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AN ANALYSIS THE EFFECT 21ST CENTURY DIGITAL SKILL ON THE ENTREPRENEURSHIP PERSONAL COMPETENCE

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ABSTRACT

One of the competencies that must be possessed by humans in the 21st century is entrepreneurship. This ability is very important to support the quality of human resources. Unfortunately, in Indonesia, there are many problems concerning entrepreneurship. Some of them are the low interest of entrepreneurship competence and the large number of unemployed persons. Entrepreneurship competence is influenced by several factors, some of them are learning that is taught systematically and the ability to use technology. Based on these reasons, there needs to be a research on the increasing entrepreneurship competencies that are influenced by entrepreneurship education and the ability to use digital technology. Quantitative approach was used in this research with its analysis using Structural Equation Model (SEM). The instruments were in the form of questionnaire and the respondents were vocational students. The results show that the influence of 21st century digital skills and entrepreneurship education is significant on entrepreneurship academic competence. The positive and significant effect of mediating entrepreneurship education shows that 21st century digital skills need to be integrated in entrepreneurship education to increase entrepreneurship competencies more effectively.

KEYWORDS: entrepreneurship, competence, education, 21st century digital skills

INTRODUCTION

Civilization continues to develop and to change rapidly. Currently, Indonesia has entered the Industrial Revolution 4.0 or commonly known as the era of Cyber Physical Systems. All order of life cannot be separated from these changes, including the field of education. Regarding this change, the development of education leads to the term 21st Century Teaching. 21st Century Teaching is applied to achieve certain competencies in relevance with its purpose. According to Fong, Sidhu, & Fook (2014), 21st century competence consists of collaborative work skills, lifelong autonomy skills, information and communication technology (ICT) skills, critical and creative thinking skills, English language skills, and entrepreneurship skill.

Some of those 21st century competencies are taught systematically in schools, one of which is entrepreneurship ability as there are entrepreneurship education subjects in school. Entrepreneurship education has two main objectives; short-term and medium-term. The short-term objective is to foster entrepreneurship motivation and intention (Hakim, 2010) and long-term objective is to reduce

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Vol. 2, No. 05; 2019

the unemployment rate (Siwan Mitchelmore & Rowley, 2010). From the perspective of short-term objective, the number of entrepreneurs in Indonesia increased from 1.67% to 3.10% from the total population of Indonesia, counting 225 people (Secondary data from BPS, 2019). The data shows an increase although not yet proportional to the number of entrepreneurs in developed countries.

Different condition can be seen from data of the unemployment in Indonesia. In 2018, the number of unemployment in Indonesia was 6.87 million from the available workforce of 133.94 million. The highest unemployment rate was SMK graduates with a percentage of 8.92% from the total number of unemployment. This is not relevant with the main objective of SMK which is to prepare graduates that are ready to work. The data was relevant with the entrepreneurship competence. Initial observations at SMKs in Wonogiri Regency showed low entrepreneurship competence. The observation used questionnaires adapted from Mojab, Zaefarian, & Azizi (2011). These results support the argument that explains the importance of entrepreneurship in reducing unemployment. Entrepreneurship competence has several influencing factors. First, socially based entrepreneurship with its relationship in building entrepreneurship experiences, processes in daily life, and dynamic learning processes and measurable learning outcomes that can build entrepreneurship competence (Jensen, 2014). Second, entrepreneurship education that combines understanding of business and technology is very influential on the entrepreneurship learning process and entrepreneurship skills building for students (Shih & Huang, 2017).

Definition of Variables

Entrepreneurship Personal Competence

Entrepreneurship competence is the required skill to carry out a task or an ability to have the skills required, both attitude and behavior, in applying creativity, innovation, risk taking, in an effort to assume financial needs, social risks, and receive repayments and satisfaction, as well as personal freedom. The value of entrepreneurship, behavior, and attitude have received heterogeneous interpretations from time to time and in the end the study of entrepreneurship competencies is a significant predictor of economic success and reforms and triggering changes in the entrepreneurship education curriculum (Chiru, Tachiciu, & Ciuchete, 2012)

Entrepreneurship Education

Entrepreneurship education is a unique practical program because in its implementation, it fosters not only practical skills, but it also alters the mindset that might differ among students (Robinson, Neergaard, Tanggard, & Kreuger, 2016). According to Tung (2011) who took the opinion of Johannison, it is stated that there are five components of entrepreneurship education; which include know-what (entrepreneurship knowledge), know-why (value and motive), know-who (social interaction), know-how (entrepreneurship skills and abilities), and know-when (intuition, the right time to startup). The five components of entrepreneurship education can be applied to measure entrepreneurship education in senior high school, vocational high school, or madrasa alliya, except the know-when component. This component cannot be counted because it can only be applied to

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Vol. 2, No. 05; 2019

entrepreneurs who have already run a business, in contrast to students who have not yet become entrepreneurs (Tung, 2011).

21st Century Digital Skill

21st century digital skills have a component that acts an indicator that someone already has these skills. 21st century digital skills consist of technical operations in technology, information management, communication, collaboration, creativity, critical thinking, and problem solving (van Laar, van Deursen, van Dijk, & de Haan, 2017; van Laar, van Deursen, van Dijk, & de Haan, 2018).

Hypotheses

H1: There is a positive and significant correlation between 21st century digital skills and entrepreneurship personal competence.

The development of innovation in entrepreneurship requires technology integration. The research provides some suggestions for further research. Some of the main issues that can be raised are the development of innovation platforms types for entrepreneurs, knowledge control platforms, entrepreneurship protection, activating and inhibiting adopting entrepreneurship innovation platforms, and consideration of strategies in entrepreneurship through an innovation platform. Digital footprints that have been explored by someone can reveal one's entrepreneurship personality (Hsieh & Wu, 2018).

H2: There is a positive and significant correlation between 21st century digital skills and entrepreneurship education.

It is almost impossible to ignore the impact of digital technology in everyday life. Technology has colored and changed the order of human life. In the end, the impact of technology, especially digital technology, will shift innovation, entrepreneurship technology, and the process of creating new businesses and modifying all aspects of life (Rippa & Secundo, 2018).

H3: There is a positive and significant correlation between entrepreneurship education and entrepreneurship personal competence.

Entrepreneurship competence in general significantly influences the effectiveness of the entrepreneurship learning process (Din, Anuar, & Usman, 2016). In this context, the effectiveness of entrepreneurship education depends on the competencies that want to be achieved. The higher the competency achieved, the more effective entrepreneurship learning has been applied. In this research, the competency components used are business plans, risk taking, self-efficacy, rewards, and locus of control. There are many more research which state that entrepreneurship education and entrepreneurship competence have strong relationships and have significant influence (S

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Vol. 2, No. 05; 2019

Mitchelmore & Rowley, 2010) (Mojab et al., 2011; Chiru et al., 2012; Robles & Zárraga, 2015; Shir, Nikolaev, & Wincent, 2018).

RESEARCH METHOD

The quantitative approach with descriptive quantitative research method was used in this research. There were three variables in this research. These variables were exogenous variables, mediating variables, and endogenous variables. The exogenous variable in this research was the 21st century digital skills. Mediation variable was entrepreneurship education and endogenous variable was entrepreneurship personal competence. The 21st century digital skills indicator consists of information management, communication, collaboration, critical thinking, creativity, and problem solving. Indicators of entrepreneurship education variables consist of know what, know why, know who, and know how. Lastly, the indicators of entrepreneurship personal competence effectiveness consist of interpersonal skills and teamwork, initiative, ambition, adaptability and flexibility, risk taking, as well as desire to learn.

The population in this research involved all 12th grade SMK students in Wonogiri in 2019 with a total of 1935 students. Samples were taken from 6 SMKs that have accreditation of grade A; SMK N 1 Wonogiri, SMK N 2 Wonogiri, SMK Bhakti Mulia Wonogiri, SMK N 1 Giritontro, SMK N 1 Kismantoro, and SMK Pancasila 1 Wonogiri. Non probability sampling with a purposive sampling technique was used in this research. The number of samples taken was 210 based on sampling theory in multivariate research from Roscoe in Sekaran (2006) which stated that the number of samples in multivariate research consisted of 5-10 times the variable assuming one variable of one indicator. In this research, there were 21 indicators x 10 (the maximum number taken) amounting to 210 samples.

ANALYSIS AND DISCUSSION

Respondent Description

Table 1. Respondent Description based on School

Sekolah	Jumlah	%
SMK Negeri 1 Wonogiri	43	20,5 %
SMK Negeri 2 Wonogiri	57	27 %
SMK Bhakti Mulia Wonogiri	18	8,5 %
SMK Negeri 1 Giritontro	22	10,5 %
SMK Negeri 1 Kismantoro	18	8,5 %
SMK Pancasila 1 Wonogiri	52	25 %

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Vol. 2, No. 05; 2019

Total	**210**	**100 %**

Source: Primary Processed Data, 2019.

Validity and Reliability Test

The research instrument consisted of 88 statements that accommodated all indicators. Questionnaire items are said to be valid if R-count > R-table. Based on the results in validity table, the value of R-table with the amount of N = 30 at a significance level of 5% is R = 0.36. Therefore, an item is considered valid because it meets the requirements of R-count > R-table (more than 0.36). In the validity table above, statements with "valid" information are statements that are considered valid because of R-count > R-table. In conclusion, all statements consisting of 88 statements were declared valid and could be used in questionnaires and distributed to respondents.

The reliability test aims to determine the accuracy of the measurement of the instrument so that it remains consistent. If you do measurements twice or more, the same criteria using the same measurement tool will yield the same result. The instrument for reliability test in this research was the cronbach's alpha formula. For of each item on the variable, it would be considered reliable if cronbach's alpha > 0.60.

Table 2. Instrument Reliability Result

Cronbach's Alpha	N of Items
0,987	105

Based on the reliability table above, it can be seen that all indicator variables have a Cronbach's alpha value above 0.60. This shows that the instrument can be used in similar research elsewhere.

Hypothesis Test

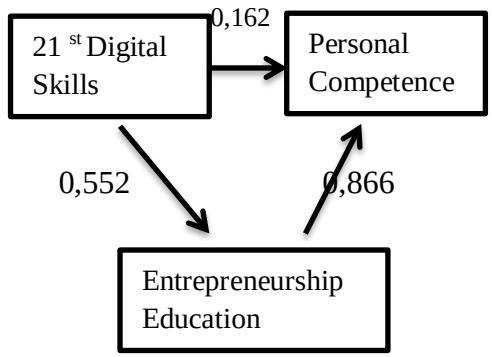

Table 3. Regression Result

Path	Result	*p-value*
Variable X → Variable M	0,552	0,000
Variable X → Variable Y1	0,165	0,001
Variable M → Variable Y1	0,866	0,000

Source: Primary Processed Data, 2019.

Mediating Effect

The mediating effect of entrepreneurship education is concerning in connecting 21st century digital skills with entrepreneurship personal competencies. The results of the mediation effects are as follow:

Table 4. Mediating Effect Result

Path	Result	*p-value*
Variable X → Variable M → Variable Y1	0,478	0,000

Source: Primary Processed Data, 2019

H1: There is a positive and significant correlation between 21st century digital skills and entrepreneurship personal competence.

Based on the results of the research, it was known that the value of the correlation coefficient of 21st century digital skills on entrepreneurship personal competence was 0.165 with a p-value of 0.001. The value is positive and the p-value <0.05. In conclusion, H1 failed to be rejected.

H2: There is a positive and significant correlation between 21st century digital skills and entrepreneurship education.

Based on the results of the research, it was shown that the value of the correlation coefficient of digital skills in the 21st century entrepreneurship education was 0.552 with a p-value of 0,000. The value is positive and the p-value is <0.05. In conclusion, H2 failed to be rejected.

H3: There is a positive and significant correlation between entrepreneurship education and entrepreneurship personal competence.

Based on the results of the research, it was shown that the coefficient of the correlation between entrepreneurship education and entrepreneurship personal competence was 0.866 with a p-value of 0.001. The value is positive and the p-value is <0.05. In conclusion, H3 failed to be rejected.

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Vol. 2, No. 05; 2019

The mediating effect of entrepreneurship education that links the 21st century digital skills variable to entrepreneurship personal competence has a coefficient of 0.478 with a p-value of 0,000. This result shows a positive correlation and has a contribution of 47.8% and is significant.

CONCLUSION

All hypotheses show that the correlations between variables are positive and significant. The correlation of 21st century digital skills to entrepreneurship personal competence has a positive and significant correlation with a contribution value of 16.5%. The correlation of 21st century digital skills to entrepreneurship education has a positive coefficient and a significant contribution value of 55.2%. The highest correlation is entrepreneurship education to entrepreneurship personal competencies with a contribution of 86.6%. The mediating effect of entrepreneurship education proved effective and significant with a contribution of 47.8%. These results indicate that 21st century digital skills need to be integrated and applied to entrepreneurship education to improve entrepreneurship personal competence.

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