Human Capital Influences Individual Work Performance from Alumni of Telkom Vocational High School Malang

Oktarica Pratiwi Suryoningtyas, Didik Nurhadi, Marsono
Universitas Negeri Malang, Indonesia
E-mail: octa.riecha@gmail.com

Abstract. The quality of Individual Work Performance (IWP) of workers affects their work productivity in the workplace. This also has an indirect impact on improving the country's economy. The workforce IWP is influenced by human capital. Furthermore, this study was conducted to analyze the human capital of vocational high school graduates on IWP. This study used a survey method with a quantitative approach. The sample of this research was 130 alumni of Telkom Vocational High School Malang in the field of information and communication technology. Human capital indicators were knowledge, competences, skills, and innovativeness. Data collected through surveys and unstructured interviews, then analyzed with descriptive and regression techniques. The findings described respondents’ demographics. Meanwhile, the result of multiple linear regression showed that there was a simultaneous influence between the human capital indicators on the IWP. An effective contribution was determined by IWP' skill and innovation. To better prepare graduates in their fields, vocational high schools should further increase knowledge, competences, skills, and innovativeness of their students to increase alumni work productivity in the world of work.

Keywords: Human capital, Individual Work Performance, vocational high school, alumni

INTRODUCTION
In practice, vocational education has contributed to the development of the quality of Human Resources (HR) and the economic development of a country (Hanafi, 2014). The education in question is oriented towards the world of work, so that all aspects ranging from cognitive to affective are owned by students. In addition, vocational education is also oriented to life skills. One of the branches of vocational education at the secondary level is vocational high schools (VHS) (Andina, 2020).

One of the branches of science produced by VHS is VHS in the field of informatics and communication technology. This field is very relevant to the development of digital technology which is very much needed in the world of work. Malang City is one of the cities that produces quality human resources, not only public schools but also private schools which also have a quality and quantity not much different from public schools.

According to Basic Secondary Education Basic Data (2020), Telkom Vocational High School Malang has the highest number of graduates in the last 3 years (2016-2019). This VHS has ISO standard management and has cooperative institutions both in the field of expertise and in the field of the labor industry. Graduates of Telkom Vocational High School Malang find it easier to find jobs through internship and direct recruitment to VHS. However, the extent to which graduates contribute to work is based on the provisions obtained at VHS. So, this research is needed to improve the quality of education that is increasingly in line with the real needs of the world of work. This study focuses on how the influence of human capital of private vocational school graduates on individual performance in a company.

Human capital itself is a combination of knowledge, skills, innovation and a person's ability to carry out their duties so that they can create value to achieve goals (Arafah, 2020). The number of VHS’ graduates in the field of informatics and communication technology in Malang City, especially VHS of Telkom Vocational High School Malang is very large so that it contributes greatly to the supply of human resources to industries in East Java in particular and Indonesia in general.

The concept of human capital emerged because of a shift in the role of human resources. Human capital arises from the idea that humans are an intangible asset that has many advantages. Human resources (human capital) play an important role in the running of a company. Because within the company, human resources (human capital) will be the driving system of the company or in other words,
the company’s performance system (Kasmawati, 2017). Therefore, human capital has a very urgent role as a key component that affects the level of performance of an organization or company (Auliana, 2017). The human capital component has a very large role as HR in the company, so company management must be more proactive in making its HR as human capital that needs to be given attention and continuous development in accordance with the dynamics of the business environment (Sudarnice, 2017). The human capital component is human capital which includes three factors, namely competence, experience and knowledge. Human capital (strategic HR) is a combination of knowledge, skills, innovativeness, and the ability of employees to carry out their duties including company values, culture and philosophy. So, it can be concluded that a person's human capital (knowledge, competences, skills, and innovativeness) has an effect on Individual Work Performance in the world of work. (Minarsih, 2018). Based on studies and observations, this study aims to determine the contribution of human capital which consists of aspects of knowledge, competence, and skills, and innovativeness towards IWP of graduates at Telkom Vocational High School Malang.

METHODS

The research design used a quantitative approach through the correlational survey method. The purpose of this research design was to determine the effect of independent variables (knowledge, competence, skills, and innovativeness) on the dependent variable (IWP). Analysis of research data used multiple linear regression analysis technique. Visually, the form of the relationship between variables in the study can be visualized in Figure 1.

![Figure 1. The Relationship Between Variables](attachment:image)

The population taken in this study were alumni at Telkom Vocational High School Malang City before 2020. The number of samples was drawn according to the needs and the basis for certain considerations, namely Telkom Vocational High School Malang to graduates in 2019 who are already working in the work world. Data were collected with a questionnaire-shaped instrument. The answer choice scale is divided into four categories: very unsuitable, inappropriate, appropriate and very suitable where the category scores are 1 to 4. In addition to taking data in the form of a questionnaire, this study also used unstructured interviews with several alumni and teachers to gather information in-depth related research results. Then, research data analyzed with a descriptive technique and multiple linear regression to answer research questions.

RESULTS AND DISCUSSIONS

The results of descriptive statistical analysis on research variables which include: knowledge, competence, skills, innovation and IWP. The respondents of this study amounted to 130 alumni of Telkom Vocational High School Malang in the Information and Communication Technology period under 2019. Human capital graduates of Telkom Vocational High School Malang at this time in the field of mastery of knowledge, can be said to be quite satisfying. This is marked by the basic knowledge they receive at school, which is linear with most of the workspaces they have studied after entering the business world and the industrial world. As much as 60% of Telkom Vocational High School Malang
graduates, enter the world of work according to the suitability of their knowledge base, supported by 22.3% stating that they are very much in accordance with their knowledge base. Only a small proportion of graduates of Telkom Vocational High School Malang enter the world of work with a mismatch in their knowledge base.

Meanwhile in the field of competency skills, graduates of Telkom Vocational High School Malang who enter the world of work, also state the suitability of the basic competencies they have. This is indicated by a significant percentage of 71.6%. The same thing is supported by a percentage of 17.7% stating that it is very suitable between the skills possessed by majors and the expertise studied while being a student at Telkom Vocational High School Malang.

Similarly, on the skill element, based on this study, data was obtained that 74.6% Telkom Vocational High School Malang graduates entered the world of work according to the skills they had. Supported by additional data of 17.7% stating that it is very suitable between the skills they have and the industrial world they enter. This illustrates that the human capital of Telkom Vocational High School Malang graduates has the appropriate skills and is accepted in the industry as a space for the world of work for graduates.

The knowledge variable data showed that in general or on average three statement items given to 130 respondents answered very inappropriate by 1.5% or as many as 2 respondents, answered not according to 16.2% or as many as 21 respondents, answered accordingly by 71.6% or as many as 93 respondents and very appropriate answer of 22.3% or as many as 29 respondents. While the standard deviation is 1.678 with a mean of 9.08. In detail, the results of the descriptive analysis of the knowledge variable have: (1) an average value of 9.08; (2) the middle value is 9.00; (3) the value that often comes out is 9.00; (4) standard deviation of 1.678; (5) variants of 2.816; (5) range of values (range) of 6; (6) the smallest value is 6; (7) the largest value is 12.

The competency variable data shows that in general or on average the 4 statement items given to 130 respondents answered very inappropriate by 1.5% or as many as 2 respondents, answered unsuitable by 9.2% or as many as 12 respondents, answered accordingly by 71.6% or as many as 93 respondents and answered very suitable for 17.7% or as many as 23 respondents. While the standard deviation is 1.511 with a mean of 12.25. In detail, the results of the descriptive analysis of the competency variables have: (1) an average value of 12.25; (2) the middle value is 12.00; (3) the value that often comes out is 12.00; (4) standard deviation of 1.511; (5) variants of 2.284; (5) range of values (range) is 7; (6) the smallest value is 9; (7) the largest value is 16.

The skill variable data shows that in general or on average the 4 statement items given to 130 respondents answered very inappropriate for 0% or as many as 0 respondents, answered incorrectly by 10.8% or as many as 14 respondents, answered accordingly by 74.6% or as many as 97 respondents and answered very suitable for 17.7% or as many as 19 respondents. While the standard deviation is 1.640 with a mean of 12.13. In detail, the results of the descriptive analysis of the skills variable have: (1) an average value of 12.13; (2) the middle value is 12.00; (3) the value that often comes out is 12.00; (4) standard deviation of 1.640; (5) the variant is 2.688; (6) the range of values (range) is 7; (7) the smallest value is 9; and (8) the largest value is 16.

Innovation variable data shows that in general or on average the 4 statement items given to 130 respondents answered very different, 3% or as many as 4 respondents, answered not according to 40% or as many as 52 respondents, answered accordingly by 43.9% or as much 57 respondents and answered very suitable for 13.1% or as many as 17 respondents. While the standard deviation is 1.873 with a mean of 10.67. In detail, the results of the descriptive analysis of the innovativeness variables have: (1) an average value of 10.67; (2) the middle value is 10.00; (3) the value that often comes out is 9.00; (4) standard deviation of 1.873; (5) variants of 3.510; (6) value range (range) of 9; (7) the smallest value is 7; and (8) the largest value is 16.

Data on the Individual Work Performance (IWP) variable shows that in general or an average of the 10 statement items given to 130 respondents who answered very inappropriate, 0.8% or as many as 1 respondent answered 10% or as many as 13 respondents, answered accordingly by 69.2% or as many as 90 respondents and answered very accordingly by 20% or as many as 26 respondents. While the standard deviation is 3.282 with a mean of 30.82. In detail, the results of the descriptive analysis of the Individual Work Performance (IWP) variable have: (1) an average value of 30.82; (2) the middle value is 30.00; (3) the value that often comes out is 30.00; (4) standard deviation of 3.282; (5) a variant of 10.772; (6) the value range (range) is 17; (7) the smallest value is 23; and (8) the largest value is 40.
Hypothesis testing uses multiple regression analysis. This analysis is used to determine whether there is an influence and how much influence the independent variables simultaneously have on the dependent variable. The amount of influence between knowledge, competence, skills and innovativeness simultaneously on IWP is presented in Table 1.

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>743.472</td>
<td>4</td>
<td>185.868</td>
<td>35.960</td>
</tr>
<tr>
<td>Residual</td>
<td>646.097</td>
<td>125</td>
<td>5.169</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1389.569</td>
<td>129</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), innovation, skill, knowledge, competence
b. Dependent Variable: IWP

Based on the results of the calculations in Table 1, the results show that the sig. 0.00 <0.05, which means that there is a simultaneous influence between knowledge, competence, skills and innovativeness on IWP. Furthermore, to determine the magnitude of the influence between knowledge, competence, skills and innovativeness simultaneously on IWP is to pay attention to the coefficient of determination presented in Table 2.

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.731&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.535</td>
<td>.520</td>
<td>2.273</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), innovation, skill, knowledge, competence

From the results in Table 2 above, it is known that the coefficient of determination (R Square) = 0.535 or 53.5%. This means that the amount of influence between knowledge, competence, skills and innovativeness simultaneously on IWP is 53.5% and 46.5% is influenced by other variables not included in the study.

<table>
<thead>
<tr>
<th>Variabel</th>
<th>Beta</th>
<th>Zero Order</th>
<th>Effect (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>0.033</td>
<td>0.423</td>
<td>1.4</td>
</tr>
<tr>
<td>Competence</td>
<td>0.071</td>
<td>0.457</td>
<td>3.2</td>
</tr>
<tr>
<td>Skill</td>
<td>0.603</td>
<td>0.703</td>
<td>42.4</td>
</tr>
<tr>
<td>Innovation</td>
<td>0.157</td>
<td>0.411</td>
<td>6.5</td>
</tr>
<tr>
<td><strong>Jumlah</strong></td>
<td><strong>53.5</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In Table 3, it shows that the contribution given to knowledge of IWP partially was 1.4%, the contribution made to competence towards IWP was partially 3.2%, the contribution made to IWP skills partially was 42.4%, and the contribution given to innovativeness to IWP partially was 6.5%. Based on these results, it can be seen that the variable that shows the highest SE value is in the skill variable, which is 42.4%. So, it can be concluded that the variable with the most dominant influence on IWP is skill.

Human capital graduates of Telkom Vocational High School at this time in the field of mastery of knowledge, can be said to be quite satisfying. This is marked by the basic knowledge they receive at school, which is linear with most of the workspaces they have studied after entering the business world and the industrial world. As much as 60% of Telkom Vocational High School Malang graduates, enter the world of work according to the suitability of their knowledge base, supported by 22.3% stating that they are very much in accordance with their knowledge base. This is supported by field data which also shows that in productive learning activities, the material taught by the teacher is always updated with current technological developments or is not monotonous and in accordance with industry needs. Only
a small proportion of graduates of Telkom Vocational High School Malang enter the world of work with a mismatch in their knowledge base. However, the data analysis shows that the variable knowledge partially does not have an effect on IWP. This is due to the world of work which is not only knowledge but also self-skills (soft skills) which are more needed such as communication, leadership, cooperation and others that are not in this study.

Meanwhile in the field of expertise competency, graduates of Telkom Vocational High School Malang who enter the world of work, also state the suitability of the basic competencies they have. This is indicated by significant data. The same thing is supported by data which states that the skills possessed are based on the department and the expertise explored during being a student at Telkom Vocational High School Malang. The suitability of skill competencies with the needs of the world of work is because the curriculum used is structured according to the link and match with the industry, so that the skills competencies taught are always updated and some teachers also have experience in the industrial world according to their expertise so that they know what skills competency needs are needed by students. However, based on the results of the analysis, it shows that the field of expertise has no effect on IWP. This is because every individual at work must develop which is sharpened by himself, not a skill competency that determines it means that every working person who works with any skill competency can develop with the desire and effort in himself.

Likewise in the skill element, based on this research, significant data obtained from Telkom Vocational High School Malang graduates entering the world of work according to the skills they have. Supported by additional data stating that it is very suitable between the skills possessed and the world of work that is entered. This illustrates that the human capital graduates of Telkom Vocational High School Malang have appropriate skills and are accepted in the business world and the industrial world as a world of work for graduates. In connection with these skills, field data also shows that skills in the field of TKI are taught well, not only in theory, but more emphasized by direct practical activities supported by teachers and laboratory facilities that support the improvement of the skills of students and students with skills. This is in line with the results of data analysis which show that skills partially affect IWP.

In the field of innovativeness, based on the data obtained, there is a significant difference. This illustrates that there has been no adjustment between the innovation program in the education curriculum with the innovation needs of the business world and the industrial world in general (Suyitno, 2018). The comparison between the non-conformity with the suitability obtained from this research data is not linear with the needs of the business world as a result of the acceptance of the rapid development of information technology innovation and entry into the curriculum of Telkom Vocational High School Malang with the need for innovation in the business world and the world. industry. This difference in innovation based on data in the field of innovation in schools emphasizes how to improve the quality and learning outcomes, while innovation in the world of work is more about how to increase the value of the company and the products produced. From this, VHS in general is also expected to be able to manage students' skills for doing business so that the resulting innovations are also needed in the world of work later. The results of data analysis also state that there is a partial effect of innovation on IWP.

Based on existing data, IWP graduates of Telkom Vocational High School Malang can be said to be in accordance with the standards desired by the business world and the industrial world. Observing the data, graduates of Telkom Vocational High School Malang have excellent IWP and match the needs of the business world and the industrial world. There was no counterproductive performance appraisal that resulted in a negative impact on the business world and the industrial world. However, there is also an increase in the quality of Telkom Vocational High School graduates in the field of innovation for prospective Telkom Vocational High School graduates in accordance with the needs of the world of work.

The existence of Telkom Vocational High School Malang as one of education with qualified and absorbed graduates in the Business World and Industrial World, is evidence that as a vocational school it has adjusted the needs of employment with the curriculum and desired achievement targets. This is in line with what Spencer and Spencer (1993: 9) wrote, “a competency is an underlying characteristic of an individual that is causally related to criterion – referenced effective and/or superior performance in a job or situation”. Graduates of Telkom Vocational High School Malang have sufficient competencies to advance to compete in the world of work with the provision of education they undergo.
Pavlova (2009) explains that work-oriented education is an educational program with three interrelated components, namely: learning for work, learning about work, and understanding the nature of work (understanding the nature of work). In this case, Telkom Vocational High School Malang has a comprehensive education system that combines these elements.

According to Sardiman (1988) the characteristics of vocational education have the following characteristics: (1) it is directed to prepare students to enter the workforce, (2) is based on demand-driven (the needs of the world of work), (3) emphasizes the mastery of knowledge, skills, attitudes and values needed by the world of work, (4) assessment of the success of students must be hands-on or the performance of the world of work, (5) a close relationship with the world of work is the key to the success of vocational education, (6) responsive and anticipatory to technological advances, (7) emphasize more In learning by doing and hands-on experience, (8) requires cutting-edge facilities for practice, and (9) requires investment and operational costs that are greater than general education. Based on this, it is clear that the focus of vocational education is to equip students with a set of skills and abilities (competencies) that can be used to work in certain fields or develop themselves according to their fields of expertise. In this study, the human capital produced by Telkom Vocational High School Malang has a proven standard of expertise in various fields of business and industry. The skills and expertise possessed by graduates (output) of Telkom Vocational High School Malang are one of the targets of business and industrial institutions in seeking workers and employees.

**CONCLUSION**

Based on the results of the research that has been done, it can be concluded as follows: (1) The influence of knowledge, competence, skills, and innovation variables on Individual Work Performance has a different level of each according to the field of work. The knowledge variable, on the results of hypothesis testing shows a significance value of 0.725 which means > 0.05 or does not have a partially significant effect on IWP. Likewise with the competency variable, the results of the hypothesis test show a significance value of 0.449 which means > 0.05 or does not have a partial effect on IWP. Meanwhile the skill variable, on the results of hypothesis testing, shows a significance value of 0.000 which means < 0.05 or has a partial influence on IWP. As with the innovation variable, the results of the hypothesis test show a significance value of 0.034 which means < 0.05 or has a partial effect on IWP. (2) Telkom Vocational High School Malang, as one of the vocational high schools in Malang City, is considered successful in creating human capital of good quality, capable of entering the business and industrial world with proven performance. This is indicated by the percentage of 69.2% plus the number of 20 percent stating that it is very suitable for the needs of the world of work. Only 0.8% stated that the IWP of Telkom Vocational High School Malang graduates was not suitable and 10% stated that the IWP of Telkom Vocational High School Malang graduates was not suitable.

**REFERENCES**


Peraturan Pemerintah Republik Indonesia Nomor 74 tahun 2008 tentang Guru


92 Oktarica Pratiwi Suryoningtyas, et. al., Human Capital Influences Individual Work Performance from Alumni…

