

# Contribution of Job Readiness Application and Student Competency Towards Job Readiness and Job Opportunities in Industry

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**Abstract**—This study aims to see the contribution of Job Readiness Applications and student competency towards job readiness and job opportunities in industry through direct and indirect causal relationships. This research design used a quantitative approach with 4 variables consisting of 3 exogenous variables and 1 endogenous variable. The population of this study amounted to 260 mechanical engineering students. The sample size was determined using a random number table with an error rate 5%. So that a sample is 164 mechanical engineering students was obtained. Data collection using a questionnaire that uses a Likert scale. The validation of the instrument used the validity and reliability tests. The prerequisite analysis test used the normality, linearity, multicollinearity, autocorrelation, and heteroscedasticity test. The analysis model of the relationship pattern between variables used is path analysis. Testing is carried out simultaneously and individually. Based on the analysis, it can be concluded into 7 conclusions. First, Job Readiness Applications contribute significantly to job opportunities in the industry, directly by 13.54% and indirectly by 19.89%. Second, there is a significant contribution of student competence to job opportunities in the industry, directly by 13.91% and indirectly by 18.49%. Third, job readiness has a 5.24% direct contribution to job opportunities in the industry. Fourth, Job Readiness Applications contribute 11.56% directly to job readiness. Fifth, student competence contributes directly to job readiness by 6.1%. Sixth, there is a 24.4% direct contribution between Job Readiness Applications and student competence on job readiness. Seventh, there is a 57.6% direct significant contribution between Job Readiness Applications, student competence, and job readiness to industry job opportunities.

**Keywords**— job readiness applications, student competency, job readiness, job opportunities, industry

## I. INTRODUCTION

The development of the industrial world demands changes in various aspects. Especially in the Covid-19 pandemic situation like nowadays. Many things have changed. This also happened to the workforce recruitment system that must be done remotely. The imbalance in the number of graduates and available job vacancies during the Covid-19 pandemic is one of the factors that cause high competition for jobs. The existence of new regulations regarding restrictions on space for movement also affects the labor recruitment selection process. This condition requires innovation related to new recruitment methods. As well as using the Job Readiness Application as a tool for remote recruitment.

Apart from the readiness of technology as a recruitment tool, the quality of Human Resources (HR) is also important.

Quality human resources are expected to be able to compete in the industrial era 4.0 [1,2,3]. The reason is, the quality of human resources needed in the industrial era 4.0 is different from the previous era [4,5]. In this case, HR is an asset for the industry to develop properly [6,7]. The quality of an individual's hard skills and soft skills is a reflection of good human resources [8].

One of the things that must be considered in job competition in the industrial era 4.0 is competence. Wahyudi [9] states that competence is closely related to the work skills of an individual. Facing the industrial era 4.0 requires superior, skilled, competitive, and qualified workers. The competency aspects required according to Silalahi [10] are classified into technical skill competencies, personality competencies, diagnostic competencies, conceptual competencies, and administrative competencies.

An individual who has good competence is expected to have good work readiness too. Readiness itself has the meaning of a tendency that encourages individuals to act confidently [11]. Furthermore, according to Chaplin [12] readiness is the level of individual maturity to do something. Robbins [13] defines work readiness according to the level of ability a person has. In contrast to Robbins, Brady [14] defines job readiness based on the personal characteristics of the workers themselves.

Technology, competence, and job readiness are some of the things that affect the absorption of graduates in the industry. This is in line with the opinion of Erfelina [15] and Fitriyani [16] which state that the absorption of graduates is closely related to the work readiness of the graduates themselves. In 2019 the unemployment rate for diploma graduates reached 5.99%. Based on these conditions, a more in-depth research is needed regarding the role of technology and competence in job readiness and job opportunities in the industry. One of them is Job Readiness Applications (JRA). This application was created to analyze industry needs and graduate competency content. This application was created in accordance with technological advancements, making evaluation and analysis easier. As a result, the data obtained can be used to map the work readiness of graduates/technicians, which can then be followed up with policies to improve the quality of graduate human resources by taking into account the suitability of industry needs and competency content at the university.

## II. METHOD

This research design used a quantitative approach with 4 variables consisting of 3 exogenous variables and 1 endogenous variable. This quantitative research method aims

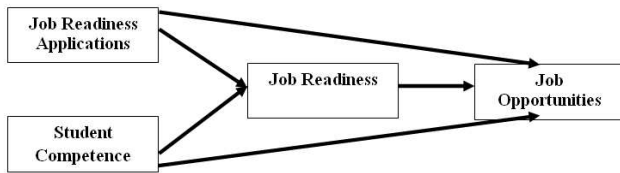


Fig. 1. Conceptual Model

to see the contribution of independent variables to the dependent variable through direct and indirect causal relationships. The population of this study amounted to 260 mechanical engineering students. The sample size was determined using a random number table with an error rate of  $\alpha = 5\%$ . So that a sample is 164 mechanical engineering students was obtained. Data collection using a questionnaire that uses a Likert scale. The validation of the instrument used the validity and reliability tests. The prerequisite analysis test used the normality, linearity, multicollinearity, autocorrelation, and heteroscedasticity test. The analysis model of the relationship pattern between variables used is path analysis. Testing is carried out simultaneously and individually.

### III. RESULT AND DISCUSSION

#### A. The simultaneous analysis result

Simultaneous analysis was performed to determine whether individual analysis could be performed. If the results of the simultaneous analysis do not meet the requirements, the individual analysis cannot be continued. Tables 1 and 2 show the outcomes of the simultaneous analysis.

TABLE I. THE SIMULTANEOUS ANALYSIS RESULT (MODEL SUMMARY)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.759 <sup>a</sup>	.576	.568	4.755

TABLE II. THE SIMULTANEOUS ANALYSIS RESULT (ANOVA)

Model	Sum of Square	df	Mean Square	F	Sig.
Regression	4914.167	3	1638.056	72.451	.000 <sup>a</sup>
Residual	3617.461	160	22.609		
Total	8531.628	163			

The simultaneous analysis was performed to determine the contribution of exogenous and intervening variables to endogenous variables. Exogenous variables are the role of job readiness applications and student competence. The intervening variable is a job readiness and the endogenous variable is a job opportunity.

Based on Tables 1 and 2 it is known that the coefficient of determination (R-square) or the simultaneous effect is 0.576 and the significance value = 0.000. Because the significance value is less than 0.05, the simultaneous test has been fulfilled and can be continued with individual tests.

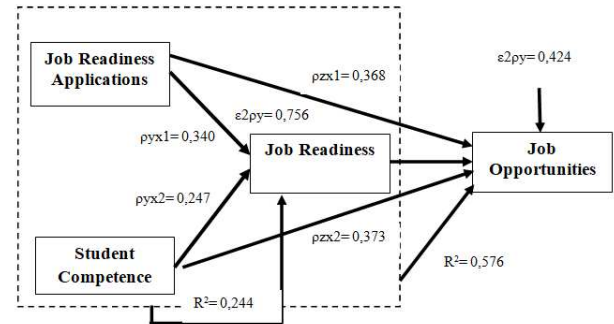


Figure 2. Path Analysis Diagram

#### B. The individual analysis result

After simultaneous analysis, the next step is individual analysis. The results of individual analysis can be seen in table 3 below.

TABLE III. THE INDIVIDUALS ANALYSIS RESULT (COEFFICIENTS)

Model	Unstandardized Coefficients	Standardized Coefficients	t	Sig.
	Std. Error	Beta		
Constant	4.206		.828	.409
JRA	.058	.368	6.155	.000
Competence	.066	.373	6.421	.000
Readiness	.060	.229	3.864	.000

Based on the results of the individual analysis in Table 3, it can then be written into a path analysis diagram, as shown in Figure 2. According to table 3, the value of each standardized coefficient beta for Job Readiness Applications is 0.368, student competence is 0.373, and job readiness is 0.229.

Based on the results of the simultaneous analysis in tables 1 and 2, as well as the individual analysis in table 3, the contribution of each variable can be calculated, either directly or indirectly. Table 4 shows the results of the calculation of the contribution between variables.

TABLE IV. SUMMARY OF DIRECT AND INDIRECT PATH COEFFICIENT DECOMPOSITION

Variable Influence	Causal Influence		The rest of ε1 dan ε2	Total
	Direct	through Y		
X <sub>1</sub> to Y	11.56%	-	-	11.56%
X <sub>2</sub> to Y	6.1%	-	-	6.1%
X <sub>1</sub> , X <sub>2</sub> to Y	24.4%	-	75.6%	100%
X <sub>1</sub> to Z	13.54%	-	-	13.54%
	-	19.89%	-	19.89%
X <sub>2</sub> to Z	13.91%	-	-	13.91%
	-	18.49%	-	18.49%
Y to Z	5.24%	-	-	5.24%
X <sub>1</sub> , X <sub>2</sub> , Y to Z	57.6%	-	42.4%	100%

#### C. Contribution of Job Readiness Applications (X1) to Job Opportunities in Industry (Z)

Based on the results of path analysis, the test value is generated as shown in Table 3 that the path coefficient on variable X1 is 0.368 and a sig value 0.000. Sig value of X1 is 0.000 (sig. <0.05) means that the contribution of X1 to Z is significant. So that there is a significant contribution of Job Readiness Applications to job opportunities in the industry directly by 13.54% and indirectly by 19.89%. This is in line

with research conducted by Banerjee [17] which states that the era of job selection should completely switch to using applications. In line with Banerjee's opinion, similar research was conducted by Bogle [18] who also created applications as an additional means to simplify the job selection process.

The use of the Job Readiness Application as a remote recruitment tool as a substitute for conventional systems is an alternative that can be used during the Covid-19 pandemic. The modern recruitment process utilizes technology in the form of an application as a tool for the recruitment process for workers [19]. Current applications have had a tremendous impact in almost all areas of life [20]. Supporting elements related to the quality of applicants can be used as a consideration during the remote selection process [21].

#### D. Contribution of Student Competencies (X2) to Job Opportunities in Industry (Z)

Based on the results of path analysis, the test value is shown in Table 3 that the coefficient of variable X2 is 0.373, and a sig value 0.000. Sig value invariable X2 is 0.000 (sig. <0.05) means that the contribution of X2 to Z is significant. So that there is a significant contribution of student competence to job opportunities in the industry directly at 13.91% and 18.49% indirectly.

Competence is one of the things that must be learned by every graduate. Every educational institution always tries to produce the best graduates so that it is easy to get a job [22]. It is hoped that graduates will be able to be absorbed in the industrial world according to the competencies obtained [23,24,25]. The levels of Diploma and Undergraduate graduates at the KKNI level are at levels 5 and 6 [26]. The achievement of graduate competencies cannot be maximum if the competence during lectures is not by the needs of the industrial world today [27]. The competency relevance effort is intended so that each fresh graduate can easily get a job according to his expertise.

Competency suitability is needed to produce best fresh graduates. Qualifications and competencies of applicants who are by the position being applied for are very important to get the right worker [28,29]. Research conducted by Sutrisno [30] shows that in general, the relevance of diploma competence to the industrial world is at 46%. For the sake of the advancement of technicians in Indonesia, education providers are needed by adjusting competencies in lectures and the industrial world [31]. The synergy of industry and institutions can be based on structured institutions [32]. With the synergy between industry and institutions, students can be more motivated to develop [33]. The cooperation relationship between industry and institutions is very influential regarding the quality of fresh graduates [34,35]. Relevant competence is needed as a basis for working in the industry [36].

#### E. Contribution of Job Readiness (Y) to Job Opportunities in Industry (Z)

Based on the results of path analysis, the test value is generated as shown in Table 3 that the path coefficient on variable Y is 0.229 and a sig value 0,000. Sig value invariable Y is 0.000 (sig. <0.05) means that the contribution of Y to Z is significant. So that there is a significant contribution of job readiness to job opportunities in the industry directly by 5.24%.

Pool [37] states that four aspects of job readiness are skills, knowledge, personality, and competence. Furthermore, Wijayanti [38] said that work readiness is also related to how someone prepares the required files. Research conducted by Pratama [39] shows that there is a correlation between job readiness to career development and job opportunities. Besides, Makki [40] also states that job readiness is important to get a job.

#### IV. CONCLUSIONS

Based on the analysis, it can be concluded into 7 conclusions. First, Job Readiness Applications contribute significantly to job opportunities in the industry, directly by 13.54% and indirectly by 19.89%. Second, there is a significant contribution of student competence to job opportunities in the industry, directly by 13.91% and indirectly by 18.49%. Third, job readiness has a 5.24% direct contribution to job opportunities in the industry. Fourth, Job Readiness Applications contribute 11.56% directly to job readiness. Fifth, student competence contributes directly to job readiness by 6.1%. Sixth, there is a 24.4% direct contribution between Job Readiness Applications and student competence on job readiness. Seventh, there is a 57.6% direct significant contribution between Job Readiness Applications, student competence, and job readiness to industry job opportunities.

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