The perspective of work readiness in vocational school students with 21st century communication and collaboration skills

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Abstract

The 21st-century skills consist of life and career, study and innovation, and information technology skills. The ability to communicate and collaborate is one of the skills. Therefore, this study aims to determine the effect of communication and collaboration skills on the work readiness of vocational students. A total number of 350 students were used as respondents. Furthermore, the instruments used were Self-Perceived Communication Competence, Work Readiness scale and Teamwork Scale for Youth. The results showed that communication and collaboration skills had both partial and simultaneous influences on student work readiness. Also, these skills were directly proportional to the level of the vocational students' work readiness. In addition, the teacher was a factor that played a role in improving communication and collaboration skills in schools. Meanwhile, with intensive supervision, parents play a role in the improvement of these skills when students are outside the school.

Keywords: Communication, Collaboration, Century skill, Work readiness.

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1. Introduction

The 21st century is known as the knowledge age, knowledge-based economy, information technology, globalization, industrial revolution 4.0, etc. This century presents rapid and unpredictable changes in all aspects of life. This provides opportunities when put to good use, however, it is disastrous when they are not anticipated in a systematic, structured and measured manner. Conversely, a superior product is produced through the collaboration of many parties and not by a single individual. This is because an individual cannot be an expert in all fields (Ujir et al., 2020),(Hidayatuloh & Muslim, 2021). Therefore, the collaboration of many parties or work units is essential. An individual with good communication skills conveys ideas to others (Moral et al., 2020). This skill ranks first of all existing soft skills (Yalız Solmaz, 2017).

The development of the industrial and business world is getting faster and it is expected that all human resources will follow. Regarding these developments, the industry requires skilled, knowledgeable and competitive human resources (Atwijuka & Caldwell, 2017). An individual with high competitive power is an absolute necessity in the industrial world. Furthermore, the shortages of other skills were expected by the industry. This is a problem because skills outside the field of expertise enable the industry to work easily. Both graduates from vocational schools and present employees are required to obtain other skills (Plant et al., 2019),(Herbert et al., 2020). Employment in the industrial world of Indonesia requires the ability to improve on other skills. This enables the determination of the quality of human resources to be obtained not only by the field ability level. A low level of education leads to the lack of skill in a worker which leads to an increase in unemployment (Arranz & García-Serrano, 2020). Therefore, the presence of a vocational High School (VHS) is one of the solutions to the problem of unemployment. The graduates from VHS are equipped with the character and required skills in their fields to enter the industrial world (Muslim et al., 2019).

The other skills required to be improved are communication and collaboration. There is a need for vocational school graduates to enter the industrial world with communication skills in addition to those they possess in their fields (Cobb et al., 2019). Communication skills are one of the needs of vocational students in preparation to enter a higher level (Hadiani & Permata, 2017),(Widiana et al., 2018). Furthermore, the communication process in the workplace aims to build and maintain a quality work relationship and improve performance quality in the field (Aziz et al., 2020),(Greenstein, 2012).

Communication skills are strengthened and balanced with collaboration or teamwork. In the 21st century, a higher ability to work together leads to ease when becoming part of the sought-after workforce (Trilling & Fadel, 2010). Collaboration skills are always needed in any field-work job (Lowell & Ashby, 2018). This statement was justified when it was observed that at the job fair in Jombang Regency, the students with the ability to collaborate were properly able to find work and accepted in previously chosen jobs. Furthermore, this teamwork process increases the productivity of a company (Rohani et al., 2017). During learning processes, it is expected that teachers use collaborative learning which enables students to obtain an improved ability to work together (Vuopala et al., 2016),(Robbins et al., 2019). Collaboration emphasizes the existence of work principles which state that during collaboration, not prioritizing one's desires enables working together to achieve common goals (Atun & Latupeirisa, 2021).

These skills are acquired in many effective and easy ways through communicating and collaborating between groups. The formation of good collaboration in a group indicates that educators should have roles that include, the orientation of the goals and objectives of the learning process, compilation of decisions about the duration of group work, arrangement of tasks to be completed during the learning process, and ensuring the active participation of groups (Faber, 2013),(Masuda et al.,

2016). Furthermore, the full management of other skills possessed by students enables them to easily accept the demands of the ever-increasing times. These demands sometimes will develop and need to be accompanied by a workforce to enable it to be in harmony with the current conditions (Kapareliotis et al., 2019). In addition to this, a vocational student should have the ability to be independent through entrepreneurial skills leading to survival in the next level of life. Therefore, this study aims to determine the effect of communication and collaboration skills on the work readiness of vocational students. This process is expected to be a reference in the development of additional skills that are different from the areas of expertise studied by vocational students.

This study discusses how communication and collaboration skills as well as 21st century skills can be a measure of job readiness in industry. Some of the research results above are sufficient to show that 21st century skills are indispensable in the world of work. Critical and creative thinking skills, students need communication and collaboration skills to support job readiness.

2. Method

This study was carried out using the ex post facto study through a quantitative approach. The dependent and independent variables are work readiness and communication and collaboration skills respectively. Furthermore, this study was carried at six vocational schools in Jombang. The population was a total of 625 students of class XII VHS from 21 classes. The sampling process used the Slovin formula with a significance of 5%. The population number in each class was different which facilitated the distribution of questionnaires, using a proportional random sampling technique. This obtained a sample of 350 respondents to fill out the questionnaire that was provided. Furthermore, the data was collected through the distribution of questionnaires. The assessment process on the variable of communication skills used the Self-Perceived Communication Competence (SPCC) Scale instrument (Croucher et al., 2020). The obtained results showed that the SPCC was 12 points which were supported by the study carried out. The Teamwork Scale for Youth instrument was used to measure or carry out the assessment process on collaborative skills variables (Lower et al., 2017), which consisted of eight items. The work readiness variable uses its Scale instrument with a total of 64 items. This instrument was also used in a study on Multiple linear regression which was carried out by Walker, Storey, Costa, & Leung (Walker et al., 2015).

3. Results and discussion

3.1 Results

The results of this study that were discussed and described include communication, collaboration skills and work readiness. The assessment of the three variables was from the result of a questionnaire filled out by students that were the samples in this study. The variable of communication skills was measured using a questionnaire with a total of 12 items. The average, standard deviation, lowest and highest values of this variable were, 36.10, 5.56, 15 and 47 respectively. Furthermore, the frequency description analysis of the variable of communication skills is shown in Figure 1 The results are described as follows: a very low criterion was 4.8%, low was 9.8%, high was 58.7% and very high criterion was 26.7%. Therefore, the criteria for communication skills of vocational school students in Jombang was categorized as high.
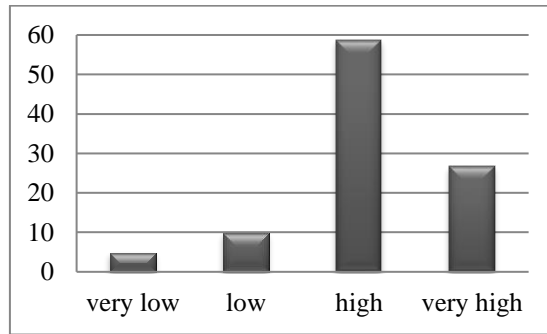
Figure 1. Variable Frequency Diagram of Communication Skills

For the second independent variable, the variable collaborative skills were measured using a questionnaire with a total of eight items. The results obtained were the average, standard deviation, lowest and highest values of this variable were, 24.14, 3.52, 16, and 32 respectively. Furthermore, the frequency description analysis of the collaborative skills variable is shown in Figure 2. The results are described as follows: a very low criterion was 2.3%, low was 22.1%, high was 58.4%, and a very high criterion was 17.2%. Therefore, the criteria for collaboration skills of vocational school students in Jombang was categorized as high.
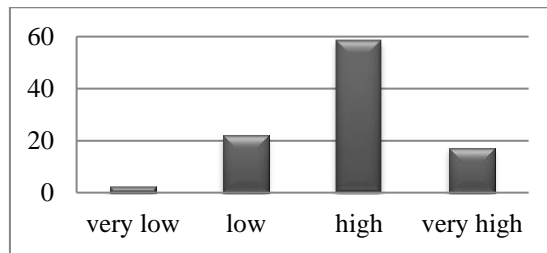

Figure 2. Variable Frequency Diagram Collaboration Skills

The work readiness variables were also measured using a questionnaire with a total of 64 items. The average, standard deviation, lowest and highest values obtained were 177.48, 18.06, 134, and 213 respectively. Furthermore, the frequency description analysis of the work readiness variable is shown in Figure 3 The results are described as follows: a very low criterion was 1.4%, a low was 3.6%, high was 73.3% and very high criterion was 21%. Therefore, the criteria for work readiness of VHS students in Jombang was categorized as high.
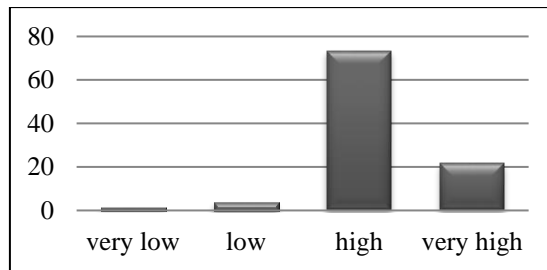

Figure 3. Work Readiness Variable Frequency Diagram

The results determined were used to examine the magnitude of the effect of the independent variable on the dependent. The total influence value between variables is shown in the adjusted R Square value. This is present in the results of the regression analysis on the model summary table.

Meanwhile, the results of the partial and simultaneous determination analysis are presented in table 1.

Table 1. Results of Analysis of Determination of Communication Skills on Work Readiness

Variable	R	R Square	Adjusted R Square
X_1-Y	0,526	0.265	0,263
X_2-Y	0,759	0.586	0,582
$X_1 X_2$-Y	0,782	0.731	0,728

From the output of the Model Summary variable X1 - Y, the adjusted R Square value was 0.265. The output results on the determination table showed that the percentage of contributions was 26.5%. For the X2 - Y variable, the adjusted R Square value was 0.586. This indicated that the percentage of donations was 58.6%. In addition, X1 X2 - Y variable obtained an adjusted R Square value of 0.731. This indicated that the percentage of the contribution of the two independent variables to the dependent variable was 73.1%.

Before carrying out the hypothesis testing, the requirements were normality, linearity, multicollinearity, heteroscedasticity, and autocorrelation tests. The prerequisite test results in the study satisfied these requirements and the hypothesis was tested. Based on the results of the F test in Table 2, the F count was equal to 130,72 using the F table reference of 2.96. Furthermore, there was a joint influence between the communication and collaborative skills variable on the work readiness variable, provided that the calculated F value was greater than the F table value.

Table 2. Results of F Test with Communication and Collaboration Skills as Predictors

Model	df	Mean Square	F	Sig
Regression	2	9674.03	130.72	0.00
Residual	347	87.29		
Total	349			

Table 3. Results of t-Test With Work Readiness as the Dependent Variable

Model	Std Error	Beta	t	Sig
Constant	4.911		20.79	0.00
Communication	0.136	0.212	4.53	0.00
Collaboration	0.214	0.658	13.21	0.00

From the results of the t-test in Table 3, the reference data for the t table value was 1.97190. Furthermore, provided that, the calculated t value was greater than that in the t table, the independent variable had a partial effect on the dependent variable. For the communication skills variable, the t value calculated was 4.53. This is because 4.530 > 1.97190, the communication skills had a partial effect on students' work readiness. For the collaborative skills variable, the t value was 13.2. This indicated that, because 13.21> 1.97190, the collaborative skills had a partial effect on students' work readiness.

3.2. Discussion

An effective communicative process should have a sense of openness when interacting. This is the willingness to open up and convey information worthy of discussion. Effective communication cannot be carried out in an unsupportive atmosphere. Therefore, support in an individual indicates that a sense of cooperation is required. The regression test results showed that communication skills had a significant

effect on the vocational high school students' work readiness. Furthermore, the percentage contribution influence of the variable communication skills on work readiness was 27.7%. From the analysis, the results showed the ability to communicate is in direct proportion to the students' work readiness. Another study carried out by Ihsan (Ihsan, 2018), showed that communication skills affected a student's work readiness. A student should be able to develop these skills because with its increasing amount, there is easy interaction with different conditions and proper adaptation. Increasing communication skills also have positive impacts on work productivity (Yuliani, 2018), (Hasanah & Nasir Malik, 2020).

Collaboration skills are one of the highest influences in the work readiness process. This high skill better prepares students during the process of working with various workgroups and individuals in a company. This opinion was discovered in a study by Kurniawan (Kurniawan, 2020). Furthermore, during the regression test, the results showed that collaboration skills had a significant effect on vocational high school students' work readiness. The percentage contribution influence of the variable communication skills to work readiness was 57.7%. This condition showed that with the presence of high collaboration skills among these students, their work readiness is maximized in the selected industry. Therefore, the collaboration process creates, togetherness, a sense of belonging, responsibility, and care between members. The process also has the advantage of developing a good plan. Through collaboration, solutions from several people with various kinds of thoughts are obtained(Chen et al., 2020),(Gusta et al., 2020). During this process, there should be an ability to relieve the selfishness of one another through the control of big ambitions that produce proper plans. Furthermore, another advantage of this process is that it brings together different experiences and ideas, which is beneficial for planning (Messersmith, 2015),(Saldo & Walag, 2020). There is no previous study on the effect of communication and collaboration skills of vocational students on work readiness simultaneously. Although, several studies examined student work readiness which was influenced by communication skills with other variables on work readiness. Therefore, this study proved that the percentage of the simultaneous effect of communication and collaboration skills on work readiness was 73.1%.

4.   Conclusion

The results of this study concluded that communication and collaborative skills had both partial and simultaneous effects on the work readiness of vocational high school students. Influence from the acquisition of these skills, a student has a better ability to face the industrial world and become a professional worker with soft skills. Although, the variable that did not coincide partially or completely with work readiness also had an effect. The percentage contribution of communication and collaboration skills to work readiness was 26.5% and 58.6 %. Therefore, students prepare themselves to become professional workers within or outside their vocational field by obtaining only one of these skills.

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