Factors Influencing the Work Interest of Mechanical Engineering Program Students of a Vocational High School in Yogyakarta

Insan Kamil and Sudji Munadi

ABSTRACT

This study aimed to investigate the effects of 1) self-competence, 2) social motivation, 3) labor market, 4) self-competence, social motivation, and labor market on the work interest of Vocational High School (VHS) students. This study employed the ex-post facto design with the regresional approach. The population in this study consisted of 306 students of Class XII of the mechanical engineering expertise program in a vocational high school in the city of Yogyakarta. The sample size was determined using Issac & Michael's table. The participants of this study were 170 vocational high school students. The sample was collected using purposive sampling, and data were collected through a survey. The collected data were then analyzed using multiple linear regression analysis which was applied for hypothesis testing. The results of this study show that (1) self-competence has a positive and significant effect on work interest (effectiveness value = 48.6%, r_count = 0.697, and t_count = 12.602); (2) social motivation has a positive and significant effect on work interest (effectiveness value = 58%, r_count = 0.762, and t_count = 15.236); (3) job market has a positive and significant effect on the work interest (effectiveness value = 70%, r_count = 0.837, and t_count = 19.821), and (4) self-competence, social motivation, and labor market collectively have a significant effect on the work interest with a percentage of 73.1% and the calculated value of 0.855. The effective contribution value of the self-ability variable is 10%, the social motivation variable is 12.7%, and the labor market variable is 50.4%. The relative contribution of the self-competence variable is 13.5%, the social motivation variable is 17.4%, and the labor market variable is 69%.

Keywords: Labor market, self-competence, social motivation, work interest.

I. INTRODUCTION

In this day and age, some countries develop very rapidly along with the development of the Industrial Revolution, which has now reached the Industry 4.0 era. This era leads to disruption, where many changes will occur in every aspect of life, especially regarding workforce, which requires certain competencies relevant to the era (Ihsan et al., 2020).

Indonesia is an archipelagic country with an extensive network and population domicile whose welfare is not evenly distributed since regions and places of residence are far apart, and connectivity between regions has not been fully connected to one. Equity in human resource development has not been fulfilled according to the demands of the global industrial world. In order to support the basic needs of workers for industry and companies, large companies require employee refreshments every year in terms of skills and abilities. The means to achieve superior character and HR formation apart from the family environment is Education (Ainia, 2020).

Indonesia must now provide competent Human Resources (HR) to survive and compete globally. Vocational high schools, universities, or colleges are expected to improve human resources’ competence to produce a quality workforce. University, an institution that generates experts, should be prepared to adapt to the needs of Industry 4.0. Through career planning, each student at a university should be able to evaluate his abilities and interests, consider alternative career opportunities, set career goals, and plan practical development activities (Zona & Zulvia, 2022). The main focus in career planning should be a match between personal goals and realistically available opportunities.

Education is one of the aspects that can generate people with characters that later allow them to possess broad vision and missions to achieve their desired goals and adapt quickly to different environments (Ainia, 2020). Education is also the right of every citizen, which can form intelligent, democratic, and inclusive citizens. The 2003 National Education System (Sisdiknas) Law states that a planned educational process is
needed to create a learning atmosphere and learning process in which students actively develop their potential. Thus, spiritual competence, religious self-control, intelligence, noble character, and skills needed by children and society develop.

Education in Indonesia is divided into three main channels: formal, non-formal, and informal. Education is divided into four levels: early childhood, elementary, middle, and high. One of the secondary education levels is a vocational high school or SMK. Based on the Regulation of the Directorate General of Early Childhood Education of the Ministry of Education and Culture No.06/D.D5/KK/2018, the Mechanical Engineering program is the main choice in the career path if someone wants to pursue knowledge in companies or industries. Vocational education or vocational high schools should be able to serve as proper facilities that can produce quality and professional human resources every year (Hartanto et al., 2019).

Directorate General of Vocational High Schools of the Ministry of Education and Culture regulates that VHS should at least be able to produce graduates who are ready to work, start businesses and see business opportunities, continue their studies at universities or colleges, and develop their skills with selected mentors. Almost 80% of VHS graduates should be absorbed by the labor market. Industries need VHS graduates because they can refresh the soft and hard skills needed by a company. However, based on the data published by Statistics Indonesia, the number of unemployed in Indonesia is 8.4 million as of February 2022. Judging from the number of unemployed people and their level of education, most of them are VHS graduates. Unemployment of VHS graduates was recorded at 10.38%. The second highest unemployment was ranked high school graduates at 8.35%, followed by D-IV, S1, S2, and S3 graduates at 6.17% and diploma I/II/III graduates at 6.09%. Meanwhile, the lowest unemployment rate for elementary school graduates was 3.09% in February 2022.

The large number of unemployed VHS graduates (10.28%), which was recorded in February 2022, proves that there is a discrepancy between the goals of VHS and the reality. In addition to work competence and fieldwork practice experiences obtained during the three years of learning at VHS, other parties have important roles in developing VHS students' readiness to work. Career plans for VHS graduates must be adapted to the requirements of industries to enable them to face different challenges at the start of their careers in the world of work. Teaching and learning activities at the SMK level shape students' abilities to develop their potential, both in terms of knowledge, skills, academic values, and attitudes to support their potential development (Virgianto et al., 2019). An SMK graduate profile has two choices: between continuing to tertiary education and working in the desired industry according to competency skills. Given the important role of universities in shaping the nation's life and the increasing value of people's welfare, increasing interest in continuing education at tertiary institutions is important.

Based on the observation results conducted at SMK Negeri 2 Yogyakarta on October 14, 2022, the researchers then interviewed five students (the number constitutes the total number of class XII students in the Mechanical Engineering Program). During the interviews, the students explained that several factors influenced their interest in working in the industry after graduating from VHS. However, mostly, they have the desire to work. In addition, they want to help their families financially because they come from the middle to lower class. At last, they feel comfortable working as they have experienced during the fieldwork practice. The researcher also obtained the primary data files of the absorption of students who went straight to work after graduating from the mechanical engineering department of SMK Negeri 2 Yogyakarta. The total number of graduates from the 2021/2022 class totaled 132 male students, of which 26 directly chose to work.

This is also reinforced by research that has been conducted (Febriyanti, 2019), namely, the factors that influence interest in work are the influence of financial rewards, labor market considerations, the influence of family environment, the influence of personality, the influence of professional recognition, and the influence of the work environment. Meanwhile, the income factor has a positive and significant effect on student interest in a career, labor market considerations, work environment factors, and student interest in wanting to work in that place (Chairunnisa, 2020). The same thing was also stated by Murdiawati (2020) namely, the factors that influence interest in work are financial reward, labor market considerations, professional training, professional recognition, social values, work environment, and professional risk.

Regarding social motivation, employee workability is essential, as employers must understand employees’ characters to create a work atmosphere that can improve employee performance. Employee work performance is closely related to the profit or income of a company (Semiring & Tanjung, 2021). Employees with high motivation or strong reasons to achieve what they want usually perform better. Thus, motivation is related to work readiness, and VHS students need to realize the importance of being prepared to face the world of work.

Individuals who choose a job have motivations that move their hearts to work. In addition to one's abilities and social motivation, an individual who will choose a job is also influenced by labor market considerations. Labor market considerations are closely related to accessible jobs in the future. Jobs with a larger labor market will be more desirable than jobs with a small labor market. This is because there will be more opportunities for development from work and rewards. Labor market considerations can be a
reason or factor for someone in determining his career.

II. METHODS

The population of this study included all students of Class XII of the Mechanical Engineering Program in a vocational high school in Yogyakarta. The sample was selected using Isaac and Michael’s table from 306 students. The total number of participants in this study was 170. The sample was collected using the purposive sampling technique, while the data were collected by means of questionnaires. The data were then analyzed using descriptive statistics to describe the data for each variable. Then, correlation and regression analysis were performed for hypothesis testing.

III. RESULTS

Testing was aimed at partially identifying the independent variable’s effects on the dependent variable (t-test). This study focused on factors influencing VHS students’ work interests. Hypothesis testing was performed using simple linear regression analysis, and SPSS software version 25 was used in data processing. The results of the analysis are presented below.

A. The Effects of Self-competence on Students’ Work Interest

<table>
<thead>
<tr>
<th>TABLE I: REGRESSION ANALYSIS RESULTS OF SELF-COMPETENCE</th>
</tr>
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<tbody>
<tr>
<td>Unstandardized Coefficients</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>(Constant)</td>
</tr>
<tr>
<td>Self-competence</td>
</tr>
</tbody>
</table>

The result of hypothesis testing shows that students’ self-competence positively influences interest in working. The result of the t-test to measure the significance of the variable shows that t_count is 12.602. When compared with a t_table (1.974) at a significance rate of 5%, t_count is greater than t_table (12.602 > 1.974) or α (0.00 < 0.05). Based on the results, it can be concluded that one’s self-competence has a significant effect on work interest.

B. The Effects of Social Motivation on Students’ Work Interest

<table>
<thead>
<tr>
<th>TABLE II: REGRESSION ANALYSIS RESULTS OF SOCIAL MOTIVATION</th>
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<tbody>
<tr>
<td>Unstandardized Coefficients</td>
</tr>
<tr>
<td>-------------------------------</td>
</tr>
<tr>
<td>(Constant)</td>
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<tr>
<td>Social motivation</td>
</tr>
</tbody>
</table>

The hypothesis testing results show that social motivation positively influences interest in working. The t-test result to measure the variable's significance shows that t_count is 15.236. When compared with a t_table (1.974) at a significance rate of 5%, t_count is greater than t_table (15.236 > 1.974) or α (0.00 < 0.05). Based on the results, it can be concluded that social motivation significantly affects work interest.

C. The Effects of the Labor Market on Students’ Work Interest

<table>
<thead>
<tr>
<th>TABLE III: REGRESSION ANALYSIS RESULTS OF THE LABOR MARKET</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unstandardized Coefficients</td>
</tr>
<tr>
<td>-------------------------------</td>
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<tr>
<td>(Constant)</td>
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<tr>
<td>Labor market</td>
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</tbody>
</table>

The result of hypothesis testing shows that the labor market positively influences interest in working. The result of t-test to measure the significance of the variable show that t_count is 19.821. When compared with a t_table (1.974) at a significance rate of 5%, t_count is greater than t_table (19.821 > 1.974) or α (0.00 < 0.05). Based on the results, it can be concluded that the labor market has a significant effect on work interest.

D. The Effects of Self-Competence, Social Motivation, and Labor Market on Students’ Work Interest

The test aims to measure the effects of the independent variable on the dependent variable simultaneously, so a regression analysis was performed. Based on the results of hypothesis testing using multiple linear regression analysis and data processing using SPSS software version 25, the results of the analysis are as follows.

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The effects of self-competence, social motivation, and the labor market significantly affect work interest. The value of $t_{\text{count}}$ (2.143) > $t_{\text{table}}$ (1.974), so $H_3$ is rejected, and $H_1$ is accepted. Therefore, it can be partially concluded that there is a significant and positive effect of self-competence ($X_1$) on work interest ($Y$). Furthermore, for the second hypothesis, the analysis results obtained $t_{\text{count}}$ (2.126) < $t_{\text{table}}$ (1.974), so $H_2$ is accepted, and $H_3$ is rejected. It means that partially, there is no significant effect of social motivation on work interest. The third hypothesis is the sig. variable ($X_3$) of 0.000 < 0.05. The value of $t_{\text{count}}$ (8.738) > $t_{\text{table}}$ (1.974), so $H_3$ is rejected, and $H_2$ is accepted. Partially, the labor market has a significant and positive effect on work interest. The last step to test the third hypothesis was using the F-test by comparing the significance value of 0.05. The results of this test can be seen in Table V.

![Table IV: Regression Analysis Results of All Variables Included](image)

<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>Regression</td>
<td>5848.334</td>
<td>3</td>
<td>1949.445</td>
<td>150.113</td>
<td>&lt;0.001</td>
</tr>
<tr>
<td>Residual</td>
<td>2155.760</td>
<td>166</td>
<td>12.987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>8004.094</td>
<td>169</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The hypotheses that tested self-competence, social motivation, and the labor market positively affected the work interest of Class XII students of a mechanical engineering expertise program in Yogyakarta. The significance test used the F-test, and based on its results, the $F_{\text{count}}$ is 150.113. Compared to the $F_{\text{table}}$ of 1.974 at a significance rate of 5%, the $F_{\text{count}}$ is greater than the $F_{\text{table}}$ (150.113 > 1.974). Hence, self-competence, social motivation, and the labor market significantly affect work interest.

![Table VI: Coefficient of Determination](image)

Based on the results given in Table VI, the R-squared value (coefficient of determination) is 0.731. This shows that simultaneously, the variables of self-competence, social motivation, and labor market affect work interest by 73.1%, while the remaining 26.9% is affected by other unobserved variables. The correlation coefficient value of 0.855 indicates a high correlation between self-competence, social motivation, and the labor market on work interest. The value of the regression coefficient is positive, which means there is a positive relationship between the dependent and independent variables. The Adjusted R Square score is obtained, indicating the magnitude of the independent variable's roles in affecting the dependent variable, which is equal to 72.6%.

**IV. DISCUSSION**

A. *The Effects of Self-Competence on Students’ Work Interest*

Based on the research conducted on Class XII vocational high students in the mechanical engineering expertise program in Yogyakarta City, self-competence positively and significantly affects work interest. This can be seen from the regression results and the significance of self-competence on students' work interests. Based on the analysis results of the research data from the self-competence variable, the correlation coefficient ($r$) is 0.697, and the coefficient of determination ($r^2$) is 0.486. Therefore, the effect of self-competence is 48.6%, while 51.4% is determined or affected by other variables not examined in this study.

Self-ability is the foundation for students to join the world of work and industry with the competencies they have. Self-ability also provides opportunities for students to develop further and add to their knowledge in the world of work. In theory, it is explained that factors influence students' work interests, namely knowledge, training, experience, and skills in the research of Raharjo et al. (2016). The results of the influence of one's abilities on work interest have contributed in the form of soft skill and hard skill factors that students have learned during the learning process at vocational schools. Two other factors, namely psychological state and physical ability, support one's abilities in this study.

The research proves that one of the factors influencing work interest is the hard skills of students as...
measured in the variable of self-competence because if self-competence is better as the core of the student's abilities in the mechanical engineering expertise program, it can promote higher student work interest. This is in line with the statement by (Robbins, 1996) that the level of individual performance will depend heavily on the individual's ability factors, such as level of education, knowledge, and experience, where the higher the level of ability, the higher performance will be.

B. The Effects of Social Motivation on Students’ Work Interest

Based on the research conducted on Class XII vocational high school students in the mechanical engineering expertise program in Yogyakarta, social motivation positively and significantly affects work interest. This can be seen from the regression results and the significance of social motivation on students' work interests. Based on the analysis results of research data from the social motivation variable, the correlation coefficient (r) is 0.762, and the coefficient of determination (r^2) is 0.580. Therefore, the effect of the social motivation variable is 58%, while 42% is determined or affected by other unexamined variables in this study.

Social motivation makes students more motivated mentally and by their desire to go directly into the world of work after they graduate. Social motivation also creates a degree of persistence and enthusiasm in carrying out activities, either from within the students themselves (internal motivation) or from outside the students (extrinsic motivation). In theory, the factors that influence interest are explained, namely intrinsic need factors, social motivation factors, and emotional factors in research Corry and Firda (2019). The results of the influence of social motivation on work interest have contributed in the form of appreciation factors, social relations, and living needs obtained by students from their peer environment, family, and social environment. In this study, two other factors, namely social needs, and self-actualization, support social motivation.

The research proves that one of the factors of work interest is the life needs of students as measured in the social motivation variable. If students have better social motivation, they will have higher work interests. This is in line with the statement by Fatah (2019) that motivation is a process of encouragement that comes either from outside or within oneself, which gives meaning, motivation, desire, need, and willingness to do a job relevant to the predetermined goals.

C. The Effects of the Labor Market on Students’ Work Interest

Based on the research results conducted on class XII vocational students in the mechanical engineering expertise program in Yogyakarta, the labor market positively and significantly affects work interest. This can be seen from the regression results and the labor market's significance on students' work interests. Based on the analysis results of research data from the labor market variable, the correlation coefficient (r) is 0.837, and the coefficient of determination (r^2) is 0.700. Thus, the effect of the social motivation variable is 70%, while 30% is determined or affected by other variables not examined in this study.

Labor market considerations are always taken into account when choosing a career. Given the slowing economy and the difficulty in finding work, we must pay attention to the labor market, both in the long and short term. Labor market considerations are always considered when choosing a career; given the slowing economy and the difficulty of finding work, we must pay attention to the labor market, both in the long and short term. In theory, it is explained that factors influence students' interest in working, namely character, profession, labor market considerations, work environment, family, and friends in research (Chairunnisa, 2020). From the contribution results, the influence of labor market considerations on work interest has contributed to factors of safety, comfort, and prospects for career paths that students want to achieve from the company or industrial world where they work later. Three other factors, namely information on the world of work, available jobs, and salary or income are supporting factors for labor market considerations in this study.

The research proves that one of the factors of work interest is the safety and comfort of students as measured in the labor market variable because if students consider better when choosing a job, they will have a better work interest. This is in line with the statement by Rahmayanti et al. (2022) that labor market consideration is a step toward seeing an opportunity for someone in the profession because the number is very low, so the competition is very tight. The more jobs available, the less competition. The less a person's interest in this profession, the greater the chance of being accepted.

D. The Effects of Self-Competence, Social Motivation, and Labor Market on Students’ Work Interest

Based on the research conducted on Class XII students of the mechanical engineering expertise program in Yogyakarta City, self-competence, social motivation, and the job market positively and significantly affect work interest. This can be seen from the regression results and the labor market's significance on students' work interests. Based on the analysis results of research data from the labor market variable, the correlation coefficient (r) is 0.855, and the coefficient of determination (r^2) is 0.731. Therefore, the effect of the social motivation variable is 73.1%, while 26.9% is determined or affected by other unexamined variables in this study.
Ability shows the capability possessed by a relatively stable person to realize certain different but related activities. Social motivation is a human power that can generate a certain tenacity and enthusiasm in carrying out activities from within or outside the individual, one of which is the job of choice to get a social position/status in society. Labor market considerations are always taken seriously by someone in a career because competition is getting tougher, and the difficulty of finding a job makes someone pay attention to the labor market, both long term and short term. Students who do not have and are not interested in it find it difficult to accept a job, let alone do a work profession. If this is forced, it will cause boredom to become a hopping, so it is difficult to get back up in the world of work, a characteristic of people who have not found talent in life.

The research proves that the three factors have a positive and significant effect because they are interrelated and must always be in the same direction in work interest. This is in line with the statement by Robbins (1996, p. 218) that the level of individual performance will depend heavily on the individual's ability factors such as level of education, knowledge, and experience, whereas the higher the level of ability, the higher the performance. Social motivation is a process of encouragement from both outside and inside, giving meaning, motivation, desire, need, and willingness to do a job relevant to the predetermined goals (Fatah, 2019). Job market consideration is a step toward seeing an opportunity for someone in the profession because there are very few, so the competition is very tight. The more jobs there are, the less competition and interest a person has in this profession, and the greater the chance of acceptance (Rahmayanti et al., 2022).

V. CONCLUSION

The results of this study are as follows: (1) work interest included in the high and significant category as evidenced by the tendency of the score of the work interest variable for Class XII students of the mechanical engineering expertise program in the city of Yogyakarta in the high category of 92 people with a percentage of 54%. (2) Self-competence has a positive and significant effect on the working interest of Class XII students of the Mechanical Engineering Expertise Program in the City of Yogyakarta with a value of 48.6% and a $r_{count}$ of 0.697 and a $t_{count}$ of 12.602. (3) Social motivation has a positive and significant effect on the working interest of Class XII students of the Mechanical Engineering Expertise Program in the City of Yogyakarta with a value of 58%, $r_{count}$ of 0.762, and a $t_{count}$ of 15.236. (4) The labor market has a positive and significant effect on the working interest of class XII students of the Mechanical Engineering Expertise Program in the City of Yogyakarta with a value of 70%, $r_{count}$ of 0.837, and a $t_{count}$ of 19.821. (5) Self-competence, social motivation, and labor market have positive and significant impacts on the working interest of class XII students of the Mechanical Engineering Expertise Program in the City of Yogyakarta with a value of 73.1% and a $r_{count}$ value of 0.855 with an effective contribution value from self-competence variable 10%, social motivation 12.7% and labor market 50.4%. The relative contribution of the self-competence variable is 13.5%, social motivation is 17.4%, and the labor market is 69%. Thus, in this study, the better and higher self-competence, social motivation, and labor market, the higher the student's work interest.

ACKNOWLEDGMENT

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CONFLICT OF INTEREST

The authors declare that they do not have any conflict of interest.

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and gain interest in subscribing to Arif Muhammad’s Youtube channel]. Talenta Conference Series: Local Wisdom, Social, and Arts, 2(3), 80-86.


