Descriptive Statistical Results of Undergraduate Students' Opinions on the Statements of the "Critical University Education Scale" According to their Year of Study

Table 6 shows the descriptive statistics results of undergraduate students' views on the Critical University Education Scale according to their year of study.

Table 6. Descriptive Statistics Results of Undergraduate Students' Views on the Critical University Education Scale According to Their Year of Study

Dimensions	Year of Study	n	$\bar{X}$	sd
IC	1	58	41.58	11.19
	2	71	49.14	8.97
	3	32	42.00	10.14
	4	75	43.73	13.46
	Total	236	44.59	11.60
FTI	1	58	35.43	10.11
	2	71	44.00	8.46
	3	32	37.12	10.28
	4	75	38.04	11.46
	Total	236	39.06	10.62
TP	1	58	54.13	10.22
	2	71	59.11	8.08
	3	32	51.46	9.71
	4	75	51.33	12.50
	Total	236	54.38	10.83
Total	1	58	131.15	28.73
	2	71	152.25	21.66
	3	32	130.59	27.54
	4	75	133.10	33.92
	Total	236	138.04	29.84

According to Table 6, when the dimensions related to the Critical University Education Scale are evaluated independently of each other, the mean of the 2nd year students' views on innovation and creativity, free thought and inquiry, and teaching practices are higher than the mean of the 1st, 3rd and 4th year students' views. In the total scale, as in all dimensions separately, the mean of the opinions of the 2nd year students regarding university education ($\bar{X}$=152.25) is higher than the mean of the opinions of the 1st, 3rd and 4th year students ($\bar{X}$=131.15, $\bar{X}$=130.59, $\bar{X}$=133.10). This finding shows that the views of the students in the 2nd year are more critical than the students in other years of study.

3.6 T-test Results of Undergraduate Students' Opinions on the Statements of "Critical University Education Scale" According to Father's Education Level

Table 7 presents the t-test results regarding whether the undergraduate students' opinions on the Critical University Education Scale differ according to their father's education level.

According to Table 7, undergraduate students' views on university education do not differ significantly in the dimension of innovation and creativity according to their father's education level, but they differ significantly in the dimensions of free thought and inquiry [$t(234)=2.16$, $p<.05$], teaching practices [$t(234)=2.03$, $p<.05$] and in total [$t(234)=2.07$, $p<.05$]. In the free thought and inquiry dimension, the opinions of the students whose fathers had a high school and above education level ($\bar{X}$=41.01) were more critical of university education than the opinions of the

students whose fathers had a secondary school and below education level ($\bar{x}$=37.93). In the dimension of teaching practices, the opinions of the students whose fathers had a high school and above education level ($\bar{x}$=56.29) were more critical of university education than the opinions of the students whose fathers had a middle school and below education level ($\bar{x}$=53.26). Considering the sum of the dimensions, the opinions of the students whose fathers have a high school and above education level ($\bar{x}$=143.27) are more critical about university education than the opinions of the students whose fathers have a middle school and below education level ($\bar{x}$=134.99).

Table 7. T-test Results of Undergraduate Students' Opinions on the Critical University Education Scale According to Their Father's Education Level

Dimensions	Education Level	N	$\bar{X}$	sd	df	t	P
IC	Secondary School and Under	149	43.79	12.72	234	1.38	.167
	High School and Above	87	45.96	9.30			
FTI	Secondary School and Under	149	37.93	11.19	234	2.16	.032*
	High School and Above	87	41.01	9.33			
TP	Secondary School and Under	149	53.26	11.38	234	2.03	.037*
	High School and Above	87	56.29	9.57			
Total	Secondary School and Under	149	134.99	32.30	234	2.07	.039*
	High School and Above	87	143.27	24.36			

*P<.05

4. Discussion

In this study, it was examined how university students evaluate the institute of university in terms of innovation and creativity, free thought and inquiry, and teaching practices. The "Critical University Education Scale" was developed by the researcher to carry out the research. The findings show that undergraduate students do not view their universities as adequate. Undergraduate students in particular criticized the teaching practices at university, followed by the dimensions of innovation and creativity and free thought and inquiry. As Miller, Cruz, and Kelley (2021) note, teaching and learning practices and creativity are interrelated. According to them, teaching and learning strategies need to be reorganized for creativity to occur. At the same time, Kardoyo, Nurkhi, and Pramusinto (2020) state that critical thinking and creativity are also related to teaching practices and that a problem-based case study develops critical thought and creativity. From this point of view, it can be said that innovation and creativity, free thought and inquiry, and teaching practices are interconnected and form parts of a whole in university education, and that issues in one dimension affects the others.

Regarding the issues related to innovation and creativity in students' undergraduate education, the criticisms that there is no search for innovation by their universities, that the continuation of the current functioning is generally accepted, that the education they receive discourages rather than encouraging innovation, and that it ignores creativity rather than encouraging it to flourish. However, in Karunarathne and Calma's (2024) study on creativity with university students, it was concluded that the creativity to be gained by students during undergraduate education will provide significant benefits in their professional and daily lives. For this purpose, it can be stated that it is crucial to design resources, learning activities, assessment practices and feedback processes to provide both learning experiences and opportunities to develop creative thinking skills in universities. Sarı and Karabağ-Sarı (2014), in their study on the meaning of university for students, stated that the meaning of university, especially for students studying in metropolitan cities in Turkey, is to educate individuals who are more critical, inquisitive, free thinking, active, creative and participatory. However, this ideal outcome is not reflected in practice. For example, in Karadağ and Yücel's (2017) university satisfaction study report, which is based on data obtained from 13,694 students studying in 164 universities, the conclusion that universities in Turkey are unable to meet the expectations of students shows that universities have a general problem in terms of innovation and creativity due to creating educational environments that align with the spirit of the time.

In the free thought and inquiry dimension, there are criticisms that the education given at the university objectifies the individual instead of subjectivizing them, that the university wishes to adopt an authoritarian environment instead of fostering a democratic way of life, and that the university aims to raise individuals who passively accept information instead of individuals who think critically. According to Çiçek Sağlam and Büyükuysal's (2013) study

on the barriers to critical thought of university students, it was concluded that the educational environment, curriculum and lecturers do not support critical thinking processes. This result shows no environments within the university enable the realization of free thought and inquiry, which are among its main functions. According Karadağ and Yücel's (2017) study, considering that universities' inadequacy in terms of meeting student demands or being sensitive to these demands and their functioning not being student-oriented, universities should prepare suitable environments for free thought and inquiry. In accordance with Seggie and Gökbel (2014), academic freedom is not only a concept that is intertwined with freedom of expression and university autonomy, but also an area of freedom that needs to be developed, supported and consistently and uniquely embraced.

In the dimension of teaching practices, undergraduate students have criticized that university focuses more on courses that focus on the classroom instead of socio-cultural activities, that there are compulsory choices instead of students being able to choose courses in accordance with their interests and abilities, that they are asked to comply with the decisions taken instead of participating in decisions about themselves, that the curriculum is not sufficiently developed, that the transmission role of academics based on rote memorization and stereotyped thinking is more prominent, and that theoretical knowledge is emphasized. It is one of the most significant expectations of students in recent years that universities ensure quality in teaching and learning (Maskell & Collins, 2017). Biswas et al.'s (2022) study on university satisfaction concluded that higher education providers should allocate more tangible and intangible resources and talent to develop a student-centered attitude in curriculum design and delivery. In their research on the problems faced by university students, Donat, Bilgiç, Eskiocak and Koşar, (2019) reported rote learning, exams, compulsory attendance, inadequate applications and difficult courses as teaching practices. Many studies on university students (Grebennikov & Shah, 2013; Hill, 2013; Planas, Soler, Fullana, Pallisera & Vilà, 2011; Maunder, Cunliffe, Galvin, Mjali & Rogers, 2013; Berman, 2013) discuss their power of change and transformation in relation to teaching. In this context, according to Karunarathne and Calma (2024), the combination of learning design, use of technology, active learning strategies, authentic assessments and experiential learning can play a significant role in providing students with opportunities to learn and further develop their skills. In Karadağ and Yücel's (2017) study, it was concluded that there is no focus on whether learning takes place in university courses, and there is no understanding of making sure that students learn during the learning process. All these empirical studies reveal that teaching practices at the institute of university should be student-oriented, and the functioning of the courses should be done with an emphasis on practice in the context of developing their skills.

Undergraduate students' views on university education do not differ significantly according to age groups in the dimensions of innovation and creativity and free thought and inquiry, but they differ significantly in the dimension of teaching practices. In the teaching practices dimension of undergraduate students' views on university education, the views of those aged 21 and below are more critical than the views of those aged 22 and above. Similar to this study, Öztürk and Ulusoy (2008) found a significant relationship between critical thinking and age in favor of those with lower ages. This result can be interpreted as those who are at a younger age have the courage to express themselves more freely. In the research conducted by Kanbay et al. (2012), Özdemir, Buyruk, and Güngör (2018) with university students, no significant relationship was found between critical thinking and age. The existence of contradictory results in the literature on whether there is a difference between age and criticality may be due to the time and sample of the study, as well as the quality of the past educational experiences of the participants in the study. It can be said that the decrease in criticality of the participants as their age increases is due to the educational practices of university education that reduce criticality and inquiry.

Undergraduate students' views on university education do not differ significantly according to their gender in the dimensions of free thought and inquiry and teaching practices, but they differ significantly in the dimension of innovation and creativity. In the innovation and creativity dimension, male students' views on university education are more critical than female students' views. Significant differences were found in favor of female students in Ataman and Adıgüzel's (2019) student views on quality perception in higher education and in favor of male students in Özdemir et al.'s (2018) views on critical thinking tendencies. Özdemir (2005), Walsh and Hardy (1999), Ricketts and Rudd (2005), Saracaloğlu and Yılmaz (2011), and Taşkın and Seferoğlu (2023) examined the critical thinking skills of university students and concluded that there was no difference according to gender. Jafarova and Demirtaş's (2020) study examining students' satisfaction with university did not find a significant difference related to gender. The fact that most of these studies concluded that there is no significant relationship between gender and critical thinking, and that the significant difference varies between genders in the studies that found a significant difference shows that there is variability between gender and being critical. These differences in the studies on critical thinking suggest that these differences may stem not from the biological gender of the participants but from their gender perceptions.

Undergraduate students' views on university education differ in the dimensions of innovation and creativity, free thought and inquiry, and teaching practices according to the program they study. The views of the students in the guidance and psychological counseling program are more critical than the views of the students in the preschool teaching and classroom teaching programs. Similarly, in the study conducted by Özdemir et al. (2018), a significant difference was found between critical thinking and programs, and in this study, it was concluded that GPC students were more critical than students in other programs. Gülveren (2007), Sakar and Aybek (2015) and Zayif (2008) found significant differences in the critical thinking levels of university students according to departments, and in many university satisfaction studies (Bacıoğlu & Vural, 2018; Şahin, 2009; Özdemir, Kılınç, Öğdem & Er, 2013), it was determined that there were differences in the satisfaction levels of students between programs. On the other hand, some studies (Özdemir, 2005; Erdem & Yazıcıoğlu, 2015) concluded that there was no significant difference in the critical thinking skills of university students according to the programs they studied. In general, many studies reveal that there are significant differences between critical thinking and programs. Especially as a result of this research, it may be possible to explain the fact that the students studying in the GPC program are more critical than the students in other programs with the professional attributes they should have.

Undergraduate students' views on university education differ in the dimensions of innovation and creativity, free thought and inquiry, and teaching practices according to their year of study. As a result of the research, the views of students studying in the 2nd year are more critical than the views of students continuing their education in the 1st, 3rd and 4th years. In the study conducted by Özdemir et al. (2018), it was concluded that the critical tendencies of university students differed according to their year of study and that students attending the 4th year were less critical than other years. According to Jafarova and Demirtaş's (2020) study examining students' satisfaction with the university, it is seen that students studying in the 4th year differ significantly in the educational services dimension compared to lower years and 4th year students are more satisfied with the university. Another study by Taşkın and Seferoğlu (2023), which examined the critical thinking skills of university students, concluded that there was a significant difference in favor of younger years. Although these results show that criticality decreases as the class level increases, it can be explained by the fact that the education given is not suitable for free thought and inquiry, student-oriented, as expressed by university students in their general views on university education. However, in Sakar and Aybek's (2015) study, it was concluded that there was no difference in critical thinking skills according to the year of study.

Undergraduate students' views on university education do not differ significantly in the dimension of innovation and creativity according to their fathers' level of education, but they differ significantly in the dimensions of free thought and inquiry and teaching practices and in total. In all dimensions and in total, the opinions of students whose fathers have high school and above education level are more critical than the opinions of students whose fathers have secondary school and lower education level. In the studies conducted by Özdemir (2005), Özdemir et al. (2013), Özdemir et al. (2018), Tümkaya and Aybek (2008), Yıldırım and Şensoy (2017), it was concluded that there was no significant difference in the critical thinking skills of university students according to their father's education level. The difference between the studies in the literature and the results of this study at the level of father education can be explained by the change in the sample group and time. It is quite significant that there is a positive relationship between students' father's education level and criticality. Increasing the level of education of parents is effective in increasing the level of consciousness of individuals and in the development of their personalities and characters.

5. Conclusion

Undergraduate students criticized the education they received at their universities in terms of innovation and creativity, free thought and inquiry, and teaching practices. Students do not find the education in their universities sufficient especially in terms of teaching practices. The fact that the education given at the university is not redesigned according to the characteristics of the age is seen as a significant obstacle for students to develop their creativity. Universities can realize their ideals by creating and enriching appropriate educational environments for students to develop and express free thought, by creating appropriate course content for the teaching staff, and by applying teaching methods according to student characteristics. Another result of the research is that university courses emphasize practice rather than theory. Considered from this perspective, since university education is similar to social life, it will be meaningful for the student if it is integrated with life. The fact that students who are new to the university are more critical than students in the upper years means that criticality, which is one of the historical ideals of the university, is diminished due to the education they receive. The loss of critical thinking, which is among the sine qua none of universities, may lead to a dangerous social docility.

6. Recommendations

Considering the results of the research, university education should encourage innovation, creativity, free thought and inquiry, and combine theory and practice. For this purpose, university education should be organized by taking into account the expectations, wishes and thoughts of all its components, particularly students. Universities should be pioneers in initiating, implementing and advancing social, cultural, economic and technological changes, and in doing so, they should apply the ideal of educating subject students who innovate, criticize, question, act and intervene by focusing on the environment in practice. It would be important to increase the scope and related variables of research on university education, as well as mixed approaches with the addition of qualitative designs in order to reveal different dimensions of reality.

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Appendix A

Critical University Education Scale Factor Loadings and Item Total Correlations

Table A. Critical University Education Scale Factor Loadings and Item Total Correlations

Dimensions	Item Number	Factor 1		Factor 2		Factor 3	
		Factor Loading	Item Total Correlation	Factor Loading	Item Total Correlation	Factor Loading	Item Total Correlation
Innovation and Creativity	9	.749	.838				
	4	.729	.765				
	3	.706	.739				
	6	.703	.809				
	14	.702	.770				
	2	.679	.717				
	12	.657	.749				
	11	.649	.733				
	8	.599	.669				
	10	.586	.729				
	17	.583	.739				
	7	.572	.655				
	1	.553	.499				
	5	.416	.456				
Free thought and Inquiry	47			.783	.828		
	54			.743	.832		
	48			.721	.799		
	58			.672	.777		
	46			.670	.785		
	52			.667	.693		
	55			.658	.728		
	49			.638	.771		
	53			.592	.750		
	43			.550	.651		
	45			.542	.717		
	40			.511	.575		
Teaching Practices	26					.648	.667
	37					.627	.673
	42					.570	.682
	36					.568	.441
	28					.552	.718
	16					.543	.764
	35					.540	.772
	24					.538	.746
	19					.531	.681
	39					.515	.557
	34					.515	.592
	51					.509	.680
	32					.509	.696
	31					.448	.454
	27					.439	.657
Eigenvalues		16.515		2.731		1.856	
Variance Explained (%)		19.024		17.110		15.337	Sum: 51.47
Cronbach Alpha Coefficient		.935		.920		.941	Sum: .963
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy							.906

Appendix B

Descriptive Statistical Results of Undergraduate Students' Critical University Education Statements

Table B1. Arithmetic means and standard deviation values of undergraduate students regarding the innovation and creativity dimension of the Critical University Education Scale

Item No	New Item No	Items	$\bar{x}$	sd
1	1	In university education, the emphasis is on rules rather than people.	3.24	1.40
2	2	In university education, instead of renewing itself according to the characteristics of the time, it is based on dogmas.	3.21	1.22
3	3	In university education, instead of encouraging people to innovate, it discourages them.	3.31	1.26
4	4	In university education, the standard demands of the past are met instead of the current expectations of students.	3.26	1.25
5	5	In university education, rules remain fixed when they should be revised according to the characteristics of the times.	3.41	1.29
6	6	In university education, creativity is discouraged rather than encouraged.	3.17	1.31
7	7	In university education there is distance between professors and students rather than good communication.	3.07	1.28
8	8	In university education, the idea of the absolute immutability of science is given instead of the idea that science is constantly evolving and changing.	2.54	1.17
9	9	In university education, instead of democratic attitudes, authoritarian attitudes are tried to be acquired.	3.17	1.30
10	10	In university education, instead of controlling change, it is oriented towards unconditional compliance with change.	3.15	1.14
11	11	In university education, instead of encouraging the implementation of new ideas, it is oriented only towards the implementation of tried and generally accepted ideas.	3.22	1.19
12	12	In university education, instead of encouraging the development of existing potential, it inculcates contentment with existing potential.	3.13	1.24
14	13	In university education, instead of encouraging the generation of different solutions to different problems, it is contented with applying the same solution to every problem.	3.11	1.16
17	14	In university education, it is accepted to maintain the existing functioning instead of seeking innovation.	3.53	1.10
Total			44.59(3.18)	11.60

Table B2. Arithmetic means and standard deviation values of undergraduate students regarding the free thought and inquiry dimension of the Critical University Education Scale

Item No	New Item No	Items	$\bar{x}$	sd
40	15	In university education, problems are kept secret rather than disclosed.	3.40	1.10
43	16	In university education, information is not given for me to question, but for me to accept it as the absolute truth.	2.96	1.24
45	17	In university education, the information given objectifies the individual instead of subjectivizing them.	3.57	1.12
46	18	In university education, instead of individuals who think critically, individuals who accept everything they are told are raised.	3.47	1.19
47	19	In university education, instead of a democratic way of life, an authoritarian environment is adopted.	3.52	1.22
48	20	In university education, stereotypes dominate instead of independent thinking.	3.41	1.19
49	21	In university education, instead of developing different ways of thinking, it focuses on a single type of thinking.	3.31	1.13
52	22	In university education, instead of respecting the rights of the other, it is oriented towards excluding the other.	2.71	1.28
53	23	In university education, instead of making students autonomous, it is oriented towards establishing a relationship of dependency.	3.19	1.18
54	24	In university education, instead of encouraging inquiry, it inculcates silence.	3.28	1.20
55	25	In university education, instead of creating appropriate environments for the expression of ideas, such environments are restricted.	2.91	1.41
58	26	In university education, instead of the authority of knowledge, it is based on the authority of fear.	3.29	1.38
Total			39.06(3.25)	10.62

Table B3. Arithmetic means and standard deviation values of undergraduate students regarding the teaching practices dimension of the Critical University Education Scale

Item No	New Item No	Items	$\bar{x}$	sd
16	27	In university education, the existing programs are not continuously developed, but rather, the existing programs are sufficient.	3.26	1.15
19	28	In university education, the emphasis is on theory, when it should be on practice.	3.32	1.37
24	29	In university education, the aim is to impose knowledge rather than to teach thinking.	3.50	1.21
26	30	In university education, professors are transmitters of knowledge rather than instructors of ways of accessing knowledge.	3.64	1.13
27	31	In university education, competition dominates instead of cooperation.	3.12	1.36
28	32	In university education, professors are controllers in the classroom instead of organizing classes according to the needs of the students.	3.54	1.10
31	33	In university education, instead of students choosing courses that suit their interests and abilities, there are compulsory choices.	4.03	1.05
32	34	In university education, students are asked to comply with the decisions taken instead of participating in decisions about themselves.	3.87	1.05
34	35	In university education, instead of education according to the characteristics of	3.86	1.10

		individuals, education is given by considering all students' learning type, speed and capacity to be the same.		
35	36	In university education, instead of relational thinking based on scientific thinking, stereotyped thinking is emphasized.	3.44	1.22
36	37	In university education, more emphasis is placed on lectures rather than social and cultural activities.	4.14	.97
37	38	University education emphasizes the quantity of graduates rather than their quality.	3.70	1.07
39	39	In university education, individuals' learning is limited to the classroom, when it should be everywhere.	3.67	1.11
42	40	In university education, teacher-centered education is applied instead of student-centered education.	3.54	1.19
51	41	In university education, instead of developing analytical skills, memorization-based skills are emphasized.	3.67	1.12
Total			54.38(3.62)	10.83

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