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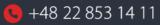
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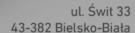
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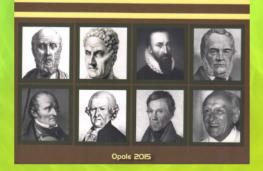
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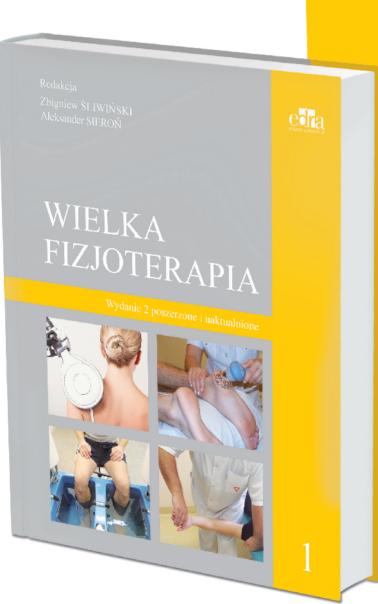
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Analysis on stakeholders' satisfaction levels of the quality of graduates of the sports science study program

Analiza poziomu zadowolenia uczestników badania z jakości edukacji absolwentów kierunku nauki o sporcie

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Abstract

This study aims to determine stakeholders' satisfaction with the quality of graduates of the Sports Science Study Program, Faculty of Sports Science, Yogyakarta State University. This study uses the Accidental Sampling method. The subjects in this study were stakeholders graduated from the Sports Science Study Program, Faculty of Sports Science, Yogyakarta State University. Data collection technique is by distributing questionnaires. The data were analyzed using the descriptive quantitative data analysis. The results of the study are in the form of elaboration of questionnaires from stakeholders graduated from the Sports Science Study Program, Faculty of Sports Science, Yogyakarta State University. Based on the results of data analysis, the conclusion obtained is that the satisfaction of stakeholders using graduates of the Sport Science Study Program, Faculty of Sports Science is satisfactory.

Key words:

satisfaction, Stakeholder, users of graduates

Streszczenie

Niniejsze badanie miało na celu określenie zadowolenia uczestników badania z jakości edukacji absolwentów Programu Studiów Nauk o Sporcie na Wydziale Nauk o Sporcie, Yogyakarta State University. W badaniu wykorzystano metodę doboru wygodnego. Przedmiotem tego badania byli uczestnicy badania, którzy ukończyli Program Studiów Nauk o Sporcie na Wydziale Nauk o Sporcie Uniwersytetu Stanowego Yogyakarta. Technika zbierania danych polega na rozprowadzeniu kwestionariuszy. Dane analizowano za pomocą opisowej analizy danych ilościowych. Wyniki badania mają formę opracowania kwestionariuszy otrzymanych od uczestników badania, którzy ukończyli Program Studiów Nauk o Sporcie na Wydziale Nauk o Sporcie, Yogyakarta State University. Na podstawie wyników analizy danych wysunięto wniosek, że satysfakcja uczestników badania korzystających z usług absolwentów Studium Nauk o Sporcie Wydziału Nauk o Sporcie jest zadowalająca.

Słowa kluczowe:

satysfakcja, uczestnicy badania, osoby korzystające z usług absolwentów



Introduction

The nowadays progress and development of world can be experienced directly by the community. The development of information technology cannot be separated from people's lives. Various information across world can now be directly accessed by the technological advances (globalization). Developments in Indonesian education, economy, health and social are also affected by today's advancement. The world is now changing and entering the era of the industrial revolution 4.0 or the fourth world industrial revolution where information technology has become the basis of human life [1]. The presence of the industrial revolution 4.0 does bring new business lines, jobs, and professions that were unthinkable before [2]. Everything becomes borderless with the use of unlimited power of computation and data, because it is influenced by the development of the internet and massive digital technology as the mainstay of the movement and connectivity between humans and machines [3]. The era of the industrial revolution 4.0 has affected many aspects of life by disrupting the technology field and also other fields, such as law, economics, and social [4]. This era is also disrupting the human's activity and human resources problems as an eminent element of an organization [5]. Human resources play a role in determining the direction and progress of an organization.

In this era, it is a challenge for universities to prepare their graduates to be able to compete in the job market and produce innovative and creative graduates [6]. Labor competition to-day is very tight so that the workforce must be able to compete even with foreign workers from various countries [7]. If the graduates of the Sports Science Study Program, Faculty of Sports Science, Yogyakarta State University (henceforth: IKOR FIK UNY) are not equipped with the competencies needed by the today's business world, then the graduates from IKOR FIK UNY will be unable to compete with graduates from other universities. The best action that needs to be taken by higher education institutions is to use feedback from students and stakeholders to determine organizational effectiveness [8].

Higher education is a strategic sector that aims to produce quality and professional human resources. The competition is quite competitive between universities, requiring educational institutions to pay attention to the quality of education and institutions so that they are able to be the best in the competition. Quality includes perfection, consistency, eliminating waste, speed of delivery, compliance with policies and procedures, providing a good, usable product, doing it right the first time, delighting or pleasing customer and total customer service and satisfaction [9]. The understanding of the two opinions above leads to service and satisfaction of the customers. Service can be interpreted as an effort made by an institution in order to meet customers' needs [10]. Satisfaction is the result of the fulfillment of consumers that the service has provided a level of enjoyment where this level of fulfillment can be more or less [11].

Satisfaction is the result of the fulfillment of consumers' service at the level of enjoyment [12]. National Accreditation Agency for Higher Education (NAAHE, henceforth: BAN-PT) assesses the demands given by the community to univer-

sities including quality assurance, quality control, and quality improvement. Efforts to implement community demands for the quality of higher education are served by BAN-PT with the scaled-accreditation program for public and private universities in Indonesia. The reality of the current curriculum implies that the structure of the teacher education curriculum must strictly be derived from the structure of the study of scientific disciplines following the lines and ways of thinking of scientists and essentialistic of curriculum [13]. This causes the curriculum taught in universities to not meet the standard needs required by the company or the world of work.

Research conducted found that (1) students lack work skills perhaps because the curriculum is general and emphasizes on academic aspects that are not in accordance with students' needs; (2) there are several fields of knowledge that are not in accordance with what students need; (3) today's students need high-tech vocational skills in accordance with the needs of the world of work [14]. In creating superior human resources, the role of universities has a major role in creating superior and professional human resources [15]. The Faculty of Sports Science of Yogyakarta State University as one of the institutions producing professionals in the field of sport has a big role in creating human resources who have superior competence in winning the competition in the world of work.

With the aim of stakeholders' satisfaction to be achieved, the entire academic community must create a conducive situation in the institutional governance. Providing express and friendly service, information assistance, infrastructure are efforts to create customers' satisfaction [16]. Universities in the effort to improve quality must be adjusted to the quality standards that are not much different from international quality standards. These problems are challenges and threats for universities in general.

Therefore, it is necessary to conduct research on all stakeholders in order to obtain a complete picture of the level of stakeholders' satisfaction on the performance of graduates of IKOR FIK UNY. It is based on the notion that the success of the study program as a work unit in higher education is largely determined by the quality of services provided that can be identified through stakeholders' satisfaction with the services of the study program in producing graduates who are in accordance with the needs of the business world. Measurement of service quality is an important element in providing better, more efficient, and more effective services.

Knowledge of customer satisfaction will provide many benefits [17]. Customer satisfaction serves as a guide to direct the entire organization on the way to meet the needs of students and stakeholders as the sustainable competitive advantage[18]. states that dissatisfaction arises because of the gap between (1) consumer expectations and management perceptions, (2) management perceptions and service quality specifications, (3) service quality specifications and service delivery, (4) service delivery and external communication, and (5) the service expected and experienced by the customer. Efforts to meet the interests and satisfaction of students need to be done through an evaluation of service performance through requests for feedback from students [19]. The information is useful as consideration for making improvements in terms of factors affecting



stakeholders' satisfaction on the quality of performance of graduates of IKOR FIK UNY.

Conformity between the desires or perceptions of consumers (customer voice) and the will of the higher education management organization (company voice) is a form of successful institutional management [20]. The increasingly fierce competition and the demands of the community for quality oriented to customer values ultimately emphasizes the organization to be able to respond quickly (responsiveness) [20]. Dealing with such a condition, the main thing that must be prioritized by universities is stakeholders' satisfaction. Stakeholders' satisfaction is determined by the quality desired by stakeholders, so that quality assurance is the top priority for every university, which is currently used as a benchmark for the competitiveness of universities [21].

Stakeholders as direct users of graduates of IKOR FIK UNY really need to be involved in providing feedback to find out the needs of the current world of work. Stakeholders as direct service users can certainly assess the quality of the performance of graduates of IKOR FIK UNY. The stakeholders who directly use the graduates of IKOR FIK UNY will feel satisfied with those who can meet the needs of the dimensions of performance quality in the world of work. High satisfaction cannot be obtained directly by providing good service quality, but the level of customer satisfaction must also be evaluated [22].

Based on the description above, it is necessary to measure stakeholders' satisfaction on the performance of graduates of IKOR FIK UNY in terms of factors of reliability, responsiveness, assurance, empathy and actuality as well as their influence on stakeholders' satisfaction on graduates of IKOR FIK UNY. This study aims to determine the satisfaction of stakeholders on the performance of graduates of IKOR FIK UNY in terms of reliability, responsiveness, assurance, empathy and actuality factors and their influence on stakeholders' satisfaction in using graduates of IKOR FIK UNY.

Methods

The data in this study were taken with an instrument in the form of a questionnaire, which was distributed to the research sample, consisting of managers, employees, and stakeholders who graduated from IKOR FIK UNY. The sample consisted of all stakeholders who graduated from IKOR FIK UNY who had worked together for a long time. The questionnaire used the Likert scale, with the scores of 1 to 4; for reasons of consistency, then the description of the data in this study used four categories, namely very satisfactory, satisfactory, unsatisfactory, and very unsatisfactory.

Results

The Data Normality Test

The normality test aims to test whether in the regression model, the dependent variable, and the independent variable having a normal distribution or not. A good regression model is one that has a normal or close to normal data distribution. To test whether the data distribution is normal or not, one way to see normality is to look at the histogram which compares the observed data with a distribution that is close to a normal distribution [23]. SPSS output results for normality test with graphical analysis are as follows:

Normal P-P Plot of Regression Standardized Residual

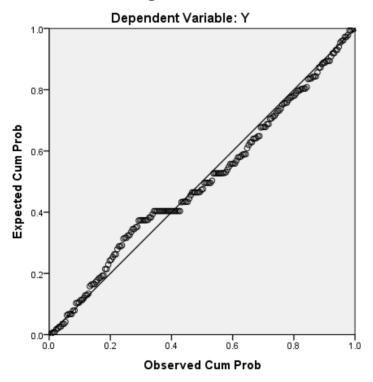


Figure 1. Normal P-P Plot of Regression Standardized Residual



The Multicollinearity Test

Multicollinearity tests are needed to determine the presence or absence of independent variables that have similarities with other independent variables in one model. Multicollinearity detection in a model can be seen from several things. They are:

1. If the value of variance inflation factor (VIF) not more than 10 and the tolerance value is not less than 0.1, it can be deter-

mined that the model is free from multicollinearity.

- 2. If the value of the correlation coefficient between each independent variable is less than 0.70, the model can be declared free from the classical assumption of multicollinearity.
- 3. If the value of the determinant coefficient, both from R2 and Rsquare, is above 0.60 but there is no independent variable that affects the dependent variable, it is suspected that the model is affected by multicollinearity.

Table 1. The Distribution of Results of the Variance Inflation Factor

Coefficients^a

		Unstandardize	d Coefficients	Standardized Coefficients			Collinearity	Statistics
Model		В	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.113	.907		2.329	.021		
	X1	.103	.015	.399	6.906	.000	.881	1.134
	X2	.415	.061	.393	6.800	.000	.881	1.134

a. Dependent Variable: Y

From the test results, the VIF value for the variable customer satisfaction and quality of graduates is 1.134 and the value is far from 10. Thus it can be concluded that there is no multicollinearity.

The Heteroscedasticity Test

The heteroscedasticity test is intended to detect disturbances

caused by factors of having the same variance in the regression model. If the variance is different, it is called homoscedasticity. A good regression model is if there is no heteroscedasticity. Heteroscedasticity testing was carried out using a scatter plot. If there is no certain pattern, it indicates that the regression model is free from heteroscedasticity problems. The graph of the results of the heteroscedasticity test is as follows:

Scatterplot

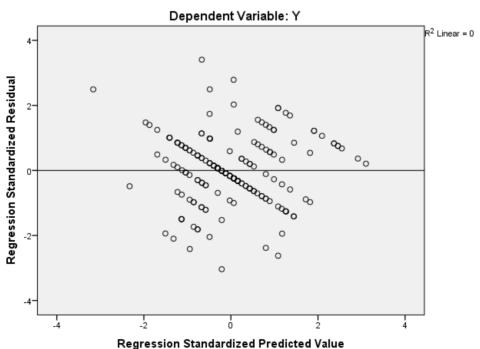


Figure 2. Normal Heteroscedasticity using the Scatter Plot



The figure shows that the points are randomly distributed, do not form a certain pattern and are spread both above and below 0 (zero) on the Y axis. Thus it can be stated that the data is free from heteroscedasticity.

Stakeholders' satisfaction with Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using the questionnaire containing 42 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 2. Frequency Distribution of Stakeholders' Satisfaction Categorization of Graduates of IKOR FIK UNY

No.	Category	Score Range	Frequency	
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	10	27.50
2.	Satisfactory (S)	56–75%	27	67.50
3.	Unsatisfactory (U)	40–55%	2	3.50
4.	Very Unsatisfactory (VU)	< 40%	1	1.50
	Total		40	100

Based on the table above, most of the respondents were satisfied with the graduates of IKOR FIK UNY with the percentage of 67.5% saying they were satisfied. Thus, it can be concluded that the satisfaction of stakeholders towards the graduates of IKOR FIK UNY is satisfactory.

The Variable of Stakeholders' Satisfaction on Communication Ability of Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using a questionnaire consisting of 4 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 3. Frequency Distribution of Stakeholders' satisfaction on Communication Ability of Graduates of IKOR FIK UNY

No.	Category	Score Range	Frequency	
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	8	18.75
2.	Satisfactory (S)	56–75%	27	67.5
3.	Unsatisfactory (U)	40–55%	5	13.75
4.	Very Unsatisfactory (VU)	< 40%	0	0
	Total		40	100

Based on the table above, most of the respondents were satisfied with the communication skills of graduates of IKOR FIK UNY with the percentage of 67.5% saying that they were satisfied. Thus it can be concluded that the satisfaction of stakeholders on the communication skills of graduates of IKOR FIK UNY is satisfactory.

The Variable of Stakeholders' Satisfaction on Organizational Ability of Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using the questionnaire consisting of 8 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 4. Frequency Distribution of Stakeholders' Satisfaction on Organizational Ability of Graduates of IKOR FIK UNY

No.	Category	Score Range	Freque	ency
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	9	21.5
2.	Satisfactory (S)	56–75%	28	70.5
3.	Unsatisfactory (U)	40–55%	2	6.5
4.	Very Unsatisfactory (VU)	< 40%	1	1.5
	Total		40	100



Based on the table above, most of the respondents were satisfied with the organizational ability of graduates of IKOR FIK UNY with the percentage of 70.5% saying that they were satisfied. Thus, it can be concluded that stakeholders' satisfaction on the organizational ability of graduates of IKOR FIK UNY is satisfactory.

The Variable of Stakeholders' Satisfaction on Leadership of Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using a questionnaire consisting of 5 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 5. Frequency Distribution of Stakeholders' Satisfaction on Leadership of Graduates of IKOR FIK UNY

No.	Category	Score Range	Frequency	
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	8	20
2.	Satisfactory (S)	56–75%	24	71
3.	Unsatisfactory (U)	40–55%	4	9
4.	Very Unsatisfactory (VU)	< 40%	0	0
	Total		40	100

Based on the table above, most of the respondents were satisfied with the leadership of the graduates of IKOR FIK UNY with the percentage of 71% saying that they were satisfied. Thus it can be concluded that the satisfaction of stakeholders towards the leadership of graduates of IKOR FIK UNY is satisfactory.

The Variable of Stakeholders' Satisfaction on Logical Thinking Ability Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using a questionnaire consisting of 5 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 6. Frequency Distribution of Stakeholders' Satisfaction on Logical Thinking Ability Graduates of IKOR FIK UNY

No.	Category	Score Range	Frequency	
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	13	32
2.	Satisfactory (S)	56–75%	24	60.5
3.	Unsatisfactory (U)	40–55%	3	7.5
4.	Very Unsatisfactory (VU)	< 40%	0	0
	Total		40	100

Based on the table above, most of the respondents were satisfied with the logical thinking skills of graduates of IKOR FIK UNY with the percentage of 60.5% saying that they were satisfied. Thus, it can be concluded that stakeholders' satisfaction with the logical thinking ability of graduates of IKOR FIK UNY is satisfactory.

The Variable of Stakeholders' Satisfaction with Additional Skills for Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using a questionnaire consisting of 4 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 7. Frequency Distribution of Stakeholders' Satisfaction with Additional Skills for Graduates of IKOR FIK UNY

No.	Category	Score Range	Frequency	
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	12	31.25
2.	Satisfactory (S)	56–75%	27	66.25
3.	Unsatisfactory (U)	40–55%	1	2.5
4.	Very Unsatisfactory (VU)	< 40%	0	0
	Total		40	100



Based on the table above, most of the respondents were satisfied with the additional skills of graduates of IKOR FIK UNY with the percentage of 66.25% saying that they were satisfied. Thus it can be concluded that stakeholders' satisfaction with the additional skills of graduates of IKOR FIK UNY is satisfactory.

The Variable of Stakeholders' Satisfaction on Business Ability Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using a questionnaire consisting of 5 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 8. Frequency Distribution of Stakeholders' Satisfaction on Business Ability of Graduates of IKOR FIK UNY

No.	Category	Score Range	Freque	ency
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	10	26
2.	Satisfactory (S)	56–75%	26	64
3.	Unsatisfactory (U)	40–55%	4	10
4.	Very Unsatisfactory (VU)	< 40%	0	0
	Total		40	100

Based on the table above, most of the respondents were satisfied with the business ability of graduates of IKOR FIK UNY with the percentage of 64% saying that they were satisfied. Thus it can be concluded that the satisfaction of stakeholders on the business ability of graduates of IKOR FIK UNY is satisfactory.

The Variable of Stakeholders' Satisfaction on the Ability to Cooperate of Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using a questionnaire consisting of 4 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 9. Frequency Distribution of Stakeholders' satisfaction on the Ability to Cooperate of Graduates of IKOR FIK UNY

No.	Category	Score Range	Frequency	
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	10	25
2.	Satisfactory (S)	56–75%	30	75
3.	Unsatisfactory (U)	40–55%	0	0
4.	Very Unsatisfactory (VU)	< 40%	0	0
	Total		40	100

Based on the table above, most of the respondents were satisfied with the ability to cooperate with graduates of IKOR FIK UNY with the percentage of 75% saying that they were satisfied. Thus it can be concluded that the satisfaction of stakeholders on the ability to cooperate of graduates of IKOR FIK UNY is satisfactory.

Variables of Stakeholders' satisfaction with the Ethics of Graduates of IKOR FIK UNY

The level of stakeholders' satisfaction in this study was measured using a questionnaire consisting of 7 questions. Based on the data analysis, the frequency distribution based on the categorization is as follows:

Table 10. Frequency Distribution of Stakeholders' satisfaction on the Ethics of Graduates of IKOR FIK UNY

No.	Category	Score Range	Frequency	
			Absolut	%
1.	Very Satisfactory (VS)	76–100%	14	35
2.	Satisfactory (S)	56–75%	26	65
3.	Unsatisfactory (U)	40–55%	0	0
4.	Very Unsatisfactory (VU)	< 40%	0	0
	Total		40	100



Based on the table above, most of the respondents were satisfied with the ethics of graduates of IKOR FIK UNY with the percentage of 65% saying that they were satisfied. Thus, it can be concluded that stakeholders' satisfaction with the ethics of graduates of IKOR FIK UNY is satisfactory.

Discussion

The level of stakeholders' satisfaction on the performance of the graduates of IKOR FIK UNY in this study can be seen from several aspects, such as communication skills, organizational skills, leadership, logical thinking skills, additional skills, business skills, ability to work together, and ethics. If viewed from several aspects that become research variables, it can be concluded that the higher the level of ability of graduates of IKOR FIK UNY in meeting the stakeholders' expectations, the higher satisfaction levels of stakeholders will be. It is in line with Abidin stating that that the level of satisfaction is influenced by the fulfillment of stakeholders' expectations from various aspects [24].

As we know from the results of the research on the level of stakeholders' satisfaction with the graduates of IKOR FIK UNY, it was determined that the stakeholders were satisfied. This information can be proven from the results of the general stakeholders' assessment as listed in Table 1. The table shows that there are 67.5% of respondents or 27 people were satisfied with the ability of graduates of UNY FIK IKOR. Meanwhile, there are 27.5% or 10 respondents were very satisfied with the abilities possessed by graduates of IKOR FIK UNY. Although the number of satisfied stakeholders is quite large, it is undeniable that there are still several related parties who are unsatisfied and even very unsatisfied with the competencies possessed by graduates of IKOR FIK UNY. From the data obtained, there are 2 people or 3.5% of respondents felt unsatisfied and 1 person or 1.5% of respondents felt very unsatisfied. Although the number of respondents feeling unsatisfied and very unsatisfied was only 3 people out of 40 people, this needs to be used as a reflection and reference to continue to improve the quality of graduates. In improving the quality of graduates, one way that can be done is to improve the quality of education in the higher education institution.

The quality of education has recently become a major target in education systems around the world. As expressed by Seyfried, the society begins to assess the quality of an institution based on general paradigms or standards, comparison of graduates of an institution to others, ranking of institutions, and also how the management system of the institution as well as the level of its accountability [25]. Regarding the previous statement, Belash affirms that the quality of education is generally understood as a balance between the fulfillment of educational aspects such as the achievement or results, processes, and conditions of the educational environment with the applied needs, goals, obligations, norms and standards [26].

The University as one of the higher education institutions is responsible for building and fostering future leaders of the nation by prioritizing quality and character education to form superior and competent human resources. Whereas, Voronov hypothesizes that ideal education at a modern university is the basis for the development of competitive professional abilities in the world of work. Further, he states that the education system needs to be developed by improving more effective learning by providing opportunities for students to practice their abilities in real work situations in various fields as showing the quality of education [27].

It should also be understood that education is not only related to the transfer of knowledge, but also having a broader meaning, namely promoting the development and formation of dignified, faithful, knowledgeable, active, creative, capable citizens and able to become responsible and democratic citizens [28]. As stated by Fadhl, higher education must include tri dharma, namely teaching, research, and community service. With the achievement of these points, it is hoped that stakeholders using graduates of IKOR FIK UNY will be satisfied in regards to their performance and abilities [29]. According to Simamora, stakeholders' assessment on graduates or alumni is so important because this can show the quality of a university [30].

Stakeholders will continue to observe and assess the performance of graduates from various aspects. In general, a person's performance can also be referred to as achievement. According to Rahma [31] performance means the achievement of a person's work based on the quality and quantity of the completed tasks, and can be measured through certain values or standards from a company where he works. Meanwhile, according to Handayani (2015)[32] quoted by Riyanto [33], a person's performance is a relationship concerning abilities, types of work, and opportunities that can be assessed from the results of their work. Whereas, according to Nugroho performance can be interpreted as a comparison between the results of a company's achievements with the devotion made, including how to use human and financial resources. From some of the information above, it can be concluded that performance is the result of a person's efforts or performance to achieve a certain value measured both in terms of quality and quantity. When someone gives a good performance, there will be satisfaction both from within himself and the related parties, in this case are stakeholders.

As we know, that in this study there were 8 aspects that were used as a standard for assessing stakeholders' satisfaction for graduates of IKOR FIK UNY. The eight aspects include communication skills, organizational skills, leadership traits, logical thinking skills, other additional skills, business skills, collaboration skills, and ethics. These aspects are used as variables for assessing the level of satisfaction of stakeholders on the performance of graduates of IKOR FIK UNY, whether they feel very satisfied, satisfied, unsatisfied, or very unsatisfied

Communication ability is one of the variables in assessing the level of stakeholders' satisfaction. This is considered as important because by having good communication skills, someone can express what they have in mind through a well and clear way. explains that in the context of the world of work, having good communication skills means the ability to convey and receive information clearly, including the ability to read situations with the aim of avoiding or solving problems [34]. Who argues that communication skills are not only through oral but



also written skills, such as making memos, reports, job descriptions, preparation of SOPs (Standard Operating Procedures), writing letters both electronically and conventionally, contract collaboration, advertisements, and so on [35].

If you look at the data from the research above regarding stakeholders' satisfaction on the communication skills of graduates of IKOR FIK UNY, there are 8 people out of the total of 40 respondents very satisfied with the communication skills of graduates of IKOR FIK UNY, equivalent to the percentage of 18.75%. Meanwhile, there are 27 people (67.5%) of respondents satisfied depicting the high value in assessing the level of stakeholders' satisfaction on the communication skills of graduates of IKOR FIK UNY. Although no one was very unsatisfied, there are still 5 respondents (13.75%) unsatisfied with the communication skills of graduates. This of course can be used as a consideration to continue to improve educational institutions in fostering students to prepare good communication skills so that they can compete in the world of work.

Communication skills need to be prepared since they are still studying in college, considering Hardjati [36] conveying that interpersonal communication skills have a very large position as a prerequisite for successful performance in any work division. She also adds that quality and customer satisfaction are closely related, because the quality of communication will have a strong impact on the progress of a company. In addition, good communication is not only useful intrapersonally, but also useful for improving performance and success in the team. This was uttered by Raappana [37]. stating that a team can be formed, work, and develop due to good communication. With good communication, team members can understand how to cooperate in the best way. To improve communication skills, of course, several aspects are needed that must be nurtured.

Nemade mentions some of these aspects, including how a person composes sentences. The better the arrangement of sentences made, the higher level of creativity of a person. The ability to explain is also eminent as it can show the level of someone's thinking skills [38]. Furthermore, how to make eye contact when someone is talking. Proper eye contacts must be appropriate for each interlocutor. In addition, how someone uses vocabulary in terms of its variation, as well as its appropriateness in meaning will also show the person's communication skills. Aspects that need to be developed further are knowledge of the topic of conversation, as well as the appropriate volume and speech. When someone masters knowledge about the topic being discussed, communication will run smoothly, as well as the use of volume and pronunciation will greatly affect the comfort of communication.

The next aspect that is used as a variable for assessing the level of stakeholders' satisfaction on graduates of IKOR FIK UNY is organizational capability. Judging from the results of the research data above, it shows that there are 9 respondents (21.5%) very satisfied with the organizational abilities possessed by graduates of IKOR FIK UNY. Meanwhile, there are 28 respondents (70.5%) satisfied depicting the high value of stakeholders' assessments regarding the organizational ability of graduates of IKOR FIK UNY. However, as in the previous variable aspect, there are 2 respondents (6.5%) unsatisfied

and 1 respondent (1.5%) very unsatisfied with the organizational abilities possessed by graduates of IKOR FIK UNY.

As in the above findings, the number of stakeholders' unsatisfied with organizational capabilities is quite low so that there is still a need for development and improvement to shape the quality of graduates of UNY IKOR FIK to enable them to compete in the world of work. Organizational ability is important considering that certainly needs to work in teams. If the organizational capabilities are low, a team work will not be able to run optimally. This is related to the statement made by Daniar that in achieving complete and maximum organizational commitment, every individual in the organization needs to carry out their jobs and obtains his salary properly fit to their functions and duties. With good cooperation, the organizational goal of developing team work will be achieved.

Developing one's organizational abilities is certainly not an instant thing to do. There needs to be a process of adjustment and habituation from the early age. In this context, organizational capacity development can be trained and accustomed to in college. Higher education institutions are actually a means for students to develop important and useful abilities, one of which is organizational skills. The organizational habits are often referred to as organizational culture. Prihantari uses this term and explains that building organizational culture will be very useful as the unifier of team members as the identity of a team, and motivation among employees within the unit. Further, she states that getting used to organizational culture will have an impact on the next generation who will see the performance and cooperation of their predecessors so that the goals of seniors can be achieved and the spirit of unity can be continued by the juniors [39].

In developing organizational culture, there are several aspects that need to be considered and familiarized by each individual. Joshi quotes Schein's statement affirming that aspects that important to understand include the norms applied in the society, values and benefits, behaviors, and beliefs that may be shared among members. In particular, some of these aspects also include discipline, responsibility, and mutual respect. If the formation of individuals' organizational characters is considered strong, the work of the team will become more focused and maximal [40].

A team or organization having a strong individual foundation will certainly be given certain tasks by the company. Huang states that, in general, stakeholders will see the achievement of an organization from how teamwork is to complete tasks such as spatial governance, analyzing company profits, and the level of performance and effectiveness. Despite, every company or institution using graduates of IKOR FIK UNY has its own standard of indicators to assess the quality of a person's organizational ability.

The variable used to assess the level of stakeholders' satisfaction is the leadership. The leadership of the graduates of IKOR FIK UNY is satisfying for the stakeholders. This is depicted by the results of data analysis in which there are 8 respondents (20%) very satisfied and 24 respondents (71%) satisfied with the leadership possessed by graduates of IKOR FIK UNY. As in the findings, there are a small number of respondents are unsatisfied with the leadership of the graduates of IKOR FIK



UNY stating by 4 respondents (9%) and none of the respondents felt very unsatisfied.

The spirit of leadership is one of the research variables on the level of stakeholders' satisfaction on graduates of IKOR FIK UNY because this is very influential on the progress of the institution or company. As stated by Runa, leadership is a process to influence the activities of a group and manage the team to achieve the desired goals and achievements. Meanwhile, Nugroho asserts that leadership is the ability to invite others to achieve goals with pleasure. He also added that leadership can be increased if it is supported by the following aspects, i.e. the natural leadership skills of a person, the number of followers, the organization followed, and the level of social, economic, and political ability [41].

For now, people who have a leadership spirit will be taken into account both in the world of work and in everyday life. States that leadership to form competent leaders requires development and training that includes intelligence, inter-professional abilities, good manners, and a strong capacity for strategic abilities, emotional management, and communication intelligence. In addition to self-development that needs to be trained to build leadership, also mentions that social awareness is the main key to make a person able to work with diverse stakeholders, understand factors contextually, see the benefits or positive sides of different opinions, and still maintain equality or justice [42].

In developing a leadership spirit, one needs to be trained from the early age. This is related to the statement from Karagianni [43] in which he states that every child of various age ranges has their own leadership abilities, and if trained, it will be very influential and increasing as they get older. Involving children in organizations such as scouts, or joining sports clubs will provide opportunities to develop their leadership experience. He also adds that school is the first formal place that is very influential in developing a child's leadership.

With regard to development of leadership through education in formal schools, Grigoropoulos argues that they need to include several paradigms. The first one is the ability to think holistically inferring that educational institutions combine academic, emotional, physical, intellectual, ethical, and social and morals abilities. The next paradigm is related to principles and values of one's personal and professional goals. Then, there is a harmony paradigm, where the ideas developed are the result of harmony between emotions and logical thinking. The last paradigm that needs to be included in school is ethos and ethics. He explains that in simple terms, ethos means doing something good or right when no one is watching. If schools or educational institutions include the four paradigms above while being given guidance, examples, and fully supported by teachers, students will have a better chance to develop their leadership skills. This is not only useful for their own learning, but also useful for their future life [44].

In everyday life, a person's leadership style is different from one another, even a leader does not necessarily have good leadership, and vice versa that people having leadership do not necessarily get the position as a leader. As stated by Sousa and Aslam, there are 3 types of leadership styles. The first is the autocratic leader who makes decisions without discussing

them with team members. This leadership style can be appropriate when quick decisions are needed, or when there is no input from team members. The next leadership style is democratic leadership in which the leader makes final decisions by involving all team members. With this, the team can develop more creativity and be comfortable of feeling appreciated. The last type is a leader who gives full freedom to the work and deadlines for the work. This type of leadership will provide high work comfort but will be difficult for team members who do not have sufficient knowledge, ability, and self-motivation to carry out their duties efficiently [45][46].

The variable measuring the level of stakeholders' satisfaction on the ability of graduates of IKOR FIK UNY is the ability to think logically. Based on the data obtained, it can be seen that the stakeholders are satisfied with the logical thinking skills possessed by graduates of IKOR FIK UNY with 13 respondents (32%) very satisfied and 24 respondents (60.5%) were satisfied. As in the findings, there are a small number of respondents who are unsatisfied with the logical abilities possessed by graduates. This is depicted by 3 respondents (7.5%) who are unsatisfied, and none of the respondents feels very unsatisfied.

The ability to think logically according to Noviani is a thinking process prioritizing logic, rationality, and senses. If it is related in everyday life, a person has a strong curiosity to describe or change complex information to be compared with one another in order to form new conclusions or abilities that are in accordance with the environment, location, space and time. Meanwhile, according to Muzaky (2020), logical thinking is the ability to think coherently and look for meaning based on facts that run hierarchically [46]. Further, Pamungkas argues that logical thinking is a thinking process relying on or prioritizing aspects of reasoning consistently so that it can reach a coherent conclusion [47].

Therefore, logical thinking is identical to an understanding, the ability to apply something, the ability to analyze or find out facts on events or activities that have been carried out, the ability to synthesize, as well as the ability to assess or evaluate. This is supported by the statement of Ash-Shiddieqy that in developing logical thinking ability, participation of educational institutions is necessary, especially universities in providing learning that can encourage students to think logically. Learning modulation uses the inquiry learning approach that links core learning with several aspects such as cognitive abilities, strengthening the foundation of character education, and students' conceptual understanding [48].

To achieve the ability to understand and solve the problem, the ability to think logically needs to be developed along with the ability to think creatively. By developing these two thinking skills, one can solve problems with appropriate solutions. The combination of developing creative thinking skills and logical thinking is so important as conveyed by Diana stating that by getting students to think logically and creatively, it is hoped that they will be able to solve problems by coming up with diverse ideas but still full of strategic calculations.

Another variable measuring the level of stakeholders' satisfaction on graduates of IKOR FIK UNY is the additional skills. Based on the findings, stakeholders are satisfied with the addi-



tional skills possessed by graduates depicted that 12 respondents (31.25%) were very satisfied, and 27 respondents (66.25%) were satisfied with the additional skills of graduates of IKOR FIK UNY. Even so, there was still 1 respondent (2.5%) unsatisfied, and no one is very unsatisfied with the additional skills possessed by the graduates.

Additional skills need to be possessed by workers to increase the 'value' of their performance. Piwowar-Sulej calls workers in the current era as generation 4.0 workers requiring several competencies to be able to compete in the world of work optimally. Some of the competencies mentioned include digital competence, namely a person's ability to operate electronic devices and the internet, the ability to assess the credibility of information sources and use them wisely, in addition to social intelligence, sociability, and openness that are also needed in today's world of work. In addition, he also mentions several aspects need to be taught in schools such as the ability to read comprehensively, communicate using foreign languages, think mathematically and refer to science, use the latest information and information technology optimally and wisely, as well as the ability to study and work in a team [49].

Workers with additional skills such as mastering foreign languages, especially the majority languages used in the world, such as English, Japanese, Mandarin, German, and French will be more considered to have extra values in their work. The current era of globalization provides many changes, especially in relation to the free market in which the whole world can be mutually connected from one country to another. One of the foreign languages that need to be learned and mastered by current generation 4.0 workers is English. As we know that English is as lingua franca and is learned to communicate universally. Yamao affirms that English is starting to develop into a business language. Therefore companies will really appreciate workers who have foreign language skills, especially English [50].

Furthermore, today's workers should be, at least, able to operate technological devices like smartphones or computers, considering that almost all lines of work require these skills. Electronic devices such as smartphones or computers are used as communication media, disseminating information, and processing data more regularly. More than just being able to operate electronic devices well, van Laar explains that there is a need for strategic capabilities in applying technology to be an appropriate means. Further, he also conveys that abilities related to socio-emotional and cognitive abilities will be very helpful in solving problems in today's digital environment [51]. This explanation is also supported by a statement from Jandrić saying that technological advances are expected to be able to improve problem-solving abilities, creativity, and also the communication skills of employees or workers [52].

Another skill that students need to develop in preparing to enter the world of work is design skills. This is considered as important since the current information dissemination or marketing is way faster by using electronic media. Therefore, the media that is distributed must be in an attractive form. The ability to create attractive designs will be needed by companies. It requires creativity and patience to obtain this ability, and with frequent practice, it will certainly improve this abili-

ty well. In addition to the design ability, current graduates need to equip themselves with digital marketing skills or marketing through digital media.

The digital aspect does play an important role at this time. Digital marketing is not only limited to buying and selling promotions, but also on how one can make work agreements and collaborations. The explanation above is reinforced by Nurhadi's statement (2020) in which he affirms that by having design and digital marketing skills, one is able to pass through increasingly difficult work and business competition as it is today. It is because if the ability to design and digital marketing increase, one can open a business opportunity with adequate income with a fairly low capital.

The ability to analyze data is also an important one among the other additional skills. Data analysis skills are very useful for studying the improvement or decline of a company in terms of both quality and earnings. According to Amalia analysis is a person's ability to understand, determine, and explain a problem into several parts so that it is easier to understand the relationship between one another [53]. The analytical ability is closely related to the ability to think logically as the variable measuring the level of stakeholders' satisfaction on graduates of IKOR FIK UNY. Syawahid (2015) [55].says that in analyzing something, facts are needed to support the analysis to reach a conclusion.

The variable measuring the level of stakeholders' satisfaction on the ability of graduates of IKOR FIK UNY is the ability to do business. Based on the findings, it is determined that most of the stakeholders were satisfied with the graduates' persistence in doing business. The results of the data collection show that there are 10 respondents (26%) very satisfied and 26 respondents (64%) stated that the business ability of graduates of IKOR FIK UNY was quite satisfactory. Meanwhile, there are 4 respondents (10%) unsatisfied and none of the respondents are very unsatisfied with the business abilities possessed by graduates of IKOR FIK UNY [54].

As we know that in the world of work, persistence and willingness to maximum performance is needed. With a strong will and maximum effort, stakeholders will be more confident in one's performance. Yuliana explains that effort can be measured by how hard a person is willing to be more serious and becoming better at work compared to before. She also adds that persistence can be measured by how consistent an employee is to always try to do something in accordance to his desire to develop for the sake of the company's progress even though the surrounding environment is not supportive [55].

The ability to do business needs to be trained before entering the world of work. Learning and habituation of persistence and effort can be developed in formal education. Higher education institutions as a forum to shape a person's character passing adolescence and entering early adulthood. Wahidah explains that during this transition period, students experience several changes such as physical, psychological, social, cultural, and academic abilities. She also mentions that in this period, their mind-set ability can be developed both in terms of academic and non-academic which is called a growth mind-set. A growth mind-set is a situation where a person can improve his abilities along with the efforts he makes to achieve it [56].



Something that can be used as a means to shape the students' character having a strong determination and willing to try include prioritizing punctuality in completing and submitting assignments, assessing the seriousness of students in doing assignments by looking at the results of the projects given as assignments, and appreciating the efforts made by students optimally by observing their work processes both individually and in groups. This is supported by Riyanti's statement asserting that persistence is formed from two aspects, namely resilience in maintaining concentration and focus on the given task, and a strong will to do something with the aim of achieving the best results [57].

The next variable measuring the level of satisfaction of stakeholders towards graduates of IKOR FIK UNY is the ability to work together. Based on the findings, it can be concluded that the stakeholders are satisfied with the collaboration skills possessed by the graduates of IKOR FIK UNY. This is indicated by 10 respondents (25%) stating very satisfied and 30 respondents stating satisfied with the ability to work together of graduates of IKOR FIK UNY. In this variable, no one is unsatisfied or very unsatisfied. This shows that the ability to cooperate of graduates of IKOR FIK UNY can be considered as satisfied, but there is still a need for development and improvement to make it even better.

The ability to work together is very important, considering that in the world of work, a person will not be able to do everything himself and will definitely still need other people to complete the work and achieve workplace success. In this case, having the ability to work together will be very helpful because any work will be better and easier if it is done together. In general, cooperation can also be referred to as teamwork. According to the explanation of Varela teamwork means a group of people with more than 2 members having the same goal so that they will unite to achieve that goal. In short, in a work group there are three main aspects, namely the similarity of goals between group members, synergy between groups, and the number of members that is more than 2 people [58]. It is undeniable, that in a team there must be some differences such as age, gender, race, and education level. Čič (2017) affirms that in terms of the age of a team there will be differences in needs, values, and attitudes as experience and knowledge increase. Seeing this difference, one's habituation in responding to differences needs to be trained beforehand. The ability to communicate and respect each other between one member and another needs to be nurtured as early as possible. He also added that mutual understanding between members in the work environment starts from a good recruitment process, memory skills, success in management, communication skills, employee performance, and how one can resolve conflicts.

The last variable measuring the level of satisfaction of stakeholders towards graduates of IKOR FIK UNY is the level of satisfaction of ethics. From the research data above, it can be concluded that stakeholders are satisfied with the ethics of the graduates. This is indicated by 14 respondents (35%) stating very satisfied and 26 respondents (65%) stating satisfied with the ethics of graduates in work. In this aspect of measurement, none of the respondents were unsatisfied or very unsatisfied

with the ethics of the graduates. Based on this information, it can be concluded that graduates of IKOR FIK UNY have good ethics and can be prepared to enter the world of work.

Ethics is a form of behavior or attitude that is a reflection of personality. Ethics is also related to how someone acts, behaves, and being loyal to something. If it is associated with the world of work, in general, ethics can be interpreted as a form of a person's attitude towards company activities such as how to behave, maintain courtesy between workers, responsiveness, ability to keep company secrets, and to be involved in activities. Tas'adi describes that ethics includes 4 components. When viewed from the object of discussion, ethics is a science discussing human behavior. Meanwhile, when viewed from the sources and scientific studies, ethics comes from reasons and philosophy so that the study of science used is centered on behavioral sciences such as psychology, anthropology, and so on. Furthermore, when viewed in terms of its function, ethics serves as a benchmark for one's judgment and determining whether one's actions are wrong or right. Finally, when viewed from its nature, ethics is relative where there is no absolute right or wrong with one's behavior and will continue to change according to changing demands of the times [59].

Bhastary explains that work ethics can be interpreted as attitudes, mind-sets and views, habits of how a person, group or nation works. The higher the ethics, the better work, and even the higher achievements. Furthermore, work ethics can be measured through several aspects, including hard work, speaking style, work values, and creativity at work. Hard work means the willingness to try to achieve a certain target or goal. Meanwhile, speaking style can also be used to determine whether a person has a work ethic or not. An attractive and polite speaking style can be one on the benchmarks of a person's ethics. Work value becomes an ethical benchmark which is then due to the results of a person's performance often being able to show how high a person's intentions are in doing things. If stakeholders are satisfied with the work or performance of a person, it can be concluded that the person has a good work ethic. The last measure of ethics can be seen through creativity of a person's performance. Creativity is the potential of each person and can be developed according to the style and needs of each individual. Creativity becomes very useful when used to develop the company, or solve problems occurred [60].

Conclusion

Based on the findings and discussion, it can be concluded that stakeholders' satisfaction on graduates of IKOR FIK UNY is satisfactory. Stakeholders stated that the level of satisfaction on graduates of IKOR FIK UNY was satisfactory with the distribution of 27.5% stating very satisfied; 67.5% stating satisfied; 3.50% stating unsatisfied; and 1.5% stating very unsatisfied.

- 1. Based on the findings and discussion, it can be concluded that stakeholders' satisfaction on the communication skills of graduates of IKOR FIK UNY is satisfactory with the distribution of 18.75% stating very satisfied; 67.5% stating satisfied; 13.75% stated unsatisfied; and 0% stated very unsatisfied.
- 2. Based on the findings and discussion, it can be concluded that stakeholders' satisfaction with the organizational ability of graduates of IKOR FIK UNY is satisfactory with the distribu-



tion of 21.5% stating very satisfied; 70.5% stating satisfied; 6.50% stating unsatisfied; and 1.5% stating very unsatisfied.

- 3. Based on the findings and discussion, it can be concluded that stakeholders' satisfaction with the leadership of graduates of IKOR FIK UNY is satisfactory with the distribution 20% stated very satisfactory; 71% stated satisfactory; 9% stated unsatisfactory; and 0% stated very unsatisfactory.
- 4. Based on the findings and discussion, it can be concluded that stakeholders' satisfaction on the logical thinking of graduates of IKOR FIK UNY is satisfactory. Stakeholders stated that satisfaction on the logical thinking of graduates of IKOR FIK UNY is satisfactory with the distribution of 32% stating very satisfied; 60.5% stating satisfied; 7.50% stating unsatisfied; and 0% stating very unsatisfied.
- 5. Based on the findings and discussion, it can be concluded that stakeholders' satisfaction on the additional skills of graduates of IKOR FIK UNY is satisfactory with the distribution of 31.25% stating very satisfied; 66.25% stating satisfied; 2.50% stating unsatisfied; and 0% stating very unsatisfied.
- 6. Based on the findings and discussion, it can be concluded

- that the satisfaction of stakeholders on the business ability of graduates of IKOR FIK UNY is satisfactory with the distribution of 26% stating very satisfied; 64% stating satisfied; 10% stating unsatisfied; and 0% stating very unsatisfied.
- 7. Based on the findings and discussion, it can be concluded that stakeholders' satisfaction on the ability to cooperate of graduates of IKOR FIK UNY is satisfactory with the distribution of 25% stating very satisfied; 75% stating satisfied; 0% stating unsatisfied; and 0% stating very unsatisfied.
- 8. Based on the findings and discussion, it can be concluded that stakeholders' satisfaction with the ethics of graduates of IKOR FIK UNY is satisfactory with the distribution 35% stating very satisfied; 65% stating satisfied; 0% stating unsatisfied; and 0% stating very unsatisfied.

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- 1. Lele, A. (2019). Industry 4.0. In Smart Innovation, Systems and Technologies. https://doi.org/10.1007/978-981-13-3384-2_13
- 2. Hamdan, H. (2018). Industri 4.0: Pengaruh Revolusi Industri Pada Kewirausahaan Demi Kemandirian Ekonomi. Jurnal Nusantara Aplikasi Manajemen Bisnis. https://doi.org/10.29407/nusamba.v3i2.12142
- 3. Risdianto, E. (2019). Analisis Pendidikan Indonesia di Era Revolusi Industri 4.0 Eko Risdianto, M. Cs. Analisis Pendidikan Indonesia Di Era Revolusi Industri 4.0.
- 4. Rohida, L. (2018). Pengaruh Era Revolusi Industri 4.0 terhadap Kompetensi Sumber Daya Manusia. Jurnal Manajemen Dan Bisnis Indonesia. https://doi.org/10.31843/jmbi.v6i1.187
- 5. Purnama, R. (2008). Pengaruh Motivasi Kerja Terhadap Produktivitas Kerja Karyawan Pada Bagian Produksi Cv. Epsilon Bandung. Strategic: Jurnal Pendidikan Manajemen Bisnis, 8(2), 58. https://doi.org/10.17509/strategic.v8i2.1028
- 6. Firmansyah, F. (2018). Analisa Efisiensi Perusahaan Telekomunikasi Dengan Metode Data Envelopment Analysis (Dea) Berbasis Pendekatan Biaya. Jurnal JKFT. https://doi.org/10.31000/jkft.v3i1.1014
- 7. Pramudyo, A. (2015). Daya Saing Sumber Daya Manusia Indonesia Menghadapi Masyarakat Ekonomi ASEAN. Jurnal Bisnis Manajemen Dan Akuntansi.
- 8. Nugroho, D. A. (2017). Pengantar Manajemen untuk Organisasi Bisnis dan Nirlaba. In UB Press
- 9. Lindsay, R W, & Zhang J (2005). The thining of Arctic sea ice, 1988-2003: Hawe we passed a tipping point? Journal of Climate 18.22 (2005): 4879-4894.
- 10. Ramseook-Munhurrun, P., Lukea-Bhiwajee, S., & Naidoo, P. (2010). Service Quality in the Public Service. International Journal of Management and Marketing Research
- 11. Johnson, M. D. (2015). Customer Satisfaction. In International Encyclopedia of the Social & Behavioral Sciences: Second Edition. https://doi.org/10.1016/B978-0-08-097086-8.73025-X
- 12. Sulaiman, A. (2016). Memahami Teori Konstruksi Sosial Peter L. BergeR. Society. https://doi.org/10.33019/society.v4i1.32
- 13. Farisi, M. I. (2010). Struktur Kurikulum Pendidikan Guru Untuk Mengembangkan Kompetensi Guru Yang Berkarakter Dan Berbasis Budaya. TING II.
- 14. Isa, Z. M., Salleh, N., Mustapha, R., & Yassin, H. M. (2009). Analisis Keperluan Kurikulum Pendidikan Vokasional Pelajar Bermasalah Pembelajaran (LD) di Malaysia. Malaysian Education Deans' Council Journal.
- 15. Kusmana, S. (2017). Pengembangan Literasi Dalam Kurikulum Pendidikan Dasar Dan Menengah. Jurnal Pendidikan, Kebahasaan, Dan Kesusastraan Indonesia.
- 16. Douglas, J., Douglas, A., & Barnes, B. (2006). Measuring student satisfaction at a UK university. Quality Assurance in Education. https://doi.org/
- 17. Missildine, K., Fountain, R., Summers, L., & Gosselin, K. (2013). Flipping the classroom to improve student performance and satisfaction. Journal of Nursing Education. https://doi.org/10.3928/01484834-20130919-03
- 18. Kotler, P. (2005). Las preguntas más frecuentes sobre marketing. Editorial Norma.
- 19. Zhou, H., Huang, X., Cui, H., Luo, X., Tang, Y., Chen, S.,... & Shen, N. (2010). miR-155 and its star-form partner miR-155* cooperatively regulate type I interferon production by human plasmacytoid dendritic cells. Blood, The Journal of the American Society of Hematology, 116(26), 5885-5894.
- 20. Kumar, V., & Reinartz, W. (2016). Creating enduring customer value. Journal of Marketing. https://doi.org/10.1509/jm.15.0414
- 21. Maisaroh, S. (2005). Pengaruh Manajemen Mutu Layanan terhadap Kepuasan Peserta Didik di Universitas PGRI Yogyakarta. Laporan Penelitian. Universitas PGRI Yogyakarta.
- 22. Minarti, S. N., & Segoro, W. (2014). The Influence of Customer Satisfaction, Switching Cost and Trusts in a Brand on Customer Loyalty The Survey on Student as im3 Users in Depok, Indonesia. Procedia–Social and Behavioral Sciences. https://doi.org/10.1016/j.sbspro.2014.07.546



- 23. Ghozali, Y. A. F., Sutopo, S., & Hidayat, A. (2017). Peningkatan Hasil Belajar dengan Program Resitasi pada Materi Gerak Harmonik Sederhana. Research Report.
- 24. Abidin, M. (2021), Stakeholders evaluation on educational quality of higher education. International Journal of Instruction, 14(3), 287-308.2
- 25. Seyfried, M., & Pohlenz, P. (2018). Assessing quality assurance in higher education: quality managers' perceptions of effectiveness. European Journal of Higher Education, 8(3), 258-271.
- 26. Belash, O., Popov, M., Ryzhov, N., Ryaskov, Y., Shaposhnikov, S., & Shestopalov, M. (2015). Research on university education quality assurance: Methodology and results of stakeholders' satisfaction monitoring. Procedia-Social and Behavioral Sciences, 214, 344-358.
- 27. Voronov, A. A., Garkovenko, V. E., Safonov, A. M., & Kosnikov, S. N. (2018). Higher education competitiveness: definition, assessment and ways of growth.
- 28. Rabiah, S. (2019), Manajemen Pendidikan tinggi dalam meningkatkan mutu pendidikan, Jurnal Sinar Manajemen, 6(1), 58-67.
- 29. Fadhli, M. (2020). Sistem Penjaminan Mutu Internal Dan Ekstenal Pada Lembaga Pendidikan Tinggi. AL-TANZIM: Jurnal Manajemen Pendidikan Islam, 4(2), 53-65.
- 30. Simamora, I. Y., & Mukhtaruddin, M. (2019). Alumni Dan Stakeholder (Studi Terhadap Kepuasan Dan Harapan Stakeholder Terhadap Alumni). Jurnal Penelitian Medan Agama, 10(1).
- 31. Rahma, T. I. F., & Imsar, I. (2019). Alumni Performance Based On Stakeholders Perception. Journal of Management and Business Innovations, 15-28.
- 32. Handayani, F. (2015). Instagram as a teaching tool? Really?. Proceedings of ISELT FBS Universitas Negeri Padang, 4(1), 320-327.
- 33. Riyanto, S., Sutrisno, A., & Ali, H. (2017). The impact of working motivation and working environment on employees performance in Indonesia stock exchange. International Review of Management and Marketing, 7(3), 342-348.
- 34. Ting, S. H., Marzuki, E., Chuah, K. M., Misieng, J., & Jerome, C. (2017). Employers' views on the importance of English proficiency and communication skill for employability in Malaysia. Indonesian Journal of Applied Linguistics, 7(2), 315-327.
- 35. Sheth, T. D. (2015). Communication skill: A prerequisite for engineers. International Journal on Studies in English Language and Literature, 3(7), 51-54.
- 36. Hardjati, S., & Febrianita, R. (2019). The power of interpersonal communication skill in enhancing service provision. Journal of Social Science Research, 14, 3192-3199.
- 37. Raappana, M., & Horila, T. (2019). Team communication in the workplace. In Workplace Communication (pp. 28-40). Routledge.
- 38. Nemade, V., Sharma, B., Ramachandran, M., & Fegade, V. (2018). Developing communication skill in a rural pharmacy college. Journal of Pharmacy Research, 12(4), 536.
- 39. Prihantari, G. A. P. E. D., & Astika, I. B. P. (2019). Effect of role overload, budget participation, environmental uncertainty, organizational culture, competence, and compensation on employee performance. International research journal of management, IT and social sciences, 6(4), 197-206.
- 40. Joshi, M., Singh, V. K., & Sharma, N. (2018). Empirical Examination of Relationship between Organizational Culture and Employee Competence: An Insight. SAMVAD, 16(2), 25-36.
- 41. Runa, R. (2020). DETERMINASI KEPUASAN KERJA DAN KINERJA KARYAWAN MOTIVASI, GAYA KEPEMIMPINAN (SEBUAH LITERATUR REVIEW MANAJEMEN SUMBER DAYA MANUSIA). Jurnal Ilmu Manajemen Terapan, 2(2), 202-222.
- 42. Thompson, S. A., & Miller, K. L. (2018). Disruptive trends in higher education: Leadership skills for successful leaders. Journal of Professional Nursing, 34(2), 92-96.
- 43. Karagianni, D., & Jude Montgomery, A. (2018). Developing leadership skills among adolescents and young adults: a review of leadership programmes. International Journal of Adolescence and Youth, 23(1), 86-98.
- 44. Grigoropoulos, J. E. (2020). How Can Manifesting Leadership Skills Infused with Ethos, Empathy, and Compassion Better Prepare Students to Assume Leadership Roles?. International Journal of Progressive Education, 16(1), 54-66.
- 45. Sousa, M. J., & Rocha, Á. (2019). Leadership styles and skills developed through game-based learning. Journal of Business Research, 94, 360-366.
- 46. Aslam, M. (2018). Current trends and issues affecting academic libraries and leadership skills. Library Management.
- 47. Pamungkas, A. S., Setiani, Y., & Pujiastuti, H. (2017). Peranan pengetahuan awal dan self esteem matematis terhadap kemampuan berpikir logis mahasiswa. Kreano, Jurnal Matematika Kreatif-Inovatif, 8(1), 61-68.
- 48. Diana, N. (2018, March). Mengembangkan Kemampuan Berpikir Kreatif dan Berpikir Logis Mahasiswa dengan Adversity Quotient dalam Pemecahan Masalah. In Prosiding Seminar Nasional Matematika dan Pendidikan Matematika (SNMPM) (Vol. 2, No. 1, pp. 101-112).
- 49. Piwowar-Sulej, K. (2018). Employee 4.0 from the competitive perspective. Studia i Prace WNEiZ US, (52/3), 121-129.
- 50.Yamao, S., & Sekiguchi, T. (2015). Employee commitment to corporate globalization: The role of English language proficiency and human resource practices. Journal of World Business. 50(1), 168-179.
- 51. van Laar, E., van Deursen, A. J., Van Dijk, J. A., & de Haan, J. (2019). Twenty-first century digital skills for the creative industries workforce: Perspectives from industry experts. First monday.
- 52. Jandrić, M., & Ranđelović, S. (2018). Adaptability of the workforce in Europe—changing skills in the digital era. Zbornik radova Ekonomskog fakulteta u Rijeci: časopis za ekonomsku teoriju i praksu. 36(2), 757-776.
- 53. Amalia, R. (2016). Kemampuan Berpikir Matematis Mahasiswa dalam Menyelesaikan Masalah Geometri. EDU-MAT: Jurnal Pendidikan Matematika, 4(2).
- 54. Yuliana, Y., & Tannady, H. (2019). Faktor Determinan Performa Pekerja Konstruksi Melalui Mediasi Motivasi. Journal of Business & Applied Management, 12(2), 169-186
- 55. Wahidah, F. R., & Royanto, L. R. (2019). Peran kegigihan dalam hubungan growth mindset dan school well-being siswa sekolah menengah. Jurnal Psikologi TALENTA, 4(2), 133-144.
- 56. Riyanti, O. O. (2019). Hubungan Antara Perilaku Disiplin Dengan Kegigihan Pada Mahasiswa (Doctoral dissertation, University of Muhammadiyah Malang).
- 57. Varela, O., & Mead, E. (2018). Teamwork skill assessment: Development of a measure for academia. Journal of Education for Business, 93(4), 172-182.
- 58. TAS'ADI, RAFSEL. (2016). Pentingnya Etika Dalam Pendidikan. Ta'dib, 17(2), 189-198.
- 59. Bhastary, M. D. (2020). Pengaruh Etika Kerja dan Stres Kerja Terhadap Kepuasan Kerja Karyawan. Maneggio: Jurnal Ilmiah Magister Manajemen, 3(2), 160-170.
- 60. Nugroho, S., Nasrulloh, A., Sumaryanto, S., & Kurnianto, D. (2021). ALUMNI ASSESSMENT ON THE QUALITY OF SERVICES AND CURRICULUM RELEVANCE OF PROGRAM STUDY SPORTS SCIENCE FIK UNY.