

# The Impact of Graduates' Skills on Facing Challenges in the Labor Market

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## Abstract

**Objectives:** This study aims to measure the impact of graduate skills on job challenges in the labor market in Kosovo and also to measure the relationship between graduates' challenges at work and demographic characteristics (age, gender, educational level, and training). **Methods:** Quantitative methods were used to conduct this research, using a structured questionnaire. The study population was graduate students in the last five years in Kosovo, and the sample included 400 students according to Slovin's formula. **Findings:** Based on the research results, the acquired skills were inversely proportional to the challenges of the graduates in the labor market. According to the multiple linear regression, it turned out that the students' skills negatively affected their challenges. Also, the T-test and ANOVA showed significant results concerning gender, age, and training. **Novelty/improvement:** Through this research, higher education institutions receive feedback on what needs more attention to better prepare students to face the job market. Hence, the research will contribute to improving the quality of teaching and reducing the challenges graduates face in the labor market.

## Keywords:

Graduates' Skills;  
Student Challenges;  
Labor Market;  
Demographic Characteristics.

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## 1- Introduction

For several decades, Human Capital Theory has focused on higher education, and according to economists, investing in higher education may be a growing indicator of future well-being as a result of improving the knowledge and skills of employees [1, 2]. Technological developments and periods of low economic growth increase the problem of unemployment, especially among young graduates. This problem stems from the fact that the skills acquired through education do not match the skill requirements of the workplace. To address this problem, it is necessary to advance professional education and develop a relationship between education and employment. As a result, the gap between the skills you learn in school and the skills you need in the workplace will be narrowed [3].

Young people are trained by educational institutions to take a productive role in the workplace. These educational institutions aim to meet the needs of the labor market through the learning process, which is confirmed by human resource theorists. In other words, these institutions tend to train young people in line with market demands [4, 5]. According to researchers, professional education is inadequate for graduates to enter the labor market, while inclusive education makes graduates more flexible and resilient to adapt to changes in modern markets and constant technological changes [6]. This research will identify the challenges graduate students face when they enter the labor market in Kosovo and the impact of skills acquired during studies on these challenges. Besides, the demographic aspect has also been explored to see where the differences lie.

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Thus, this research addresses the research gap by exploring graduate skills and challenges in a way that higher education institutions receive feedback on what needs consideration to better prepare students to enter the job market. Based on the dynamics of innovations and technological processes, higher education should be in step with these developments to develop the skills of graduates concerning the requirements of employers. It will also contribute to improving the quality of teaching and reducing the challenges graduates face in coping with the labor market.

## 2- Literature Review

Education creates the skills and abilities necessary for the workplace, which affects the improvement of living standards. The contemporary society, influenced by technological development and high competition, has increased the challenges for employees [7] in getting and keeping a job because technology is increasingly making work easier, but on the other hand, harder due to the growing demand for more creative and professional work. Graduates do not have the standard skills required by employers [8, 9], although human resource managers have highly valued technical knowledge. On the other hand, they lack business soft skills, personal attributes [9-11], interpersonal skills, time management skills, team working skills, and professional skills. Hence, researchers, higher education, professional bodies, and employers are recently paying more attention to the skills and competencies of graduates [12, 13].

Preliminary research has identified different skills for employees depending on the context analyzed. For example, the study conducted by the OECD in 2011 analyzed basic skills, technological flexibility, entrepreneurship, communication skills, creativity, teamwork, and negotiation [14], while in the research conducted in 2014, employers singled out time management, taking responsibility, and the efficient organization as necessary skills for decent employment [15]. Critical Perspectives on Graduate Employability research has identified team management skills, negotiation skills, and job-related skills in the area of supply management [16], while the Enhancing Graduate Work-Readiness research has emphasized how the central role of personal planning, initiative, and organizational skills [17]. Students should understand that education is not intended to achieve good grades, but to develop personal skills for career achievement [9, 18], as addressed in this research:

*Interpersonal skills* represent the skills that people use in their meetings to regulate behavior for it to be in step with the objectives, i.e., interpersonal skills are defined as goal-oriented behaviors used in interactions between parties to bring the desired state of affairs [19]. Students perceive interpersonal skills as the most important employment factor, leading to their more convenient adaptation to work [9].

*Organizational skills* represent a set of techniques used by individuals to increase the effectiveness of future-oriented learning, problem-solving, and task completion, thus requiring the integration of elements to achieve planned goals [20].

*Planning skills* are the ability to evaluate, coordinate, lead, and control the activities that each employee must possess in order to be able to achieve individual and organizational goals.

*Time management skills* are skills that individuals use to complete activities productively and efficiently. Mastering these skills enable individuals to perform all the tasks and activities necessary to achieve the results for themselves and the organization [21].

*Teamwork skills* are skills to perform work effectively, become part of the team, and use shared resources, which we organize based on the skills, productivity, and preferences of team members. These skills provide individuals with the opportunity to accept tasks on the team, leaving no room for complaints about the team. Teamwork creates a synergy of individuals who generate results that were not achievable by working individually [22].

*Creativity* is the possession of specific knowledge to combine and propose new ideas in establishing products, processes, and business models. Employers consider this skill as a central factor, while it is reported as a skill lacking in graduates [9].

*Knowledge* is a collection of relevant information, which provide a structure for evaluating and integrating new experiences and information. This individual knowledge within the organization is regarded as a repository of intelligence for organizational development [23]. The categories of knowledge treated in the research include theoretical, research and practical.

*Numerical skills* are skills of crucial importance, which represent the skills of counting, manipulating numbers, and applying in practical contexts. It is a skill considered very necessary for evaluating the employability and job performance of graduates [9].

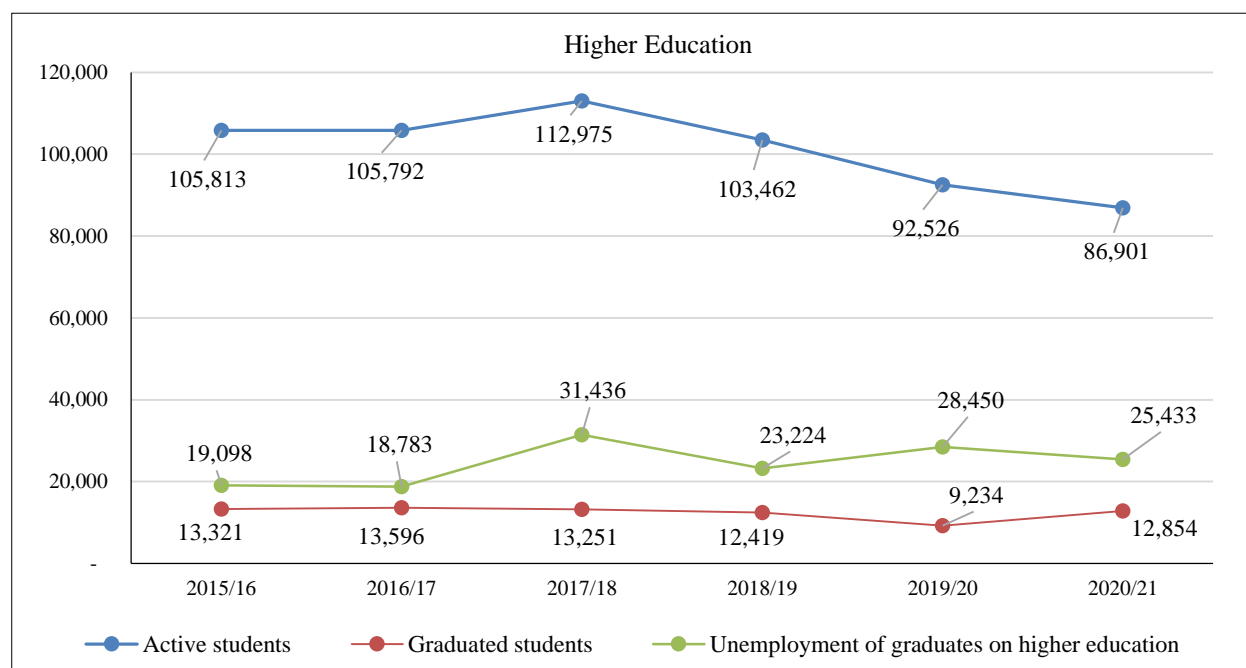
*Problem-solving* ability is a skill that enables the development and transformation of situations from an obstacle to an opportunity.

### 2-1- Kosovo Context of Education System, Employment, and Challenges in Labor Market

Kosovo has a high trend of enrolment in higher education [24], which means that young people spend a large part of their time on their professional and personal development. Kosovar youth aim to attend studies by a mass of 92%, while according to experts, the study curricula are not well adapted to the labor market, or the orientation of studies does not consider market demand. Public spending on the education sector is consistently at 4.6% of GDP, which is at the level of countries in the region compared to the percentage of young people in the country's demographics [25].

According to the graph, the number of active students in Higher Education Institutions was 105 813 in the academic year 2015/16 [26], following an increasing trend until the academic year 2017/18. Then, there was a decrease of about 10% of active students in 2018/19 due to migration from Kosovo to European countries and the USA [27]. Identifying the number of unemployed in Kosovo has always been problematic due to the lack of a correct registry of this population. Hence, experts have always raised doubts about the assessment of unemployment in Kosovo, predicting the number of unemployed to be higher [28]. Despite the downward trend of active students, the number of graduates has been approximately constant except for the academic year 2019/20, with a decline of about 25% because of the Covid-19 pandemic. However, after the situation improved in the academic year 2020/21, the number of graduates reached the level of previous years.

The lack of research of Higher Education Institutions in the labor market, government policy for career guidance, an economic model for the country, and funding for research work may have led to this gap in the skills of graduates. Higher Education Institutions are greatly curriculum-oriented in the field of social sciences, economics, law, and social sciences. However, Higher Education Institutions had been recently oriented towards nursing due to the demand for labor in the European Union countries, including Germany. Kosovo's economic power is much lower to pay graduates, leading to the emigration of talents, most of whom are graduates of the faculty of medicine, computer science, engineering, etc. [29].



**Figure 1. Actual students, graduated students, and unemployment of graduated**

Based on the high number of active students in higher education in the public and private sectors, most young people can continue their studies, regardless of their results and the skills gained from primary and secondary education. Adding to the low scores from the PISA test, this shows that education has a low performance. Accordingly, the education system in Kosovo needs a reform based on market demands and labor force competition from the countries of the region and the European Union [30].

### 3- Research Methodology

A quantitative method was used for the study, through which we achieved the objectives and gave answers to the research questions. The study population included graduate students in the last five years, the total number of whom was obtained from the Kosovo Agency of Statistics. The sample size was determined based on Slovin's formula for sampling to include a representative sample in the study. Based on Table 1, there have been 61354 graduates in the last five years [26].

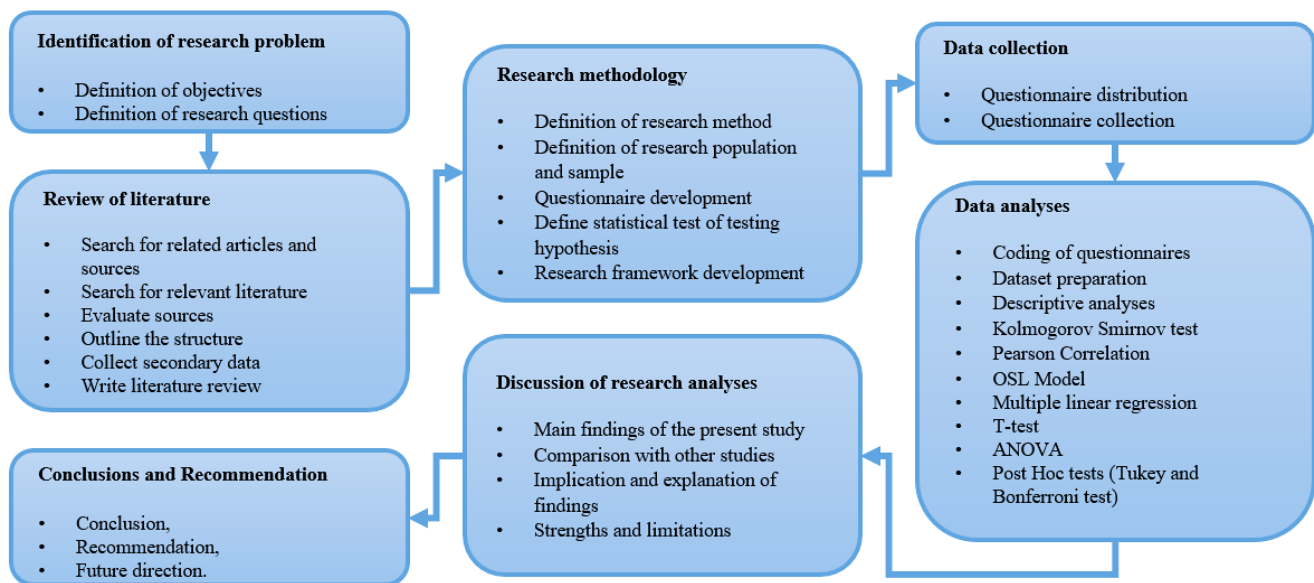
**Table 1. Graduate students in the last five years**

Description	2016/17	2017/18	2018/19	2019/20	2020/21
Graduated students	13,596	13,251	12,419	9,234	12,854

Equation 1 shows the sample calculation, according to which the sample for conducting the research included 400 graduate students in the last five years.

$$N = \frac{N}{1+N*(e)^2} = 400 \quad (1)$$

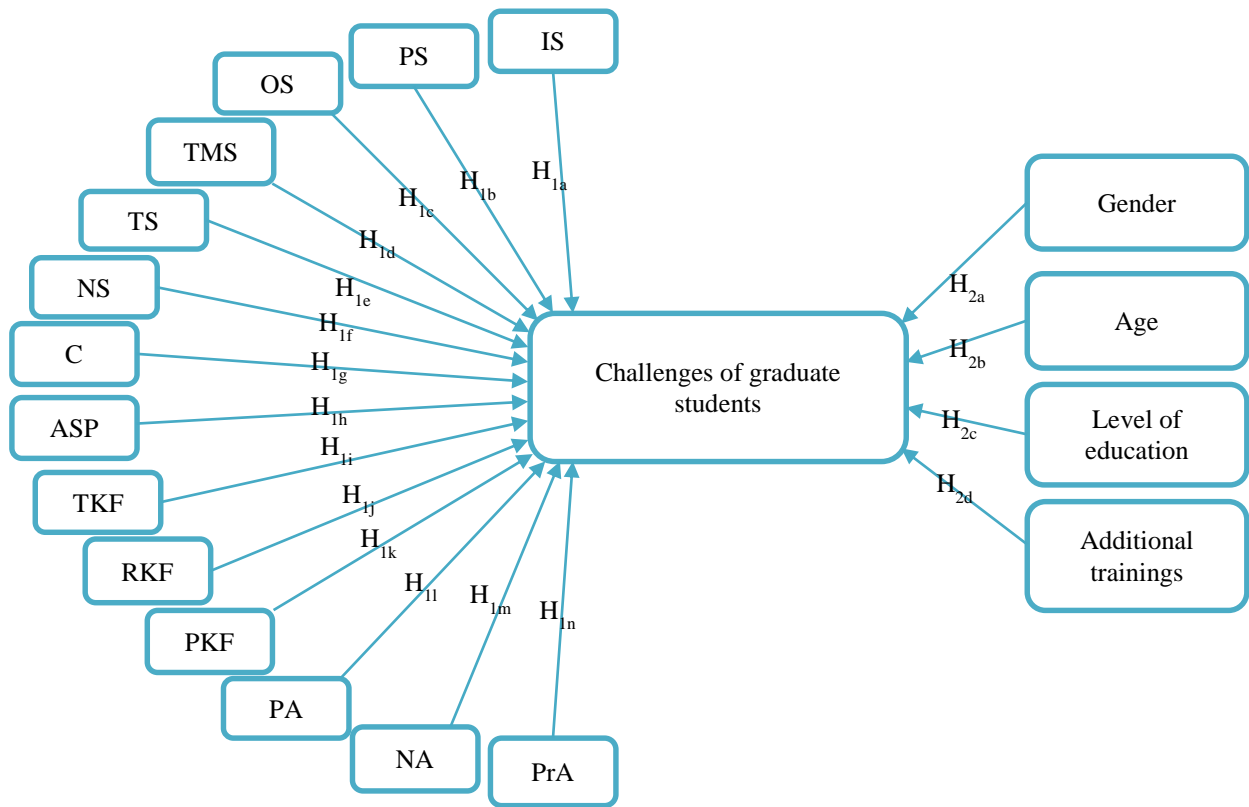
The questionnaire was structured and divided into three sections, the first of which had questions about demographic characteristics. The second section included questions about student skills according to the Likert scale ranging from 1 = much below the standard required by the employer to 5 = much above the standard required by the employer. The third section highlighted the student challenges according to the Likert scale ranging from 1 = strongly disagree to 5 = strongly agree. Data processing was conducted using Statistical Package for the Social Sciences (SPSS), version 26. Figure 2 presents the research methodology in a flowchart.

**Figure 2. Flowchart of research methodology**

This paper has presented two objectives and two hypotheses:

- **Objective 1:** Measuring the impact of graduate skills on job challenges in the labor market in Kosovo.
- **H<sub>1</sub>:** There is a statistically significant relationship between graduate skills and job challenges.
- **Objective 2:** Measure the relationship between graduates' challenges at work and demographic characteristics (age, gender, educational level, and training).
- **H<sub>2</sub>:** There is a statistically significant relationship between graduates' challenges at work and demographic characteristics (age, gender, educational level, and training).

The independent variables are the students' skills (IS, PS, OS, TMS, TS, NS, C, ASP, TKF, RKF, PKF, PA, NA, PrA), while the dependent variables are the challenges of the graduate students (CGS). To see the relationship between the variables, refer to the framework below (Figure 3):



**Figure 3. Framework of research**

Various tests were performed to present the results. Kolmogorov Smirnov test of normality was initially performed to confirm the distribution of data, the results of which were used to verify the hypotheses. Since  $p > 0.05$ , the data distribution turned out to be normal, satisfying the conditions to carry out Pearson correlation, linear regression, t-test, ANOVA, and Post Hoc (Tukey and Bonferroni) tests to identify the groups which had differences.

Through the correlation analysis, the relationship of the dependent variable (CGS) and the independent variables (IS, PS, OS, TMS, TS, NS, C, ASP, TKF, RKF, PKF, PA, NA, PrA) was tested. The reason for performing the correlation is to determine the direction the dependent variable (y) will take when the independent variables change. The correlation coefficient is calculated through the following equation:

$$r = \frac{\sum_{i=1}^n (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum_{i=1}^n (x_i - \bar{x})^2 \times \sum_{i=1}^n (y_i - \bar{y})^2}} \quad (2)$$

Regression analysis was used to present the relationship between the dependent variable (CGS) and the independent variables (IS, PS, OS, TMS, TS, NS, C, ASP, TKF, RKF, PKF, PA, NA, PrA), performing one by one tests and finding R square for each variable. The following equation represents the simple linear regression model:

$$y = \beta_0 + \beta_1 * x_1 + \varepsilon \quad (3)$$

where  $\beta_1 = \frac{n \sum xy - \sum x \sum y}{n \sum x^2 - (\sum x)^2}$ ,  $\beta_0 = \bar{y} - \beta_1 \bar{x}$ , y is the dependent variable and x is independent variable. Multiple linear regression was used to explain the relationship of student skills (IS, PS, OS, TMS, TS, NS, C, ASP, TKF, RKF, PKF, PA, NA, PrA) and graduate challenges through the following mathematical equation:

$$y = \beta_0 + \beta_1 x_1 + \dots + \beta_n x_n + \varepsilon \quad (4)$$

The t-test was used to investigate the difference between the two groups (gender and challenges), in terms of mean value. So, through the T-test it was determined whether there is a significant difference between the gender mean and the mean of the challenges. Independent Samples T Test is presented by the following equation:

$$t = \frac{\mu_A - \mu_B}{\sqrt{\left[ \frac{(\sum A^2 - \frac{(\sum A)^2}{n_A}) + (\sum B^2 - \frac{(\sum B)^2}{n_B})}{n_A + n_B - 2} \right] * \left( \frac{1}{n_A} + \frac{1}{n_B} \right)}} \quad (5)$$

The t-test was used to investigate the difference between the two groups (gender and challenges) considering the mean value. Therefore, the t-test determined whether there was a significant difference between the means of gender and the challenges. The following equation represents independent samples t-test:

$$F = \frac{\frac{\sum n_j (\bar{X}_j - \bar{X})^2}{k-1}}{\frac{\sum \sum (X - \bar{X}_j)^2}{N-k}} \quad (6)$$

#### 4- Results and Discussion

Out of 400 graduate students, participants in the research were 48.5% (n = 198) female and 50.5% (n = 202) male. Of these, 37% (n = 148) were in the age group 18-25 years old, 30% (n = 120) in the age group 26-33 years old, 19% (n = 78) in the age group 34 -41 years old, 7% (n = 28) in the age group 42-49 years old, and 6.5% (n = 26) over 50 years old. Regarding the level of education, 51.8% (n = 207) were graduate students at the Bachelor's level and 48.3% (n = 193) at the Master's level. In addition to the categorization of students according to the level of education, there was another categorization based on the institution where they studied, indicating that 63.5% (n = 254) were graduate students in public institutions, and 36.5% (n = 146) were from public institutions (Table 2).

Out of the research participants, 27.8% (n = 111) were unemployed, 23.5% (n = 94) employed for 0-1 years, 12% (n = 48) for 2-3 years, 9.3% (n = 37) for 4-5 years, and 27.5% (n = 110) more than 5 years. In addition, the largest percentage of graduates, 26.8% (n = 107), was employed 5 years after completing their studies, 11.3% (n = 45) stated that they were employed 3 years after graduation, 17% (n = 68) were employed 1 year after graduation, 20% (n = 80) were employed immediately after graduation, and 25% (n = 100) were employed before graduation.

**Table 2. Respondent Characteristics; Note: N=400**

Demographic variable	Variable segmentation	N	%
Gender	Female	198	49.5
	Male	202	50.5
Age	18 - 25 years old	148	37.0
	26 - 33 years old	120	30.0
	34 - 41 years old	78	19.5
	42 - 49 years old	28	7.0
	Over 50 years old	26	6.5
Level of education	Bachelor	207	51.8
	Master	193	48.3
I completed my studies at the institution:	Public	254	63.5
	Private	146	36.5
How long have you been working?	0-1 year	205	51.2
	2-3 years	48	12.0
	4-5 years	37	9.3
	Over 5 years	110	27.5
	Longer than 5 years after graduation	107	26.8
	About 3 years after graduation	45	11.3
When were you employed?	About 1 year after graduation	68	17.0
	Immediately after graduation	80	20.0
	Before graduation	100	25.0

According to descriptive analysis and considering the Likert scale, from a minimum of 1 = much below the standard required by the employer to a maximum of 5 = much above the standard required by the employer, the average skills of graduate students was  $\bar{x} = 2.99$  and  $SD = 1.04$ . Based on the overall average, the skills of the graduates were at the average level. Also, referring to the Likert scale from minimum 1 = strongly disagree to maximum 5 = strongly agree, the overall average of graduates entering the labor market was  $\bar{x} = 2.05$  and  $SD = 0.96$ . Based on the overall average, the challenges faced by graduates were below average.



Table 3 categorizes skills into subcategories, where the average interpersonal skills (IS) was  $\bar{x}$  = 2.97 and SD = 1.03, which means that students had an average level of flexibility in thinking and functioning style, motivation and training of other team members, communication and public presentation skills, and networking and relationship building. The average communication skills were  $\bar{x}$  = 2.71 and SD = 0.88, indicating that students had below-average levels of the ability to accurately assess time, identify and organize the resources required, organize a personal time to perform responsibilities, and develop clear schedules and deadlines. The average organizational skills (OS) were  $\bar{x}$  = 2.62 and SD = 0.70, indicating that graduate students had below-average levels of job delegation skills, decision-making skills, team management, project management, and scheduling skills. The average time management (TMS) turned out to be  $\bar{x}$  = 2.96 and SD = 0.98, which shows that students had an average level of skills for prioritization, goal setting, communication, time planning, stress management, and setting short-term and long-term goals. The average teamwork (TS) was  $\bar{x}$  = 3.17 and SD = 1.15, which represents an above-average level of communication skills, conflict resolution, report building and listening organizational skills, impact ability, and reliability.

The average of numerical skills (NS) was  $\bar{x}$  = 3.03 and SD = 1.04, which means that graduate students had above-average knowledge of basic numbers, knowledge of arithmetic, budgeting, interpretation of mathematical information, understanding the relationship between numbers, understanding trends, and measuring and analyzing data. The average creativity (C) graduate students gained during schooling was  $\bar{x}$  = 3.22 and SD = 1.12, which means that students had above-average levels of problem-solving skills, writing skills, visual arts, communication skills, and open-mindedness. The average problem-solving ability (ASP) was  $\bar{x}$  = 3.32 and SD = 1.20, giving indications for the above-average levels of analytical skills, innovative and creative thinking, adaptability, flexibility, initiative, and sustainability. The average of specific discipline skills (TKF) was  $\bar{x}$  = 2.96 and SD = 0.95, which means that graduates had a below-average level of knowledge for empirical research and conceptual frameworks specific to the applied field, processing of practitioners' knowledge and practical principles, and preferred ideology of the profession.

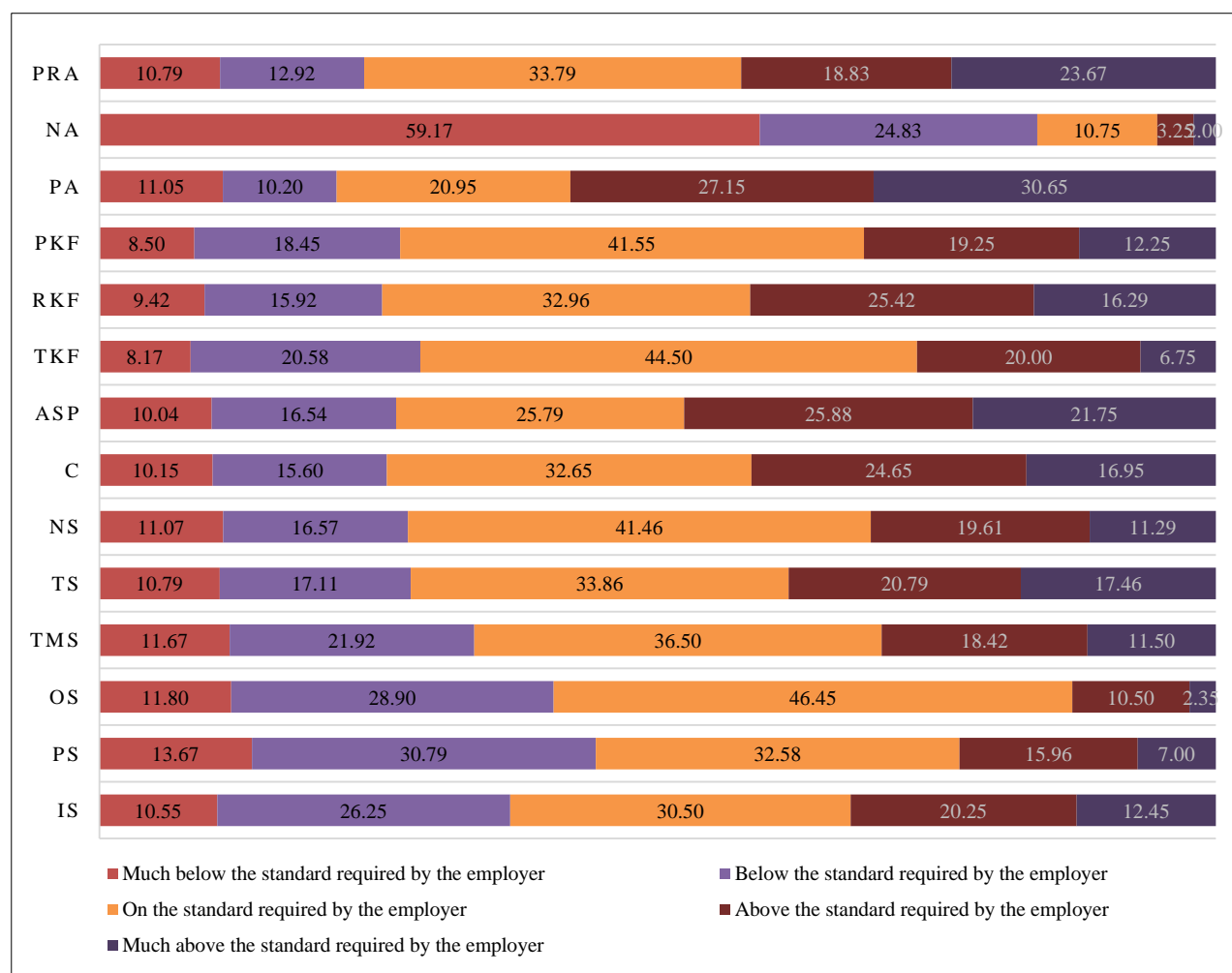
The average for field research knowledge (RKF) was  $\bar{x}$  = 3.23 and SD = 1.11, which shows an above-average level of ability to search for information, attention to detail, note-taking, time management, problem-solving research, and communication of results. The average practical knowledge of the field (PKF) was  $\bar{x}$  = 3.08 and SD = 1.03, which means an above-average level of skills for problem orientation, comprehension, action orientation, and definition of appropriate instruments. The average of possessing positive attributes (PA) was  $\bar{x}$  = 3.59 and SD = 1.28, indicating that the graduates were well above the average level of adaptability, being positive, ambitious, sincere, professional, and cooperative. The mean of the negative attributes (NA) was  $\bar{x}$  = 1.64 and SD = 0.88, which shows the graduates were not arrogant and inflexible, deceitful and irresponsible, dishonest, jealous, selfish, or rude. Finally, the average of professional attributes (PrA) was  $\bar{x}$  = 3.31 and SD = 1.90, which means that graduates were above the average level of focus, objective and proactive, effective and efficient, and loyal.

**Table 3. Descriptive statistics of graduate student skills- Source: Authors' data**

Variables	Mean	SD	Variance
IS	2.978	1.034	1.070
PS	2.718	0.882	0.777
OS	2.627	0.708	0.502
TMS	2.962	0.982	0.965
TS	3.170	1.152	1.328
NS	3.035	1.042	1.085
C	3.227	1.127	1.271
ASP	3.328	1.202	1.445
TFK	2.966	0.957	0.916
RKF	3.233	1.112	1.238
PKF	3.083	1.033	1.068
PA	3.598	1.288	1.660
NA	1.641	0.887	0.786
PrA	3.317	1.190	1.417

Note: IS = Interpersonal skills, PS = Planning skills, OS = Organizational skills, TMS = Time management skills, TS = Teamwork skills, NS = Numerical skills, C = Creativity, ASP = Ability to solve problems, TKF = Theoretical knowledge of the field, RKF = Research knowledge for the field, PKF = Practical knowledge of the field, PA = Positive attributes, NA = Negative attributes, PrA = Professional attributes.

Referring to Figure 4, positive attributes (20.95%), ability to solve problems (25.79), interpersonal skills (30.50%), and planning skills (32.58%) showed the lowest scores concerning the level of skills according to the standard required by the employer. The graduates showed lower scores in terms of accurate assessment of time, organization of personal time to perform responsibilities, setting the way to measure results for themselves, flexibility in thinking, motivation, communication skills, analytical skills, and innovative thinking. However, time management skills (36.50%), numerical skills (41.46%), practical knowledge of the field (41.55%), theoretical knowledge of the field (44.50%), and organizational skills (46.45%) showed higher scores than those of the possession of skills according to the standard required by the employers. Accordingly, graduates showed high results in knowledge of numbers and computational skills, empirical research and conceptual frameworks, problem orientation, defining the right instruments, delegating jobs to subordinates, and the ability to make decisions and manage the team.



**Figure 4. Graduates' skills**

Before the following hypothesis tests, the normality, Kolmogorov-Smirnov, and Shapiro-Wilk tests were performed to determine the distribution. Since  $p = 0.200 > 0.05$ , the data distribution was normal, satisfying one of the conditions to use regression and parametric tests to validate the hypotheses. Also, the condition for representation of the sample was met because  $289 > 50 + 8 \times 14 = 162$ ;  $289 > 162$ , and there were no problems with autocorrelation as the value of the Durbin Watson test was within the range of 1.5 and 2.5.

Of particular importance is the reliability analysis of the questionnaire because all analyses come from it. The reliability of the measuring instrument leads to certainty in the interpretation and discussion of the results, contributing to the verification of the hypotheses. To measure the reliability of the instrument, we rely on the values of Cronbach's alpha coefficient for each category. According to Table 4, the total reliability of the instrument for all categories was  $\alpha = 0.927$ , indicating an acceptable level of reliability.



**Table 4. Correlation analyses matrix**

Variables	$\alpha$	IS	PS	TMS	TS	NS	C	TFK	RKF	PKF	PA	NA	PRA	CGS
IS	0.984	1												
PS	0.976	0.817**	1											
TMS	0.899	0.802**	0.823**	1										
TS	0.901	0.828**	0.823**	0.873**	1									
NS	0.898	0.708**	0.741**	0.768**	0.773**	1								
C	0.803	0.802**	0.828**	0.860**	0.907**	0.812**	1							
TFK	0.866	0.762**	0.719**	0.794**	0.772**	0.680**	0.777**	1						
RKF	0.988	0.794**	0.835**	0.825**	0.851**	0.802**	0.910**	0.822**	1					
PKF	0.897	0.800**	0.785**	0.842**	0.887**	0.768**	0.884**	0.795**	0.884**	1				
PA	0.986	0.733**	0.736**	0.777**	0.752**	0.803**	0.806**	0.696**	0.833**	0.783**	1			
NA	0.897	-0.032	0.054	0.072	0.107*	0.063	0.096	0.041	-0.064	0.007	-0.123*	1		
PrA	0.891	0.763**	0.800**	0.805**	0.816**	0.773**	0.861**	0.724**	0.888**	0.846**	0.858**	-0.092	1	
CGS	0.989	-0.376**	-0.342**	-0.364**	-0.336**	-0.315**	-0.332**	-0.307**	-0.385**	-0.381**	-0.182**	0.208**	-0.221**	1

\*\* Correlation is significant at the 0.01 level (2-tailed)

Note: IS = Interpersonal skills, PS = Planning skills, TMS = Time management skills, TS = Teamwork skills, NS = Numerical skills, C = Creativity, TKF = Theoretical knowledge of the field, RKF = Research knowledge for the field, PKF = Practical knowledge of the field, PA = Positive attributes, NA = Negative attributes, PrA = Professional attributes, CGS = Challenges of graduate students

#### 4-1- $H_1$ Verification

According to Table 4, Pearson's correlation was used to measure the degree of relationship between the dependent variable and the independent variables. Based on the value of the correlation coefficient:  $r = -0.376$  and  $\text{sig} < 0.01$ , there was a low negative correlation between interpersonal skills (IS) and challenges of graduate students (CGS);  $r = -0.342$  and  $\text{sig} < 0.01$ , there was a low negative correlation between planning skills (PS) and challenges of graduate students (CGS);  $r = -0.364$  and  $\text{sig} < 0.01$ , there was a low negative correlation between time management skills (TMS) and challenges of graduate students (CGS);  $r = -0.336$  and  $\text{sig} < 0.01$ , there was a low negative correlation between teamwork skills (TS) and challenges of graduate students (CGS),  $r = -0.315$  and  $\text{sig} < 0.01$ , there was a low negative correlation between numerical skills (NS) and challenges of graduate students (CGS);  $r = -0.332$  and  $\text{sig} < 0.01$ , there was a low negative correlation between creativity (C) and challenges of graduate students (CGS);  $r = -0.307$  and  $\text{sig} < 0.01$ , there was a low negative correlation between theoretical knowledge of the field (TKF) and challenges of graduate students (CGS);  $r = -0.385$  and  $\text{sig} < 0.01$ , there was a low negative correlation between Research knowledge for the field (RKF) and challenges of graduate students (CGS);  $r = -0.381$  and  $\text{sig} < 0.01$ , there was a low negative correlation between practical knowledge of the field (PKF) and challenges of graduate students (CGS);  $r = -0.182$  and  $\text{sig} < 0.01$ , there was a negligible correlation between positive attributes (PA) and challenges of graduate students (CGS);  $r = 0.208$  and  $\text{sig} < 0.01$ , there was a negligible correlation between negative attributes (NA) and challenges of graduate students (CGS); and  $r = -0.221$  and  $\text{sig} < 0.01$ , there was a negligible correlation between professional attributes (PrA) and challenges of graduate students (CGS).

Based on the correlation results, there was a negative linear relationship between the skills acquired by students during their studies and challenges in the labor market, which means that students' skills and challenges were inversely proportional, and the more skills the students had, the fewer challenges they would have in the job market or vice versa. The relationship of organizational skills (OS) and the ability to solve problems (ASP) with challenges of graduate students was not significant; therefore, the relationship between them is not discussed.

The value of R square, referring to Table 5, shows what percentage of graduate students' challenges (dependent variable) is explained by the skills acquired during schooling (independent variables). Therefore, based on the value of R Square ( $R^2 = 0.226$ ;  $\text{sig} = 0.000$ ), 22.6% of the challenges of graduate students can be explained by the skills students have acquired during schooling, while the remaining 77.4% is explained by variables not included in the model by any random error. Therefore, with the increase of independent variables in the model, the value of R square also increases. The ANOVA test, which expresses the importance of the model as a whole, based on  $F(14, 385) = 9.333$ ,  $\text{sig} = 0.000$ , determines that the model used is significant at each level.

**Table 5. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	0.503 <sup>a</sup>	0.253	0.226	0.76131	0.253	9.338	14	385	0.000	2.048

a. Predictors: (Constant), IS, PS, OS, TMS, TS, NS, C, ASP, TFK, RKF, PKF, PA, NA, PrA

b. Dependent Variable: CGS

According to the following model ( $\beta_0 = 2.522$ , Sig. = 0.000), despite the skills acquired during studies, students would have challenges in the labor market. Accordingly, with the increase of each skill (IS, PS, OS, ASP, PKF, PrA), the challenges would decrease (Table 6), except for NA ( $\beta_{\_6} = 0.212$ ; Sig < 0.05), in which the increase of negative attributes would lead to more challenges for students. Other independent variables such as (TMS, TS, NS, C, TFK, RKF, PA) were excluded from the model considering the p-value > 0.05.

**Model:**

$$y = \beta_0 + \beta_1 * x_1 + \beta_2 * x_2 + \beta_3 * x_3 + \beta_4 * x_4 + \beta_5 * x_5 + \beta_6 * x_6 + \beta_7 * x_7 + \varepsilon \quad (7)$$

$$y_{(CGS)} = 2.252 - 0.110 * x_{(IS)} - 0.576 * x_{(PS)} - 0.456 * x_{(OS)} - 0.612 * x_{(ASP)} - 0.205 * x_{(PKF)} + 0.212 * x_{(NA)} - 0.236 * x_{(PrA)}$$

**Table 6. Multiple linear regression analysis**

Model	Unstandardized Coefficients		Standardized Coefficients		t	Sig.
	B	Std. Error	Beta			
1 (Constant)	2.252	0.183	-	12.321	0.000	
IS	-0.110	0.080	-0.131	-1.373	0.021	
PS	-0.576	0.100	-0.586	-5.768	0.000	
OS	-0.456	0.109	0.374	-4.181	0.000	
ASP	0.612	0.112	0.850	5.442	0.000	
PKF	-0.205	0.099	-0.244	-2.064	0.040	
NA	0.212	0.051	0.217	4.145	0.000	
PrA	-0.236	0.086	-0.324	-2.755	0.006	

a. Dependent Variable: CGS

According to Table 7, based on the value  $R^2 = 0.031$  ( $\beta = -0.148$ ;  $t = -3.574$ ; Sig < 0.05), 3.1% of challenges of graduate students (CGS) depend on interpersonal skills (IS),  $R^2 = 0.059$  ( $\beta = -0.238$ ;  $t = -4.986$ ; Sig < 0.05), 5.9% of challenges of graduate students (CGS) depend on planning skills (PS),  $R^2 = 0.027$  ( $\beta = -0.144$ ;  $t = -3.313$ ; Sig < 0.05), 2.7% of challenges of graduate students (CGS) depend on time management skills (TMS),  $R^2 = 0.018$  ( $\beta = -0.102$ ;  $t = -2.730$ ; Sig < 0.05), 1.8% of challenges of graduate students (CGS) depend on teamwork skills (TS),  $R^2 = 0.013$  ( $\beta = -0.095$ ;  $t = -2.302$ ; Sig < 0.05), 1.3% of challenges of graduate students (CGS) depend on numerical skills (NS),  $R^2 = 0.017$  ( $\beta = -0.101$ ;  $t = -0.650$ ; Sig < 0.05), 1.7% of challenges of graduate students (CGS) depend on creativity,  $R^2 = 0.011$  ( $\beta = -0.096$ ;  $t = -2.139$ ; Sig < 0.05), 1.1% of Challenges of graduate students (CGS) depend on theoretical knowledge of the field (TKF),  $R^2 = 0.034$  ( $\beta = -0.144$ ;  $t = -3.755$ ; Sig < 0.05), 3.4% of challenges of graduate students (CGS) depend on Research knowledge for the field (RKF),  $R^2 = 0.033$  ( $\beta = -0.151$ ;  $t = -3.666$ ; Sig < 0.05), 3.3% of challenges of graduate students (CGS) depend on practical knowledge of the field (PKF),  $R^2 = 0.033$  ( $\beta = -0.123$ ;  $t = -3.702$ ; Sig < 0.05), 3.3% of challenges of graduate students (CGS) depend on positive attributes (PA),  $R^2 = 0.043$  ( $\beta = 0.203$ ;  $t = 4.233$ ; Sig < 0.05), 4.3% of challenges of graduate students (CGS) depend on negative attributes (NA),  $R^2 = 0.059$  ( $\beta = -0.238$ ;  $t = -4.986$ ; Sig < 0.05), 5.9% of challenges of graduate students (CGS) depend on professional attributes, (PrA).

Independent variables like OS and ASP were excluded from the model considering the p – value > 0.05.

**Table 7. Ordinary least square (OLS)**

Variables	$\beta$	R	R Square	Adjusted R Square	t	Sig.	Std. error	Durbin Watson
IS	-0.148	0.176	0.031	0.029	-3.574	0.000	0.041	1.987
PS	-0.238	0.242	0.059	0.056	-4.986	0.000	0.048	2.023
TMS	-0.144	0.164	0.027	0.024	-3.313	0.001	0.044	1.997
TS	-0.102	0.136	0.018	0.016	-2.730	0.007	0.037	2.321
NS	-0.095	0.115	0.013	0.011	-2.302	0.022	0.041	2.402
C	-0.101	0.132	0.017	0.015	-2.650	0.008	0.038	1.986
TFK	-0.096	0.107	0.011	0.009	-2.139	0.033	0.045	1.879
RKF	-0.144	0.185	0.034	0.032	-3.755	0.000	0.038	2.404
PKF	-0.151	0.181	0.033	0.030	-3.666	0.000	0.041	1.980
PA	-0.123	0.182	0.033	0.031	-3.702	0.000	0.033	1.672
NA	0.203	0.208	0.043	0.041	4.233	0.000	0.048	2.042
PrA	-0.238	0.242	0.059	0.056	-4.986	0.000	0.048	2.215

a. Dependent Variable: CGS.

**Note:** IS = Interpersonal skills, PS = Planning skills, TMS = Time management skills, TS = Teamwork skills, NS = Numerical skills, C = Creativity, TKF = Theoretical knowledge of the field, RKF = Research knowledge for the field, PKF = Practical knowledge of the field, PA = Positive attributes, NA = Negative attributes, PrA = Professional attributes, CGS = Challenges of graduate students

#### 4-2- $H_2$ Verification

According to the results of the analyses, the mean of 198 females participating in the research was  $\bar{x} = 2.00$  (SD = 0.705), and the mean of 202 males was  $\bar{x} = 2.40$  (SD = 0.959). Thus, females did not agree that they had skill shortages bringing challenges, while males stated above the level "I do not agree with the lack of skills acquired from schooling which are a source of challenge in the workplace" (Table 8).

**Table 8. Descriptive statistics for gender**

	N	Mean	SD	Std. Error Mean
Female	198	2.006	0.70501	0.05010
Male	202	2.407	0.95921	0.06749

Based on the results of the Independent-Samples T-Test, Sig (2-tailed)  $p < 0.05$  indicates that there was a significant difference between the means of the groups. Therefore, based on these results, females and males had different levels of challenge, with males facing more challenges in the labor market than females. According to the results of Table 9, the mean of age group 18-25 years old was 2.07 (SD = 0.781), 26-33 years old  $\bar{x} = 2.34$  (SD = 0.909), 34-41 years old  $\bar{x} = 2.12$  (SD = 0.815), 42-49 years old  $\bar{x} = 2.77$  (SD = 1.09) and over 50 years old  $\bar{x} = 2.01$  (SD = 0.683). To identify the age difference for labor market challenges, we rely on the ANOVA test (Table 10).

**Table 9. Results of Independent-Samples T-Test**

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		F	Sig.	t	df	Sig. (2 -tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
									Lower Upper
CGS	Equal variances assumed	22.639	0.000	-4.75	398	0.000	-0.400	0.084	-0.56 -0.235
	Equal variances not assumed	-	-	-4.76	369.19	0.000	-0.400	0.084	-0.56 -0.235

**Table 10. Descriptive statistics for age**

		Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
	A1	2.075	0.781	0.064	1.948	2.202	1.00	4.32
	A2	2.340	0.909	0.083	2.175	2.504	1.00	4.03
	A3	2.122	0.815	0.092	1.938	2.306	1.00	3.55
	A4	2.776	1.097	0.207	2.350	3.202	1.32	4.68
	A5	2.014	0.683	0.133	1.738	2.290	1.26	3.16
	<b>Total</b>	2.209	0.865	0.043	2.124	2.294	1.00	4.68

**Notes:** A1= 18-25 years old; A2= 26-33 years old; A3=34-41 years old; A4=42-49 years old; A5= Over 50 years old.

According to the variance homogeneity test, the  $p$ -value  $>0.05$  indicates homogeneity of the variances. Since the basic assumption of analysis of variance was provided, the results obtained were considered to be sound. Given the  $F(4, 395) = 5.315$  and  $p < 0.000$ , there was a significant difference between age groups in the challenges encountered in the labor market. After identifying a significant difference between the groups, the Post Hoc (Turkey and Bonferroni) tests come into consideration (Table 11).

**Table 11. ANOVA results**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	15.267	4	3.817	5.315	0.000
Within Groups	283.651	395	0.718	-	-
<b>Total</b>	298.918	399	-	-	-

Since the Tukey and Bonferroni tests gave the same results, we will only discuss the Tukey test results. Based on the Mean Difference between A4 and A1, A3, and A5, A4 had more challenges than other groups considering the  $p$ -value  $<0.05$ , except for the A2 which had no statistically significant difference with  $p > 0.05$ . According to the following test, subgroups were created based on the level of challenges in the labor market, where A4 was included in a group with A2, which means that A4 had different challenges from the other age groups, while A2 had the challenges of both subgroups (1, 2). The inclusion of A1, A2, A3, and A5 in one group shows that these age groups had the same characteristics in terms of challenges in the labor market.

Based on the results of Table 12, the mean of graduates attending professional training within their field of study was  $\bar{x}=2.139$  (SD =0.926), the mean of graduates who attended training outside their field of study was  $\bar{x}= 2.26$  (SD =0.726), the mean of those who did not attend training was  $\bar{x}=2.27$  (SD =0.869), and the mean of graduates who received training inside and outside their field of study was  $\bar{x}= 1.40$  (SD=0.183). To identify the difference in the means of participation in training and challenges in the labor market, we rely on the results of the ANOVA test.

**Table 12. Tukey test - Table of subgroups**

Age		N	Subset for alpha = 0.05	
			1	2
Tukey HSD <sup>a,b</sup>	A5	26	2.0149	-
	A1	148	2.0759	-
	A3	78	2.1224	-
	A2	120	2.3401	2.3401
	A4	28	-	2.7765
	Sig.	-	0.320	0.082

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 48.978.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

**Table 13. Descriptive statistics for training**

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Min	Max
					Lower Bound	Upper Bound		
Q1	207	2.1931	0.92698	0.06443	2.0661	2.3201	1.00	4.68
Q2	99	2.2678	0.72607	0.07297	2.1230	2.4127	1.00	4.03
Q3	84	2.2757	0.86934	0.09485	2.0871	2.4644	1.00	4.32
Q4	10	1.4065	0.18324	0.05794	1.2754	1.5375	1.19	1.55
<b>Total</b>	400	2.2093	0.86554	0.04328	2.1242	2.2944	1.00	4.68

Notes: Q1= Yes, I have attended professional training within the field of study; Q2= Yes, I have attended professional training outside the field of study; Q3= No, I did not attend any training; Q4= Yes, I have attended trainings inside and outside the field of study.

According to the variance homogeneity test,  $p > 0.05$  shows homogeneity of the variances. Since the basic assumption of analysis of variance was provided, the results obtained were considered to be sound. Given  $F(3, 396) = 3.263$  and  $p < 0.000$ , there was a significant difference between participation in training and challenges encountered in the labor market. After identifying a significant difference between the groups, the Post Hoc (Turkey and Bonferroni) tests come into consideration (Table 14).

**Table 14. ANOVA results**

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	7.210	3	2.403	3.263	0.021
Within Groups	291.708	396	0.737	-	-
<b>Total</b>	298.918	399	-	-	-

Since the Tukey and Bonferroni test gave the same results, we will only discuss the Tukey test results. Based on the difference of the means of Q1, Q2, Q3 with Q4, it turned out that Q1, Q2, Q3 had more challenges than Q4 considering  $p < 0.05$ . According to the results, subgroups were created depending on the challenges in the labor market, where Q4 formed a single group, while Q1, Q2, and Q3 were included in one group together. Thus, students who attended training within their field of study, outside the field of study, and who did not attend training at all faced the same challenges in the labor market. However, students, who attended training both within and outside their field of study, showed different characteristics from the above groups (Table 15).

**Table 15. Turkey test - Table of subgroups**

		N	Subset for alpha = 0.05	
			1	2
Tukey HSD <sup>a,b</sup>	Q4	10	1.4065	-
	Q1	207	-	2.1931
	Q2	99	-	2.2678
	Q3	84	-	2.2757
	Sig.	-	1.000	0.981

Means for groups in homogeneous subsets are displayed.

a. Uses Harmonic Mean Sample Size = 31.537.

b. The group sizes are unequal. The harmonic mean of the group sizes is used. Type I error levels are not guaranteed.

According to One-Way ANOVA and based on  $p > 0.05$ , there was no statistically significant relationship between the level of education and the challenges of graduates in the labor market. Table 16 presents the hypotheses and sub-hypotheses raised in the research, along with the tests used to validate the hypotheses.

**Table 16. Verification of hypotheses of the research**

Alternative Hypothesis		Statistical test used	Result
<b>H<sub>1</sub>: There is a statistically significant relationship between graduate skills and job challenges</b>		Multiple linear regression	Accepted
<b>H<sub>1a</sub></b>	There is a statistically significant relationship between interpersonal skills and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1b</sub></b>	There is a statistically significant relationship between planning skills and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1c</sub></b>	There is a statistically significant relationship between organizational skills and job challenges.	Pearson's correlation & OLS Model	Rejected
<b>H<sub>1d</sub></b>	There is a statistically significant relationship between time management skills and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1e</sub></b>	There is a statistically significant relationship between team working skills and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1f</sub></b>	There is a statistically significant relationship between numerical skills and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1g</sub></b>	There is a statistically significant relationship between creativity and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1h</sub></b>	There is a statistically significant relationship between ability to solve problems and job challenges.	Pearson's correlation & OLS Model	Rejected
<b>H<sub>1i</sub></b>	There is a statistically significant relationship between theoretical knowledge of the field and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1j</sub></b>	There is a statistically significant relationship between research knowledge of the field and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1k</sub></b>	There is a statistically significant relationship between practical knowledge of the field and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1l</sub></b>	There is a statistically significant relationship between positive attributes and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1m</sub></b>	There is a statistically significant relationship between negative attributes and job challenges.	Pearson's correlation & OLS Model	Accepted
<b>H<sub>1n</sub></b>	There is a statistically significant relationship between professional attributes and job challenges.	Pearson's correlation & OLS Model	Accepted

<b>H<sub>2</sub>: There is a statistically significant relationship between graduates' challenges at work and demographic characteristics (age, gender, educational level, and training)</b>		<b>T-test, One-way ANOVA &amp; Post Hoc test</b>	<b>Accepted</b>
<b>H<sub>2a</sub></b>	There is a statistically significant relationship between graduates' challenges at work and gender.	T- test	Accepted
<b>H<sub>2b</sub></b>	There is a statistically significant relationship between graduates' challenges at work and ages.	ANOVA & Post Hoc test	Accepted
<b>H<sub>2c</sub></b>	There is a statistically significant relationship between graduates' challenges at work and educational level.	ANOVA	Rejected
<b>H<sub>2d</sub></b>	There is a statistically significant relationship between graduates' challenges at work and training.	ANOVA & Post Hoc test	Accepted

Based on multiple linear regression and the average skills possessed by graduates, we notice gaps in planning skills, organizational skills, professional attributes, practical knowledge of the field, and graduate challenges in the workplace. According to the results, planning and organizational skills enable students to have fewer challenges in the labor market, but it turned out that students had low levels of these skills. On the other hand, although professional attributes and practical knowledge of the field have a low impact on challenges, graduates scored highly in these skills. From the discussion of the findings, we see that students lacked some skills that were influential in reducing the challenges when entering the labor market.

If we compare our results with those of other researchers, we notice differences in the challenges of graduates in the labor market. For example, a study conducted by Pitan (2016) in Nigeria highlighted poor curricula, lack of cooperation of higher education institutions with stakeholders, and low commitment and dedication of students to developing their skills [31]. However, the OECD study (2016) classified the nature of gaps in three areas, including the mismatch of skills, qualifications, and fields of study. This report also found gaps in literacy skills, work flexibility, time management, teamwork skills, and numerical skills [32], which differed from the results of research conducted in Kosovo. According to a report by the World Bank (2010), a study conducted in Indonesia revealed gaps in critical thinking, communication skills, teamwork skills, and creativity [33]. These findings were not in line with the results of the research conducted in Kosovo, according to which graduates had creativity and teamwork skills.

The study conducted with young people shows that the main challenges are appropriate training and professional development, which tend to facilitate the faster employment of graduates [34]. On the contrary, research in Kosovo shows that graduates who have attended vocational training inside and outside their field of study have no challenges in facing the labor market, while graduates who have attended special vocational training inside or outside their field of study have the same challenges in facing the labor market.

If we analyze the challenges in terms of gender, the T-test shows that women have fewer challenges compared to men. However, according to Gracia (2009), women have fewer expectations for success due to difficulties in adaptation and experiencing the erosion of self-confidence in terms of employability [35], whereas Boahin & Hofman (2013) found no significant relationship between gender and the acquisition of employment skills [36].

## 5- Conclusion

Based on the results of the descriptive analysis, we conclude that the skills of the graduates are at an average level, except for the planning and organizing skills, which resulted in a below-average level. Referring to Pearson's Correlation, we conclude that the skills of graduates are inversely proportional to the challenges, which means that the more skilled the graduates are, the easier it will be to enter the labor market and vice versa. Only negative attributes resulted in a positive coefficient, which means that the higher the negative attributes, the greater the challenges will be, i.e., they remain in fair proportion.

From the results of multiple linear regression, we conclude that 25.3% of the challenges faced by graduates in the labor market depend on the skills they acquired during their studies. However, the impact of time management skills (TMS), teamwork skills (TS), numerical skills (NS), creativity (C), theoretical knowledge of the field (TKF), research knowledge of the field (RKF), and positive attributes (PA) proved insignificant in student challenges. According to the T-test, we conclude that there is a significant difference in the challenges facing graduates in the workplace between females and males, where males face more skill challenges than females. In terms of skill challenges by age, the ANOVA test shows a significant difference, which, according to the Tukey and Bonferroni tests, is in the age group of 42–49 years. Training is a tool for increasing personal and professional skills; therefore, this attribute was selected to investigate whether there was a difference in challenges faced by graduates who received training or not. According to one-way ANOVA, there was a significant difference between training and challenges. The Tukey and Bonferroni tests showed that graduates who attended training in and outside of their field of study faced different challenges from those in other categories investigated, such as those who did not attend training at all, either specifically inside or outside their field of study. According to the results of the present study, it is recommended that students take deeper study programs outside their field of study, including more elective courses.



### **5-1- Limitations and Suggestions for Further Research**

A limitation of this research is the inclusion of a wide range of skills, which made the research aspect difficult. Another limitation is the non-categorization of the analysis according to the field of study. The fact that graduates in Kosovo are not always employed based on their qualifications and profession, and some of the graduates are overqualified for the job, many of them may not have significant challenges, making it difficult to highlight the challenges graduates face in the labor market in Kosovo.

Future studies can analyze the challenges of the graduates by categorizing the graduates according to their field of study to identify the related challenges adequately. In addition, future studies should exclude respondents working outside the profession or those with adequate qualifications for the job.

## **6- Declarations**

### **6-1- Author Contributions**

Conceptualization, F.Q. and A.B.; methodology, A.B.; software, A.B.; validation, F.Q., A.B.; formal analysis, A.B. and L.S.; resources, A.B. and F.Q.; writing—original draft preparation, A.B. and F.Q.; writing—review and editing, F.Q. and F.P.; visualization, F.Q.; supervision, F.Q.; project administration, F.Q. and F.P.; funding acquisition, L.S. All authors have read and agreed to the published version of the manuscript.

### **6-2- Data Availability Statement**

The data presented in this study are available on request from the corresponding author.

### **6-3- Funding and Acknowledgements**

Many thanks for AAB College, Pristina, Kosovo for financing the publication and cover the costs of conducting research.

### **6-4- Ethical Approval**

Not applicable.

### **6-5- Conflicts of Interest**

The authors declare that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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## **Annex I: The Questionnaire**

### ***Session 1 - Demographic questions***

#### **1. Gender:**

- a) Female
- b) Male

#### **2. Age:**

- a) 18 - 25 years old
- b) 26 - 33 years old
- c) 34 - 41 years old
- d) 42 - 49 years old
- e) Over 50 years old

#### **3. Level of education:**

- a) Bachelor
- b) Master
- c) PhD

#### **4. I completed my studies at the institution:**

- a) Private
- b) Public

#### **5. How long have you been employed?**

- a) 0-1 years
- b) 2-3 years
- c) 4-5 years
- d) over 5 years
- e) Unemployed

#### **6. When were you employed?**

- a) Before graduation
- b) Immediately after graduation
- c) About 1 year after graduation
- d) About 3 years after graduation
- e) Longer than 5 years after graduation

#### **7. Did you attend additional training during or after graduation?**

- a) Yes, I have attended professional training within the field of study
- b) Yes, I have attended professional training outside the field of study
- c) No, I did not attend any training

### ***Session 2 - Assessment of student's skills***

***1= Much below the standard required by the employer; 5 = Much above the standard required by the employer***

#### **1. How do you assess your interpersonal skills (IS) that you have benefited from schooling?**

- Flexibility in thinking and style of operation. (1, 2, 3, 4, 5)
- Motivate and train other team members. (1, 2, 3, 4, 5)
- Communication and public presentation skills. (1, 2, 3, 4, 5)
- Tolerance, respect for team members and conflict management. (1, 2, 3, 4, 5)
- Networking and relationship building. (1, 2, 3, 4, 5)

#### **2. How do you assess your planning skills that you have acquired from school?**

- Accurately assess the time and effort required to perform a task. (1, 2, 3, 4, 5)
- Identify and organize the resources required. (1, 2, 3, 4, 5)
- Organize personal time to perform responsibilities. (1, 2, 3, 4, 5)

Maintain proper preparation time for scheduled appointments / deadlines. (1, 2, 3, 4, 5)

Develop clear schedules and deadlines. (1, 2, 3, 4, 5)

Decide how to measure results for yourself. (1, 2, 3, 4, 5)

**3. How do you assess your organizational skills that you have gained from schooling?**

Delegation of work to subordinates (1, 2, 3, 4, 5)

Decision making skills (1, 2, 3, 4, 5)

Team management skills (1, 2, 3, 4, 5)

Project management skills entrusted to us (1, 2, 3, 4, 5)

Ability to make schedules (1, 2, 3, 4, 5)

**4. How do you assess your time management skills that you have benefited from schooling?**

Prioritization (1, 2, 3, 4, 5)

Goal setting (1, 2, 3, 4, 5)

Communication (1, 2, 3, 4, 5)

Time planning (1, 2, 3, 4, 5)

Stress management (1, 2, 3, 4, 5)

Setting short-term and long-term goals (1, 2, 3, 4, 5)

**5. How do you assess your teamwork skills that you have benefited from schooling?**

Communication (1, 2, 3, 4, 5)

Conflict resolution (1, 2, 3, 4, 5)

Report building and listening (1, 2, 3, 4, 5)

Decision making and problem solving (1, 2, 3, 4, 5)

Organizational and planning skills (1, 2, 3, 4, 5)

Obedience and influence skills (1, 2, 3, 4, 5)

Credibility (1, 2, 3, 4, 5)

**6. How do you assess your numerical skills that you have gained from schooling?**

Basic knowledge of numbers (1, 2, 3, 4, 5)

Computational skills (1, 2, 3, 4, 5)

Budgeting (1, 2, 3, 4, 5)

Interpretation of mathematical information (1, 2, 3, 4, 5)

Understanding the relationships between numbers (1, 2, 3, 4, 5)

Understanding trends (1, 2, 3, 4, 5)

Measurement and analysis of data (1, 2, 3, 4, 5)

**7. How do you rate your creativity that you have benefited from schooling?**

Problem solving (1, 2, 3, 4, 5)

Writing skills (1, 2, 3, 4, 5)

Visual arts (1, 2, 3, 4, 5)

Communication skills (1, 2, 3, 4, 5)

Open minded (1, 2, 3, 4, 5)

**8. How do you assess your problem-solving skills that you have benefited from schooling?**

Analytical skills (1, 2, 3, 4, 5)

Innovative and creative thinking (1, 2, 3, 4, 5)

Convenience and flexibility (1, 2, 3, 4, 5)

Measured (1, 2, 3, 4, 5)

There is initiative (1, 2, 3, 4, 5)

Endurance (1, 2, 3, 4, 5)

**9. How do you assess your theoretical knowledge of the field you have gained from schooling?**

Empirical research and specific conceptual frameworks. (1, 2, 3, 4, 5)

Elaboration of practical principles (1, 2, 3, 4, 5)

**10. How do you assess your research knowledge in the field you have benefited from schooling?**

Searching for information (1, 2, 3, 4, 5)  
 Attention to detail (1, 2, 3, 4, 5)  
 Taking notes (1, 2, 3, 4, 5)  
 Time management (1, 2, 3, 4, 5)  
 Solving research problems (1, 2, 3, 4, 5)  
 Communication of results (1, 2, 3, 4, 5)

**11. How do you assess your practical knowledge of the field you have gained from schooling?**

Compatibility (1, 2, 3, 4, 5)  
 Problem orientation (1, 2, 3, 4, 5)  
 Understanding (1, 2, 3, 4, 5)  
 Orientation of actions (1, 2, 3, 4, 5)  
 Defining the right instruments (1, 2, 3, 4, 5)

**12. How do you rate your positive attributes?**

Adaptable (1, 2, 3, 4, 5)  
 Positive (1, 2, 3, 4, 5)  
 Ambitious (1, 2, 3, 4, 5)  
 Honest (1, 2, 3, 4, 5)  
 Professional and collaborator (1, 2, 3, 4, 5)

**13. How do you rate your negative attributes?**

Arrogant and inflexible (1, 2, 3, 4, 5)  
 Fraudulent and irresponsible (1, 2, 3, 4, 5)  
 Dishonest (1, 2, 3, 4, 5)  
 Jealous (1, 2, 3, 4, 5)

**14. How do you evaluate your professional attributes that you have benefited from schooling?**

Focused (1, 2, 3, 4, 5)  
 Objective and proactive (1, 2, 3, 4, 5)  
 Responsible (1, 2, 3, 4, 5)  
 Effective (1, 2, 3, 4, 5)  
 Empathetic and loyal (1, 2, 3, 4, 5)

***Session 3 - Challenges of students in facing the labor market***

***1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree***

**Please provide the challenges you had in entering the labor market, respectively in the first employment.**

Challenges for lack of interpersonal skills:	1	2	3	4	5
I had challenges due to lack of planning skills:	1	2	3	4	5
I had challenges due to lack of organizational skills:	1	2	3	4	5
I had challenges due to lack of time management skills:	1	2	3	4	5
I had challenges due to lack of teamwork skills:	1	2	3	4	5
I had challenges due to lack of numerical skills:	1	2	3	4	5
I had challenges due to lack of creativity:	1	2	3	4	5
I had challenges due to lack of problem-solving skills:	1	2	3	4	5
I had challenges due to lack of theoretical knowledge in the field:	1	2	3	4	5
I had challenges due to lack of knowledge for field research:	1	2	3	4	5
I had challenges due to lack of practical knowledge in the field:	1	2	3	4	5
I had challenges due to the lack of positive attributes:	1	2	3	4	5
I have challenges due to possessing negative attributes:	1	2	3	4	5
I had challenges due to lack of professional attributes:	1	2	3	4	5