Journal of Mechanical Engineering and Vocational Education (JoMEVE)

Jurnal Homepage: https://jurnal.uns.ac.id/jomeve

ANALYSIS OF READINESS FOR WORLD WORK AFTER THE INDUSTRIAL PRACTICE OF STUDENTS OF ENGINEERING EDUCATION ENGINEERING FKIP UNS

Addin Nur Khasanah[1], Muhammad Akhyar[1], Ngataou Rohman[1]

[1]Mechanical Engineering Education, Universitas Sebelas Maret Surakarta
Email: addinnurkhasanah@gmail.com

KEYWORDS

Work readiness, Working world, Industrial training

ABSTRACT

The aims of this study are (1) to describing the work readiness of Mechanical Engineering Education students of Sebelas Maret University in dealing with the industrial sector after carrying out industrial training in terms of each indicator; (2) to describing the highest and lowest signs of work readiness of industrial sector after industrial training owned by Mechanical Engineering Education students of Sebelas Maret University. The population in this study were all of Mechanical Engineering Education students who had carried out industrial training. The selected samples were 99 students of Mechanical Engineering Education. Instrument validity and reliability tests were carried out on 30 UNS Mechanical Engineering Education students who had carried out industry training and were chosen randomly. The results of the study revealed the work readiness of Mechanical Engineering Education students of Sebelas Maret University in terms of the overall indicators in the medium category. The highest grade of work readiness indicator of Mechanical Engineering Education students is on an emotional index with a value of 20,7%. The lowest grade of work readiness indicator of Mechanical Engineering Education students is on skill indicator with an amount of 20,7%.

INTRODUCTION

Education has an essential role in the development of a nation in various aspects of life. The quality of education also influences the quality of human resources in the country. The better education in a country, the better its human resources. Indonesia is considered as a country that has less human resources when compared to developed countries in Asia, such as China and Korea. The quality of education is still regarded as low and not relevant between the quality of educational outcomes and the quality of graduates. Competition in the world of work is increasingly high so that quality human resources is a demand.

The high unemployment rate for undergraduate graduates is one of the problems of education in Indonesia. According to data from BPS, records in February 2018 show that unemployed scholars reached 6.31%, an increase of 1.13% compared to February 2017 records where unemployment rates among scholars were 5.18%. The low level of human resources is one of the factors that trigger high unemployment in Indonesia.

Lembaga Pendidikan Tenaga Kependidikan (LPTK) is college s which become the foundation in producing professionals in the world of education. Competence possessed by college graduates is the first determining factor expected by LPTK in carrying out its functions (Siswanto, p.292). Vocational Engineering Education is one form of LPTK which has a large share in providing a reliable mid-level workforce in its field. However, Vocational Technical Education Program students are more equipped with academic abilities, resulting in gaps between the theories obtained when studying and work practices in the field.

e-ISSN : 2615-5699

https://doi.org/10.20961/jomeve.v2i2.38072

One of the efforts undertaken by universities to anticipate the above problems is by requiring students to attend technical practice programs. Students are expected to be able to apply the knowledge gained from several subjects into practical work undertaken during industrial practice. This industrial practice program is a means of preparing students to gain experience and learning about the real world of work.

The University and the world of work expect graduates to be able to do work in the workplace later to the best. There are still bachelor graduates who are not ready to enter the workforce. Based on Agustin (2008), student anxiety about the world of work is classified as moderate with an empirical average of 72, 289, and a mean of 80 mortgages. In conclusion, students experience anxiety about the world of work but are still at a reasonable level and also can still be adequately controlled. So it does not have a very significant effect on physical and psychological conditions.

Based on the results of interviews with 93 UNS Mechanical Engineering Education students in 2014 and 2015, 61 students answered that they wanted to work in the industrial sector, 26 students wanted to become teachers, and six students were still in doubt. This article describes the readiness to face the world of work from students of Mechanical Engineering Education, Sebelas Maret University.

RESEARCH METHODS

The population of this research is students of Mechanical Engineering Education Study Program UNS who have carried out industrial practice. Based on observations of students who have implemented Industrial Practices, namely the Class of 2015 and 2014 as many as 129 students.

Table 1. Research Population

Students class of 2014 and 2015	Population distribution
Class of 2015	64
Class of 2014	65
Total of population	129

The total population of this study was 129 students. Then 30 students from all communities were taken to test the instrument so that there were 99 students left so that the whole data source for this study was 99 students.

Tabel 2. Research Subject

Students class of 2014 and 2015	Sample distribution
Class of 2015	49
Class of 2014	50
Total of Sample	99

Data collection techniques used in this study were using the questionnaire method. This study uses a questionnaire method in the form of a questionnaire with closed questions that will help respondents to answer questions quickly. The items in the questionnaire are made into affirmative sentences and negative sentences.

The trial of the instrument was carried out for 30 students of UNS Mechanical Engineering Education, who had carried out industrial practice — testing this data using the help of IBM SPSS Statistics version 21. Based on the results of the validity test, there are 16 wrong statement items and 51 remaining valid statement items. The reliability test results obtained an alpha coefficient of 0.935. This shows that all statement items to measure readiness to face the world of work are reliable because the alpha coefficient exceeds 0.6.

Analysis of the data used is in the form of descriptive statistical data analysis. The results of the study are mode (Mo), median (Me), standard deviation (SDi), maximum value, and minimum value. Then this data is presented in tabular or diagram form.

Arikunto (2012, p.263) states that the level of the tendency of research variables is based on categorization using the ideal average comparison criteria. The following are the component evaluation criteria according to Arikunto:

Tabel 3. Component Rating Criteria

Scor	Sample distribution
X>Mi + 1,5Sdi	High
(Mi-1,5Sdi)<X≤(Mi+1,5SDi)	Middle
X≤	99

Information:

Mi = ½ (Maximum score + minimum score)

SDi = 1/6 (Maximum score + minimum score)

RESULTS AND DISCUSSION

Description of research data on the readiness to face the world of work after industrial practice at Mechanical Engineering students in terms of all indicators, which include mean, median, mode, standard deviation, maximum value, and minimum value. The instrument used was a closed questionnaire with 51 statements consisting of positive affirmations (score 5-1) and negative (counts 1-5). Based on the data obtained, readiness to face the world of work after industry practice in terms of all indicators with the highest score obtained is 244 and the lowest score of 139. From these data, received a mean of 196.5, a median of 197, a mode of 179, and a standard deviation 16,659. Frequency distribution of readiness to face the world of work in terms of knowledge, it can be illustrated in the diagram in Figure 1.

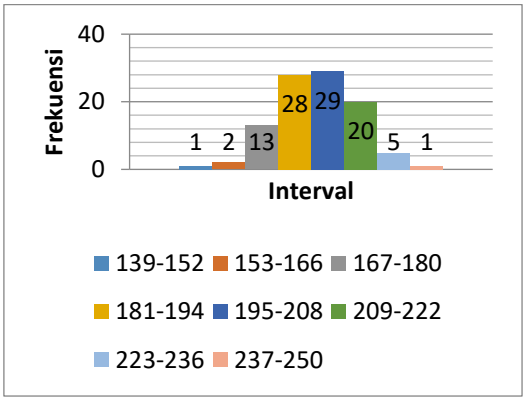

Figure 1. Data Frequency Distribution in terms of Overall Indicators

Furthermore, the ideal mean score (Mi) is made a comparison to find out the categorization of all indicators. The highest perfect score is 244, and the lowest perfect score is 139. The rating of the mean ideal (Mi) is 191.5, and the ideal standard deviation score (SDi) is 17.5.

The distribution of the categorization score of readiness to face the world of work after industrial practice in UNS Mechanical Engineering students in terms of overall indicators can be seen in Table 4.

Table 4 Frequency Distribution of Readiness Data to Face the World of Work in Terms of Overall Indicators

Interval	Category	F
X>217,75	High	9
165,25<X≤217,75	Middle	86
X≤165,25	99	4
Total		9

Based on Table 4 about the categorization of readiness to face the world of work in terms of all indicators, it can be illustrated in the diagram in Figure 2.

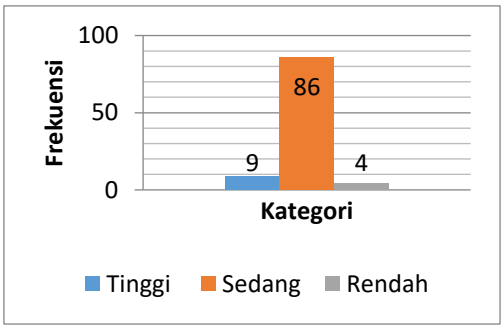

Figure 2. Distribution of Categorization Score for Readiness to Face the World of Work based on Overall Indicators

Based on the statistical results of all indicators of readiness to face the world of work, it can be seen the magnitude of the highest percentage of indicators of readiness to face the world of Mechanical Engineering UNS students after carrying out industrial practice. These data can be seen in Table 5.

Table 5. Distribution of Readiness to Face the World of Work in Terms of the Highest Indicator

No	Indicator	Relative Frequency
1	Phisical Condition	17,9

2	Mental Condition	7,5
3	Social Condition	13,2
4	Emotional Condition	20,7
5	Motif	16,98
6	Knowledge	18,9
7	The skills	4,7
Total		100

Based on Table 5 on readiness to face the world of work in terms of the highest indicators, it can be illustrated in the diagram in Figure 3.

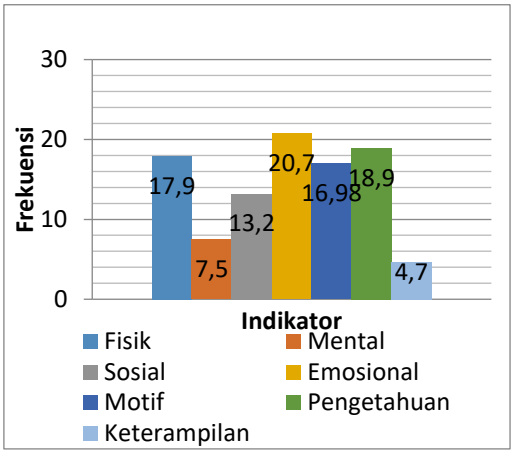

Figure 3. Distribution of categorization of readiness in facing the world of work in terms of the highest and lowest indicators

Analysis Based on the Lowest Indicator

Student Readiness Mechanical engineering education in dealing with the world of work can be seen from the skills indicators. The randomness indicator has the lowest value compared to other indicators. The reason for this low indicator is thought to be due to several factors, namely, lack of practice hours so that the skills acquired by students are also not sharpened.

Second, that is related to the industrial practice undertaken by students, the duration of the implementation of one month's industrial training is still considered lacking. There are some companies where industry practices are conducted that provide inappropriate job desks for undergraduate students. Third, the machines in the Mechanical Engineering Education workshop are still lacking. The available engines are a means of supporting students to hone skills, with a lack of mechanisms and substandard quality of mechanisms hindering students from honing their skills.

The things above are the factors that are suspected to influence the skill indicators to be the lowest indicators of readiness to face the world of work. Based on interviews with 10 UNS Mechanical Engineering Education students, the skills they have are still lacking, which is what drives them to be reluctant to teach at SMKs and choose to plan to work in the industrial sector. The reason they decided to work in the industrial area is that this sector is broader, and not everything obtained during lectures is applied.

Analysis Based on the Highest Indicator

UNS Mechanical Engineering Education students' readiness to work world is seen from emotional indicators. This indicator is an indicator that has the highest value when compared to other indicators. The cause is due to several factors, including the age factor of Mechanical Engineering UNS students who are getting older. According to Astuti (2000), the emotional maturity of a person is in line with age because emotional maturity is influenced by the level of growth and maturity of one's physiology.

Second, the change in interaction in the educational environment of Mechanical Engineering Education students is quite good. The educational climate in Mechanical Engineering Education contributes positively to the emotional development of its students because the main objective of the Mechanical Engineering Education Study Program is to produce vocational teachers in mechanical engineering.

Third, changes in outside views and interactions with peers. According to Syamsu (2009,p.128), one of the factors that influence one's emotional maturity is social relations, interactions, and excellent communication with peers and other people. Interaction with a variety of friends around both study partners and across campus, this makes the perspective of students of Mechanical Engineering Education more widespread. This change in attitude

can affect the emotional maturity of a person because when an unexpected event occurs, he can see from various points of view.

CONCLUSION

The readiness of mechanical engineering education students in terms of indicators (physical conditions, mental conditions, social conditions, emotional conditions, motives, knowledge, and skills) belong to the medium category. The results of the analysis of the data from all indicators contained 86 children in the medium group, 9 in the high grade, and 4 in the low category. Based on these data, it can be concluded that 86.9% of UNS Mechanical Engineering Education students who have carried out industrial practices have the readiness to face the world of work, including in the moderate category.

The highest category of readiness indicators to face the world of work owned by Mechanical Engineering Education students is the emotional indicator with a value of 20.7%. The lowest grade of symbols is the skills indicator at 4.7%. Emotional has an important role related to a person's feelings, which can then affect mentally able to increase the confidence of students to be better prepared to face the world of work. Skills possessed by a person will make him more ready to face the world of work because, with sufficient skills, a person will be more confident in completing the work he will face.

REFERENCES

Agustin, A. (2008). Hubungan antara Kematangan Vokasional dengan Kecemasan Menghadapi Dunia Kerja. Skripsi Tidak Dipublikasikan. Universitas Muhamadiyah

Arikunto, S. (2013). Dasar-Dasar Evaluasi Pendidikan. Jakarta: Bumi Aksara.

Arikunto, S. (2013). Prosedur Penelitian Untuk Pendekatan Praktik. Jakarta: Rineka

Astuti. (2000). Psikologi Perkembangan pada Remaja Awal. Yogyakarta: Torrent Books.

Caballero, C., Walker, A., & Fuller-Tyszkiewicz, M. (2011). The Work Readiness Scale (WRS): Developing a Measure to Assess Work Readiness In College Graduates. Journal of Teaching and Learning for Graduate Employability, 2(2), 41 - 54.

Dalyono, M. (1997). Psikologi Pendidikan. Jakarta: PT. Rineka Cipta.

Hamalik, O. (2007). Teknik Pengukuran dan Evaluasi Pendidikan. Bandung: CV. Madar Maju.

Pool, L.D., & Sewell, P. (2007). The Key to Employability: Developing A Practical Model of Graduate Employability. Journal of Education and Training. 49 (4), 277-289. Diperoleh pada 10 Juni 2018, dari http://www.emeraldinsight.com/0040-0912.htm.

Seeker, K.R., & Wilson, J.B. (2000). Planning Succesful Employee Perfomance. Terj. Ramelan. Jakarta: PPM.

Siswanto. (2011). Tingkat Kesiapan Mengajar Mahasiswa Prodi Pendidikan Akuntansi Fakultas Ilmu Sosial dan Ekonomi Universitas Negeri Yogyakarta. Jurnal Pendidikan Akuntansi Indonesia, 9(2), 92-140

Slameto. (2010). Belajar dan Faktor Faktor Yang Mempengaruhinya. Jakarta: Rineka Cipta.

Syamsu, Y. (2009). Psikologi Perkembangan Anak dan Remaja. Bandung: PT Rosda Karya Remaja