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Penulis Artikel: THE READINESS OF TEACHER CANDIDATES FOR VOCATIONAL HIGH SCHOOL IN THE 4TH INDUSTRIAL AND CAPABILITY IN TECHNOLOGY

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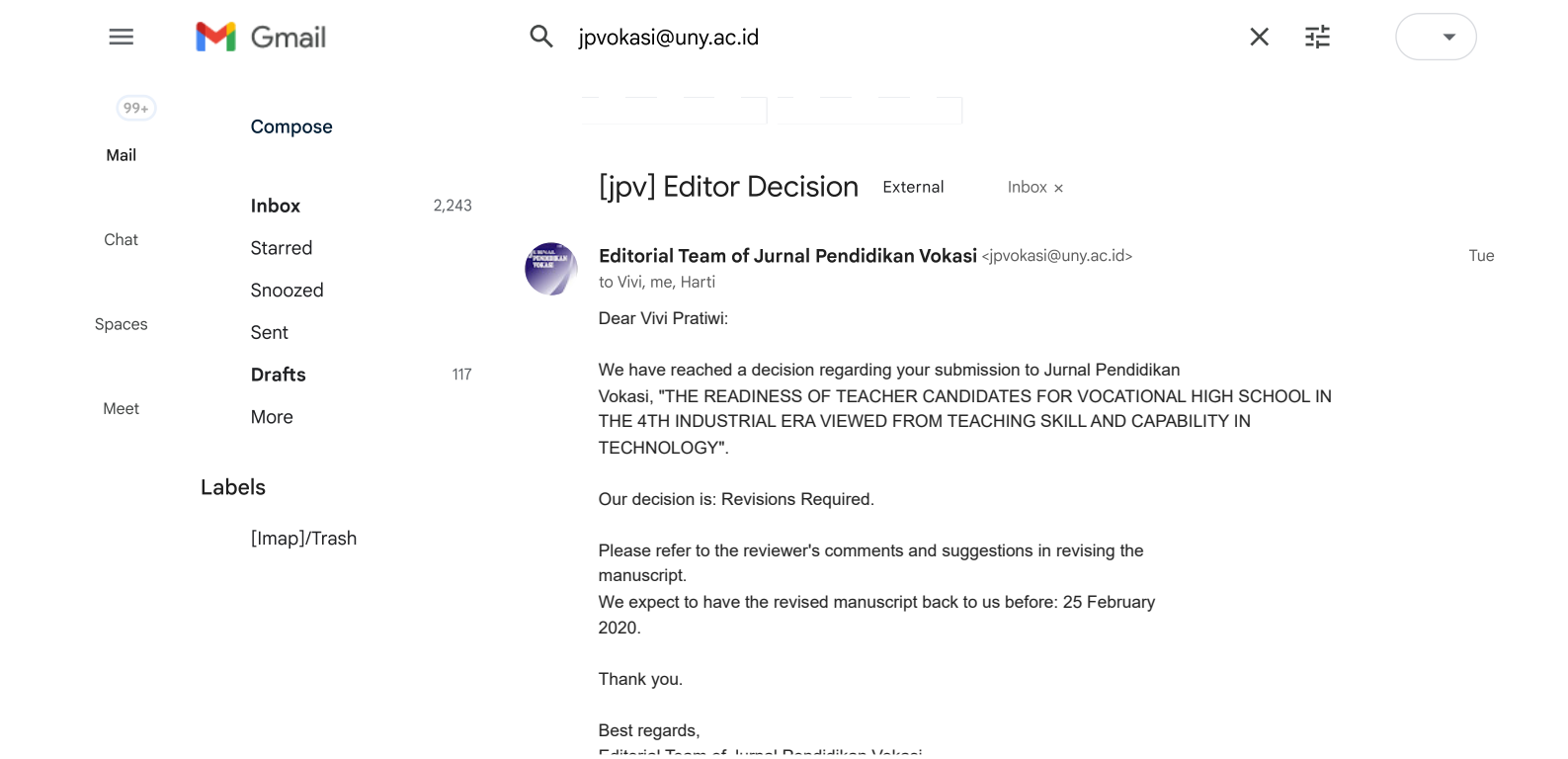

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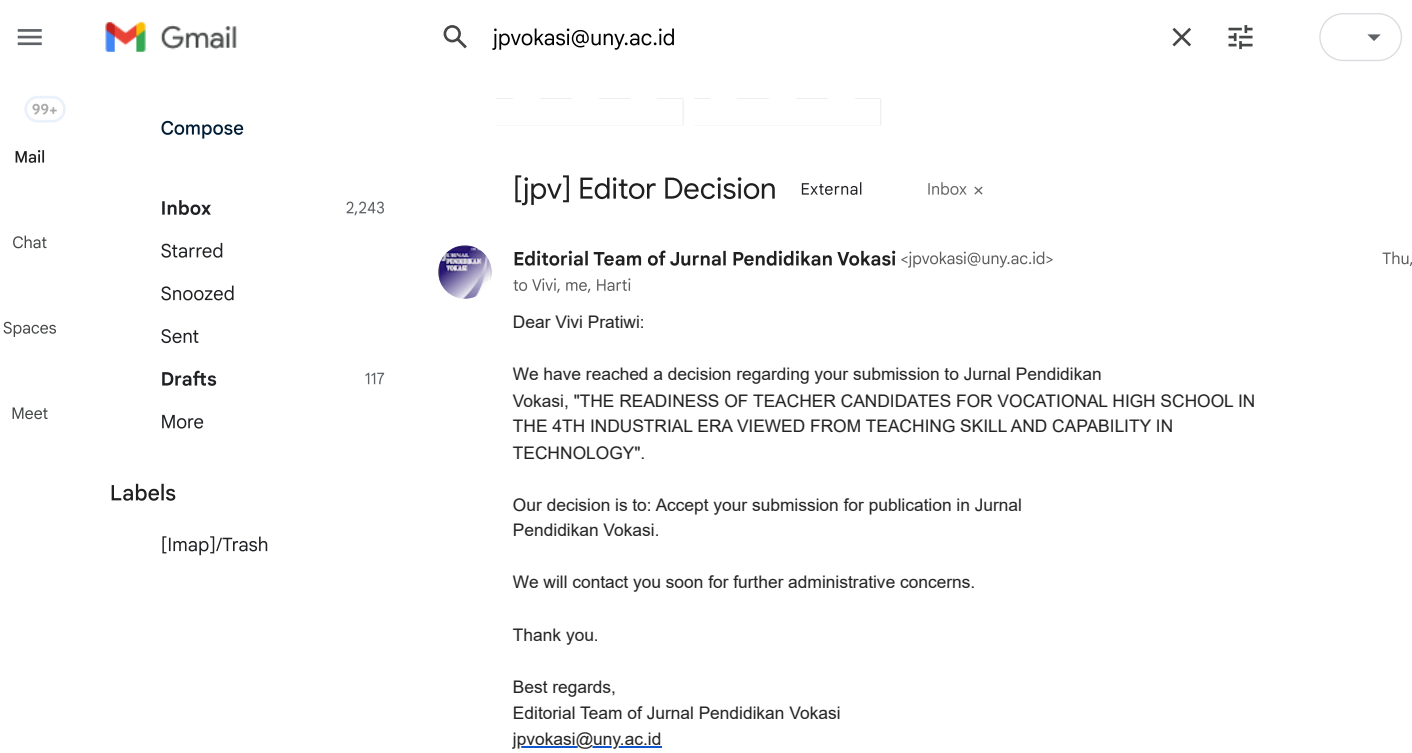
We have reached a decision regarding your submission to Jurnal Pendidikan Vokasi, "THE READINESS OF TEACHER CANDIDATES FOR VOCATIONAL HIGH SCHOOL IN THE 4TH INDUSTRIAL ERA VIEWED FROM TEACHING SKILL AND CAPABILITY IN TECHNOLOGY".

Our decision is: Revisions Required.

Please refer to the reviewer's comments and suggestions in revising the manuscript.
We expect to have the revised manuscript back to us before: 25 February 2020.

Thank you.

Best regards,
Editorial Team of Jurnal Pendidikan Vokasi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Thu,
Dear Vivi Pratiwi:
We have reached a decision regarding your submission to Jurnal Pendidikan Vokasi, "THE READINESS OF TEACHER CANDIDATES FOR VOCATIONAL HIGH SCHOOL IN THE 4TH INDUSTRIAL ERA VIEWED FROM TEACHING SKILL AND CAPABILITY IN TECHNOLOGY".
Our decision is to: Accept your submission for publication in Jurnal Pendidikan Vokasi.
We will contact you soon for further administrative concerns.
Thank you.
Best regards,
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Jurnal Pendidikan Vokasi

THE READINESS OF TEACHER CANDIDATES FOR VOCATIONAL HIGH SCHOOL IN THE 4TH INDUSTRIAL ERA VIEWED FROM TEACHING SKILL AND CAPABILITY IN TECHNOLOGY

Anonymous

Abstract

This study aims to evaluate the readiness of prospective teachers for Vocational High Schools in dealing with the world of work in the 4th industrial era when viewed from teaching skills and technological mastery abilities. This type of research is evaluative research with quantitative descriptive approach. The population in this study consisted of 1,725 students at Surabaya State University. A total of 996 students were used as research samples by using simple purposive sampling technique. The results showed that the average student stated that he already had enough provision to face the world of work from the lecture process that he had obtained so far. Prospective vocational teachers already have good teaching skills because they are equipped with various theories and practices directly to school so that prospective teachers have the experience they are ready to use in dealing with the world of work. In the ability to master technology, vocational teacher candidates already have a good readiness in the use of technology in learning.

Keywords: *work-readiness, teaching skills, technological mastery.*

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•Keterampilan mengajar guru belum terjelaskan demikian juga kemampuan teknologi yang harus dikuasai mahasiswa calon guru.

INTRODUCTION

Nowadays, the world began to enter the era of the 4th industrial revolution as the impact of the advances in science and technology brought. The 4th industrial revolution era is a new era in the development of the world today. This era is closely related to the integration of automation technology and cyber technology for data exchange in manufacturing technology. The 4th Industrial Revolution era applied the concept of automation carried out by machines without requiring human labor in its application or use. This era refers to current and future developments regarding the use and use of technology that is capable of changing the workplace (Beraza, 2018: 215).

Although the impact of the development of the industrial revolution era on employment opportunities for graduates has not been very visible, but there is a possibility that this 4th industrial era will create new jobs and unemployment in a relatively equal amount (Teng, et al, 2019: 2). All jobs will experience the impact of this industrial revolution which will certainly affect new graduates in dealing with the world of work (Chui, et al, 2016: 58). As a result, as many as 75-375 million workers switched professions and as many as 1.8 million jobs were replaced by machines. Therefore, State Higher Education (PTN) and Private Higher Education (PTS) are required to be able to produce professional graduates who are ready to face this 4th industrial era.

Universitas Negeri Surabaya (UNESA) is one of the State Higher Education (PTN) in Indonesia that organizes educational programs and non-educational programs that have more than 25,000 students. UNESA is an institution based on LPTK (Educational Workforce Education Institutions) so that its main task is to produce educational personnel for preschool education, basic education, and secondary education. UNESA students as candidates for professional education in the era of the 4th industrial revolution must certainly be able to understand and develop according to the needs of the workforce today. This is because they will play an important role in the success of learning at various levels of education that will affect the quality of human resources in Indonesia. Professional education personnel have several criteria that must be mastered, including teaching skills (Ambarawati, 2016: 83; Hidayat, Kuswana, & Untung, 2016: 249) and good technological mastery skills (Hidayat, Kuswana, & Untung, 2016: 251).

Teaching skills really need to be owned by teachers to transfer knowledge, skills, attitudes, and values to students in the learning process. According to Ambarwati (2016: 84) there are 7 teaching skills that must be possessed by teachers, namely: Skills to open lessons, Skills to explain, Skills to ask questions, Skills to strengthen, Skills to hold variations, Skills to close lessons, and Skill in preparing Learning Implementation Plans (RPP). Educational students who are interested and understand the teaching profession, so they will give greater attention to understanding and learning about the teaching profession, namely work in education and teaching. Furthermore, these students will carry out activities to foster and improve teaching skills towards professional teacher competencies.

Technology mastery skills can be interpreted as the ability to use applications or software to search, provide, change, and control information creatively to produce, evaluate, and analyze information into other forms using a variety of tools and digital media (Voogt, et al, 2013: 405). According to Saputra and Purnama (2012: 61) teachers as educators will always be required to be innovative creative in finding learning breakthroughs that are able to combine text, images, audio, music, animation, and video in a unity that supports one another in order to achieve learning objectives and are able arouse pleasure during the learning process. In accounting learning, the use of computer applications during the learning process was able to improve students' ability to use computers and influence the level of salary earned (Suttipun, 2014: 145). Under these conditions, students as prospective workers need to be equipped with soft skills in the form of technological mastery abilities that will affect student work readiness in the 4th industrial era (Teng, et al, 2019: 12).

Based on these conditions, UNESA must be able to produce quality educational staff in accordance with the needs of the world of work in the 4th industrial era. The

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Department of Economic Education is one of the departments at UNESA that produces educational staff at the level of vocational secondary education or commonly known as Vocational High School (VHS). Based on an initial survey conducted at Department of Economic Education graduates in UNESA, information was obtained that as much as 41.42% of 350 graduates worked as teachers, 30% worked as private employees, 5.71% worked as entrepreneurs, 4.28% worked as banks , and the rest work in other fields. This shows that the interest of graduates with the aim of PTN is appropriate, namely to produce educational staff (teachers). Then from the results of the initial interviews with the graduates it was found that to be able to get a job now needed the ability to master technology such as the ability to operate computers and the internet to support the desired profession. In addition, teaching skills are also very necessary considering that most graduates of the Department of Economic Education in UNESA work as teachers according to their fields.

Based on these conditions, an evaluation of the readiness of students as prospective college graduates is needed to provide an overview of the conditions of vocational teacher candidates in facing the world of work in the 4th industrial era. Work readiness can be seen as a process and purpose that involves the development of one's work related to attitudes, values, knowledge and skills (Yustina & Sukardi, 2014: 183). Work readiness refers to the degree to which people have the ability and willingness to complete certain tasks (Utami & Hudaniah, 2013: 44). In order to work effectively and efficiently, as well as develop expertise and skills, students as prospective job seekers must have high stamina, master their expertise, and the basics of science and technology, have a high work ethic, and be able to communicate in accordance with the demands his job, and has the ability to develop themselves (Hidayat, Kuswana, Untung, 2016: 247). According to Suttipun (2014: 139) students 'readiness in facing the world of work can be seen from their capabilities, knowledge, and competence in building relationships, according to Hanani & Sukirno (2016: 38) students' readiness in facing the world of work can be seen from ethical competency, knowledge competency, capability competency, respect about human rights and values and competency analysis. An evaluation of the work readiness is needed so that the information obtained from the results of this study can be used as input in improving the learning process for educational institutions and also as an illustration of what competencies or expertise need to be prepared by graduates in this case as prospective teachers in dealing with the world of work.

Based on the background above, the readiness of vocational teacher candidates needs to be evaluated to find out the quality of teaching skills and the ability to master technology in facing the demands of the world of work in the 4th industrial revolution era. Therefore, this study aims to illustrate the readiness of vocational teacher candidates to face the workforce in industrial era 4.0 when viewed from teaching skills, and the ability to master technology. The results of this study are expected to be used as evaluation material to improve the quality of learning in PTN / PTS so as to improve the quality of graduates who will later become professional education personnel at various levels of education. In addition, the results of this study can also be used to find solutions and actions that can improve the competitiveness of PTN / PTS graduates to face the world of work.

RESEARCH METHOD

The type of this research is an evaluative study using a quantitative descriptive approach. Evaluative research is research conducted with the aim of gathering useful information about the object of evaluation under study and then compared and assessed with certain indicators (Wirawan, 2011: 8). The population of this study were 1,725 students majoring in Economic Education at Universitas Negeri Surabaya (UNESA). The sample used was 996 students who were determined using simple purposive sampling technique. The sample criteria used are students majoring in Economic Education 4-8 semester assuming students have obtained educational courses and in the near future will face the world of work so that the sample is considered relevant to the research objectives. The following technical determination of the

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samples used in this study are presented in table 1:

Table 1 Research Samples

Sample Criteria	Amount
Samples are students of the Department of Economic Education UNESA	1.725
Samples are 4-8 semester students	996
Number of Research Samples	**996**

Data collection was carried out by distributing questionnaires to student samples so as to produce primary data from research subjects. Based on various theories and previous research, this study uses research indicators regarding work readiness, namely teaching skills and the ability to master technology. Data obtained from the results of student surveys in the form of quantitative data so analyzed descriptively quantitative with percentage techniques. Quantitative data obtained using a Likert scale with a score of 1-4 with the criteria not ready until very ready.

RESEARCH RESULTS & DISCUSSION

Based on the results of the distribution of questionnaires to 996 students majoring in Economic Education consisting of 331 students in 2015, 314 students in 2016, and 351 students in 2017 obtained information about the readiness of prospective teachers for Vocational High Schools in dealing with the world of work in the 4th industrial era if seen from teaching skills and the ability to master technology. The results of this study can be explained as follows:

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Teaching Skills for Prospective Teachers at Vocational High Schools (VHS)

Based on the results of research conducted to students majoring in Economic Education at UNESA obtained information about the readiness of prospective teachers of Vocational High Schools (VHS) in dealing with the world of work seen from teaching skills which are divided into eight aspects as follows:

A. Aspect of Opening Lesson Skills

In the aspect of skills in opening the lesson of vocational teacher candidates readiness can be seen in Figure 1 below:

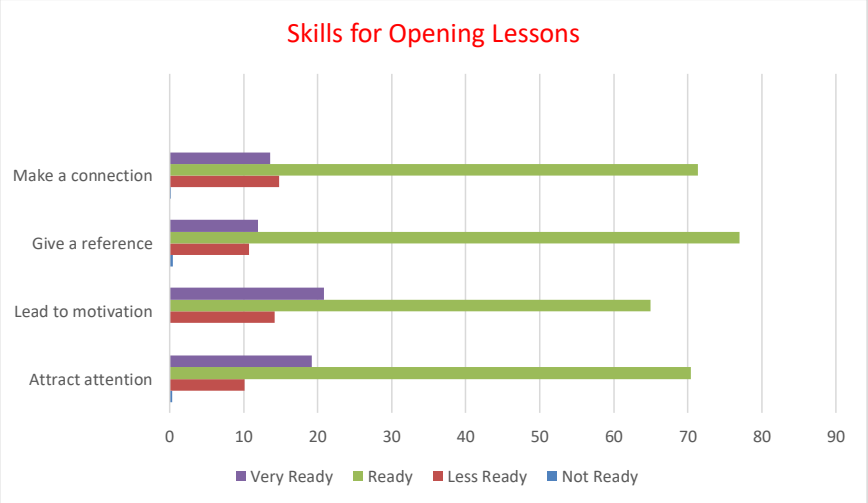

Figure 1. Skills for Opening Lessons

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Based on Figure 1 above, it can be seen that the indicators of skills attract students' attention when opening learning as much as 19.2% of students feel very ready, 70.4% feel ready, 10.1% feel less ready, and only 0.3% feel not ready. These results indicate that as many as 89.6% of students of the Department of Economic Education, Faculty of Economics, UNESA as future teacher candidates already have the skills to attract good students when opening learning. Students feel they already have good confidence in terms of appearance and attitude as a teacher that they get from learning in the course of the Management and Learning Program so they feel ready to attract the attention of students.

On the skills indicator, motivation as much as 20.8% of students feel very ready, 65% of students feel ready, and 14.2% of students feel less ready. These results indicate that as much as 86.3% of prospective VHS teachers already have the skills to cause good motivation when opening learning. These skills are needed by students as prospective educators in order to make students who will be given the material to be interested in the material to be learned by using various forms of learning motivation.

Then, on the skills indicator as many as 11.9% of students feel very ready, 77% feel ready, 10.7% of students feel less ready, and only 0.4% of students feel unprepared. These results indicate that as many as 88.9% of prospective teachers already have the skills to provide a good reference when opening learning. Giving a reference in question is to give instructions on what activities will be carried out in learning. Thus, learning will be directed and effective in achieving learning objectives.

In the skills indicator making connections as many as 13.6% of students feel very ready, 71.4% feel ready, 14.8 feel less ready, and only 0.2% of students feel unprepared. These results indicate that as many as 85% of prospective VHS teachers already have the skills to make good connections when opening learning. By having these skills, students will be able to open learning to be meaningful because it can link the material learned by students so that the material given will last long in students' memories. This skill will certainly add value to students as prospective quality educators.

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B. Aspect of Explaining Skills

In the aspect of explaining skills, the readiness of vocational teacher candidates can be seen in Figure 2 below:

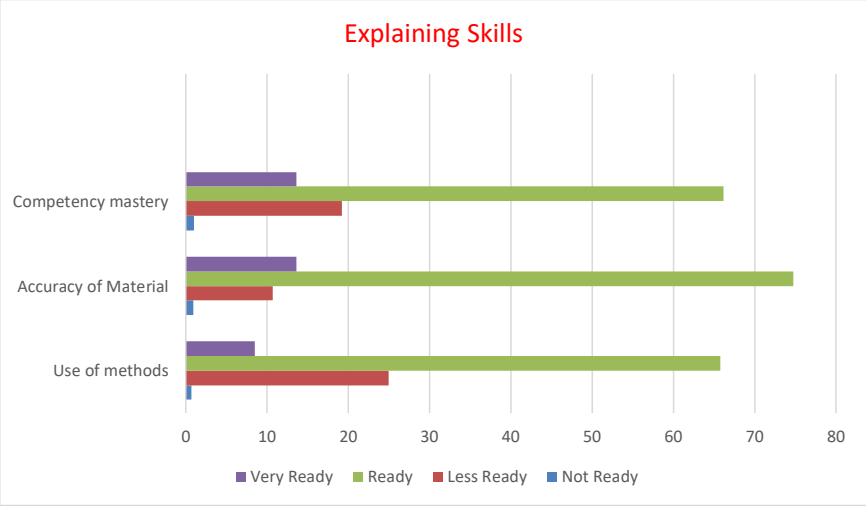

Figure 2. Explaining Skills

Based on Figure 2 above, it can be seen that the 8.5% of students feel very ready, 65.8% of students feel ready, 25% of students feel less ready, and 0.7% of students feel unprepared. These results indicate that prospective VHS teachers already have good readiness in the use of appropriate learning methods. Students as future teacher candidates already have good knowledge about various methods that can be used in learning.

On the indicator of the accuracy of the material as much as 13.6% of students feel very ready, 74.8% of students feel ready, 10.7% of students feel less ready, and as much as 0.9% feel not ready. These results indicate that VHS teacher candidates already have a good readiness in the accuracy of the selection of material used when explaining in learning activities. Students have experience learning about materials related to subjects that will be taught when becoming a teacher later. Students are equipped with knowledge and skills according to their area of expertise in each study program.

Furthermore, the indicators of mastery of competence as many as 13.6% of students feel very ready, 66.2% of students feel ready, 19.2% of students feel less ready, and as much as 1% of students feel not ready. These results indicate that as many as 79.8% of prospective VHS teachers already have good readiness in competency mastery that they will teach later when entering the workforce. Good mastery of competencies will make it easier for students to adapt to the teaching world in the 21st century of learning today.

C. Aspects of Asking Skills

In the aspect of questioning skills, readiness of vocational teacher candidates can be seen in the following figure 3:

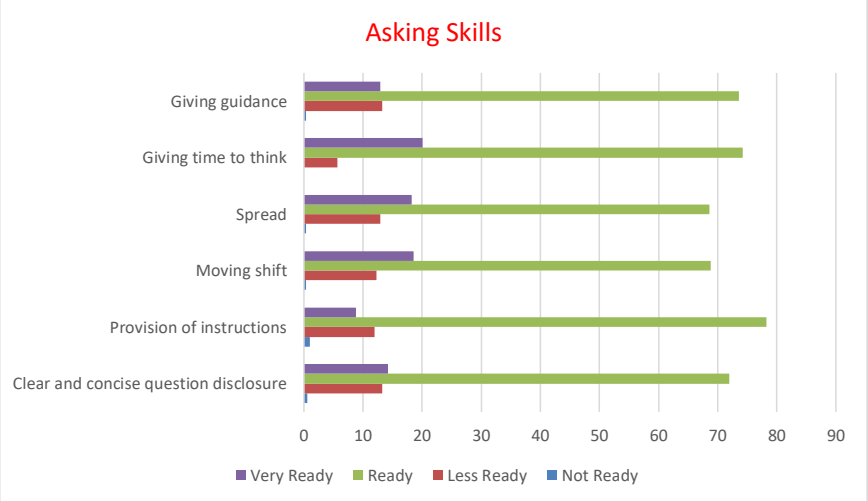

Figure 3. Asking Skills

Based on Figure 3 above, it can be seen that the clear and concise questioning skill indicator of 14.2% of students feels very ready, 72% of students feel ready, 13.2% of students feel less prepared, and as much as 0.6% of students feel they are not ready. These results indicate that as many as 76.2% of vocational teacher candidates already have the skills to express questions clearly and concisely when conducting question and answer activities in learning. This skill is also needed when later making evaluation questions at the end of learning.

Then, on the indicator of giving guidance as much as 8.8% of students feel very ready, 78.3% of students feel ready, 11.9% of students feel less prepared, and 1% of students feel not ready. These results indicate that as many as 87.1% of vocational teacher candidates already have good reference skills when conducting question and answer with students. The reference is given to give students a clear picture and boundary of the questions and answers intended by the teacher and vice versa.

On the turn shift indicator 18.6% of students feel very ready, 68.8% of students feel ready, 12.3% of students feel less ready, and as many as 0.3% of students feel not ready. These results indicate that as many as 87.4% of vocational teacher candidates already have shifting skills when conducting Q&A in learning. This shifting of turns is necessary so that the interaction between the teacher and students is not only centered on one individual student but is comprehensive on each individual in the class.

In the indicator of the spread of questioning skills as many as 18.2% of students feel very ready, 68.6% of students feel ready, 12.9% of students feel less ready, and as much as 0.3% of students feel not ready. These results indicate that as many as 86.8% of prospective vocational teacher teachers already have good dissemination skills when conducting Q&A with students.

Furthermore, in the indicator of giving time to think when doing questions and answers as many as 20.1% of students feel very ready, 74.2% of students feel ready, and as much as 5.7% of students feel not ready. These results indicate that as many as 84.3% of vocational teacher candidates already have good accuracy in giving students time to think when giving questions to students.

On the indicator of providing guidance as many as 12.9% of students feel very ready, 73.6% of students feel ready, 13.2% of students feel less ready, and as much as 0.3% of students feel not ready. These results indicate that as many as 86.1% of vocational teacher candidates already have good skills in giving demands to students to find the right and correct answers to questions raised by teachers to their students.

D. Aspects of Strengthening Skills

In the aspect of strengthening skills, the readiness of vocational teacher candidates can be seen in the following figure 4:

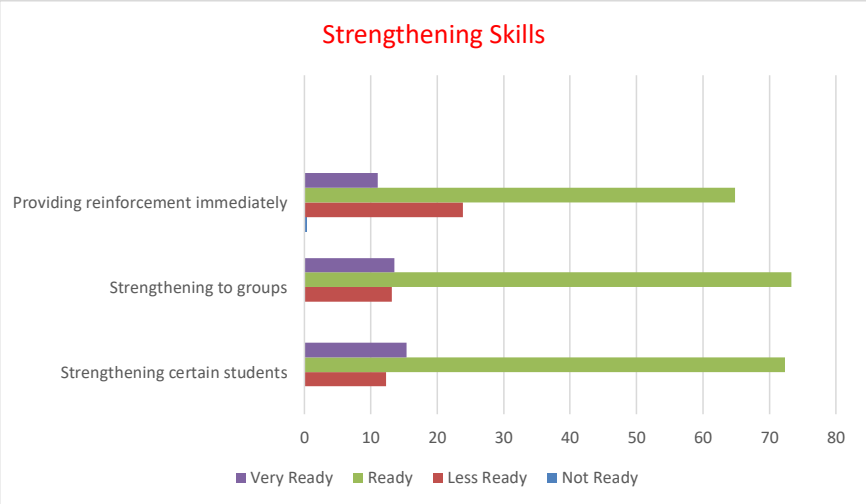

Figure 4. Strengthening Skills

Based on Figure 4 above, it can be seen that the indicators of reinforcement to certain students when learning as much as 15.4% of students feel very ready, 72.3% of students feel ready, and as much as 12.3% of students feel not ready. These results indicate that as many as 87.5% of vocational teacher candidates already have good skills in providing reinforcement to certain students. This reinforcement is given to students who can do a good job in the form of praise, or reinforcement by reprimand when there are students who make mistakes. Thus students will be ready to become teachers who are able to control the class.

In the reinforcement indicator to the group as much as 13.5% of students feel very ready, 73.3% of students feel ready, and as much as 13.2% of students feel less ready. These results indicate that 86.8% of vocational teacher candidates already have good skills in providing reinforcement to study groups. This will be the provision of students as prospective teachers in guiding the course of learning through cooperative-based learning.

Then, on the indicator of giving reinforcement immediately as many as 11% of students feel very ready, 64.8% of students feel ready, 23.9% of students feel less ready, and as much as 0.3% of students feel not ready. These results indicate that as many as 75.8% of vocational teacher candidates already have good skills in providing reinforcement immediately. This means that students as prospective teachers already feel they have good punctuality when it is necessary to strengthen learning.

E. Aspects of Making Variation Skills

In the aspect of the skills to hold variations, the readiness of vocational teacher candidates can be seen in Figure 5 below:

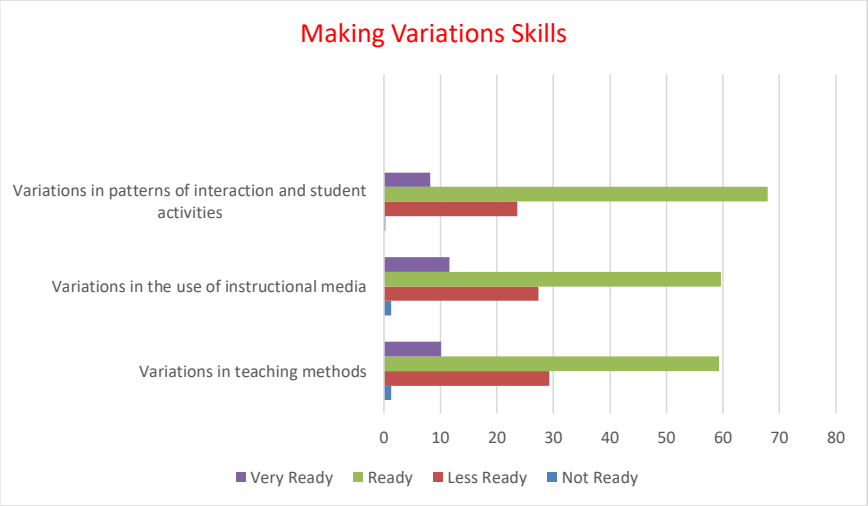

Figure 5. Making Variations Skills

Based on Figure 5 above, it can be seen that the variation indicators in how to teach 10.1% of students feel very ready, 59.3% of students feel ready, 29.3% of students feel less ready, and as much as 1.3% of students feel not ready . These results indicate that as many as 69.4% of vocational teacher candidates already have good skills in providing variations in the way of teaching. Students have been provided with provisions on various models and methods that can be used in learning so that the class becomes lively and enjoyable.

On the indicator of variation in the use of instructional media as many as 11.6% of students feel very ready, 59.7% of students

feel ready, 27.4% of students feel less ready, and 1.3% of students feel not ready. These results indicate that as many as 71.3% of vocational teacher candidates already have good skills in the use of learning media. Students already know various types of media that can be used to facilitate the delivery of material to students later. However, the obstacle faced by many students as prospective teachers is the limited availability of suitable learning media. This is a challenge and also the reason why 28.7% of students feel they are not ready to use media variations in learning.

Then, the indicator variation in the patterns of interaction and student activities as much as 8.2% of students feel very ready, 67.9% of students feel ready, 23.6% of students feel less ready, and as much as 0.3% of students feel not ready. These results indicate that as many as 76.1% of vocational teacher candidates already have good skills when giving variations in patterns of interaction and student activities. This is needed by students as prospective teachers so that the learning atmosphere is not boring and saturated so students will be interested in learning.

F. Aspects of Closing Lessons Skills

In the aspect of closing skills, the readiness of vocational teacher candidates can be seen in Figure 6 below:

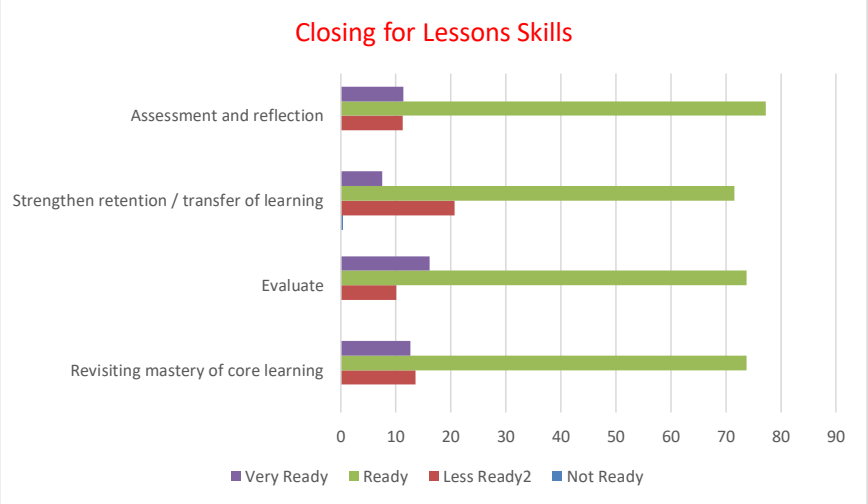

Figure 6 Closing for Lessons Skills

Based on Figure 6 above, it can be seen that the indicator revising the mastery of learning core as many as 12.6% of students feel very ready, 73.8% of students feel ready, and only as much as 13.6% of students feel less ready. These results indicate that as many as 76.4% of prospective vocational teachers already have good skills in reviewing the mastery of core learning. These skills are needed to be able to summarize what has been learned at the end of learning.

Then in the evaluation skills indicator as many as 16.1% of students feel very ready, 73.8% of students feel ready, and as many as 10.1% of students feel less ready. These results indicate that as many as 89.8% of vocational teacher candidates already have good evaluation skills at the end of learning. With good evaluation skills students as prospective teachers will be able to know the learning achievements that have been achieved so as to determine further learning activities.

On the indicator of strengthening retention / transfer of learning as much as 7.5% of students feel very ready, 71.5% of

students feel ready, 20.7% of students feel less ready, and as much as 0.3% of students feel not ready. These results indicate that as many as 79% of vocational teacher candidates already have good skills in strengthening the retention / transfer of learning conclusions to students at the end of learning.

Furthermore, in the assessment and reflection indicators as many as 11.4% of students feel very ready, 77.3% of students feel ready, and only as much as 11.3% of students feel less ready. These results indicate that as many as 88.7% of vocational teacher candidates already have good skills in assessing and reflecting. This is closely related to the determination of student learning outcomes that must be done by the teacher as a report and evaluation material from the teacher of the learning activities that have been carried out. Students as prospective teachers of the 21st century will also be able to choose the use of evaluation methods that are appropriate to technological developments.

G. Skills Aspect in Preparing Learning Implementation Plan (RPP)

In the aspect of skills in preparing the Learning Implementation Plan (RPP), the readiness of prospective vocational teacher candidates can be seen in Figure 7 below:

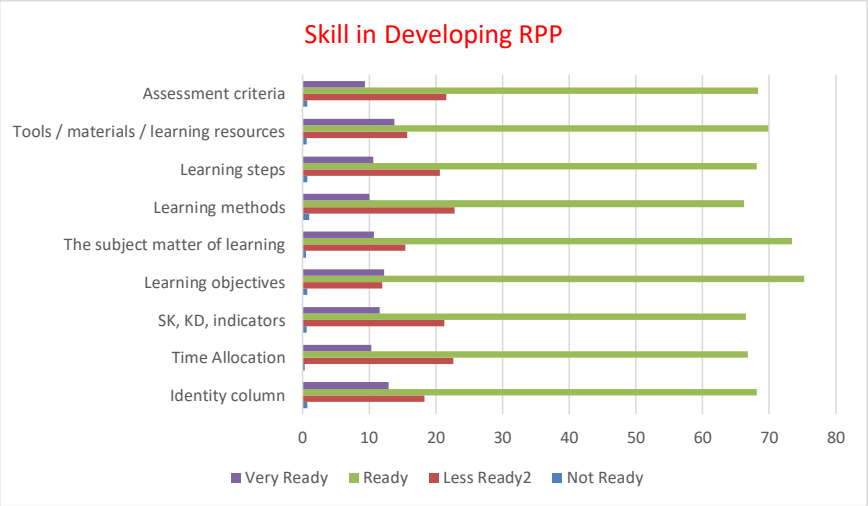

Figure 7. Skills in Developing RPP

Based on Figure 7 above, it can be seen that the indicators of filling the identity column in the preparation of the RPP are 12.9% of students feel very ready, 68.1% of students feel ready, 18.3 students feel less ready, and as much as 0.7% of students feel not ready. These results indicate that as many as 81% of vocational teacher candidates already have good skills in filling the identity column in the preparation of lesson plans.

Then in the indicator of filling the time allocation in the preparation of the RPP as much as 10.3% of students feel very ready, 66.8% of students feel ready, 22.6% of students feel less ready, and as much as 0.3% of students feel not ready. These results indicate that as many as 77.1% of vocational teacher candidates already have good skills in filling the time allocation in the preparation of the RPP.

In the indicators of deciding SK, KD, indicators on the preparation of RPP 11.6% of students feel very ready, 66.5% of students feel ready, 21.3% of students feel less ready, and as much as 0.6% of students feel not ready. These results indicate that as many as 78.1% of vocational teacher candidates

already have good skills in determining SK, KD, indicators on the preparation of RPP.

In the indicator of determining learning objectives in the preparation of the RPP as many as 12.2% of students feel very ready, 75.2% of students feel ready, 11.9% of students feel less ready, and as much as 0.7% of students feel not ready. These results indicate that as many as 87.4% of vocational teacher candidates already have good skills in determining learning objectives in the preparation of lesson plans.

In the indicator of determining the subject matter of learning in the preparation of RPP 10.7% of students feel very ready, 73.4% of students feel ready, 15.4% of students feel less ready, and as much as 0.5% of students feel not ready. These results indicate that as many as 84.1% of vocational teacher candidates already have good skills in determining the subject matter of learning in the preparation of lesson plans.

In the indicator of the selection of learning methods in the preparation of RPP as much as 10% of students feel very ready, 66.2% of students feel ready, 22.8% of students feel less ready, and only as much as 1% of students feel not ready. These results indicate that as many as 76.2% of vocational teacher candidates already have good skills in the selection of learning methods in the preparation of lesson plans.

In the indicator of determining the steps of learning in the preparation of the lesson plan as much as 10.6% of students feel very ready, 68.1% of students feel ready, 20.6% of students feel less ready, and as much as 0.7% of students feel not ready. These results indicate that as many as 78.7% of prospective vocational teachers already have good skills in determining the steps of learning in the preparation of lesson plans.

In the indicator of determining the tools / materials / learning resources in the preparation of RPP as many as 13.8% of students feel very ready, 69.9% of students feel ready, 15.7% of students feel less ready, and as much as 0.6% of students feel not ready. These results indicate that 83.7% of vocational teacher candidates already have good skills in determining the tools/ materials/ learning resources in the preparation of lesson plans.

In the indicator of determining the assessment criteria of learning in the preparation of RPP 9.4% of students feel very ready, 68.3% of students feel ready, 21.6% of students feel less ready, and as much as 0.7% of students feel not ready. These results indicate that as many as 77.7% of vocational teacher candidates already have good skills in determining the learning assessment criteria in the preparation of lesson plans.

Based on the results of the study above it can be concluded that prospective vocational teachers have good readiness in teaching skills. All teaching competencies are employability skills that must be possessed by prospective teachers in dealing with the world of work (Verna, et al, 2018: 122). By having good competency mastery, prospective teachers will be easier to work and better prepared to face the world of work because they have good skills (Lestari & Siswanto, 2015: 188).

Ability Mastery Technology Candidate Master Vocational High School (VHS)

Based on the results of research conducted to students majoring in Economic Education UNESA obtained information about the readiness of prospective Vocational High School (SMK) teachers in dealing with the world of work seen from teaching skills which are divided into eight aspects as follows:

A. Aspects of Technology Use

In the aspect of technology use, the readiness of vocational teacher candidates can be seen in Figure 8 below:

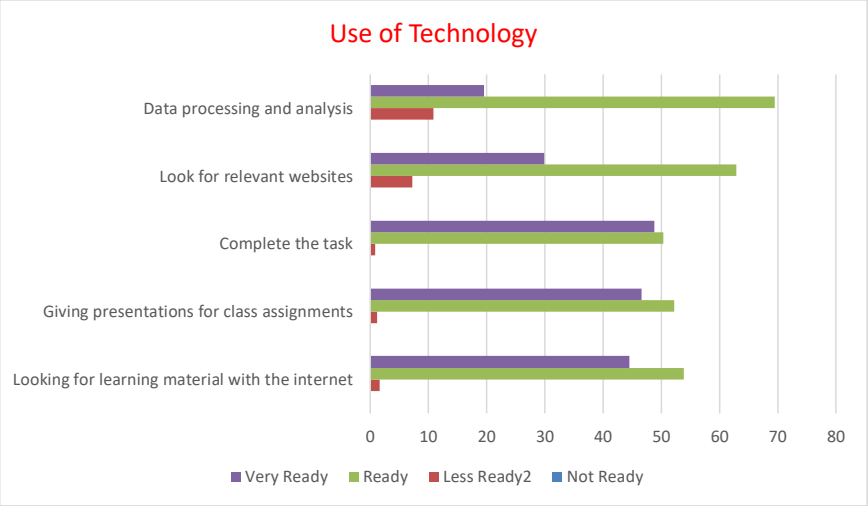

Figure 8. Use of Technology

Based on Figure 8 above it can be seen that the indicators of the use of technology to search for learning materials with the internet as much as 44.5% of students feel very ready, 53.9% of students feel ready, and only as much as 1.6% of students feel less ready. These results indicate that all prospective vocational teachers already have good skills in using technology to search for learning materials on the internet. Students are already familiar with the ease of accessing various information provided on the internet in everyday life.

On the indicator of the use of technology for giving presentations for assignments in class as many as 46.6% of students feel very ready, 52.2% of students feel ready, and only as much as 1.2% of students feel less ready. These results indicate that 98.8% of vocational teacher candidates already have good skills in the use of technology in giving presentations for assignments on the internet. Students are able to present varied assignments after material presentations.

Furthermore, on the indicator of the use of technology to complete assignments, 48.8% of students feel very ready, 50.3% of students feel ready, and only 0.9% of students feel less ready. These results indicate that 99.1% of vocational teacher candidates already have good skills in using technology to complete assignments on the internet. As prospective teachers, students already have good abilities in utilizing technology to complete assignments or other obligations.

On the indicator of the use of technology to search for relevant websites as many as 29.9% of students feel very ready, 62.9% of students feel ready, and only as much as 7.2% of students feel less ready. These results indicate that 92.8% of vocational teacher candidates already have good skills in the use of technology for relevant websites on the internet. Students usually still find obstacles in filtering data sources from websites that are found so that there are still 7.2% who are not ready to search for relevant sources of websites.

On the indicator of the use of technology for process and data analysis as many as 19.6% of students feel very ready, 69.5% of students feel ready, and only as much as 10.9% of students feel less ready. These results indicate that 89.1% of vocational teacher candidates already have good skills in using technology to search for learning materials on the internet. Students have been equipped to use technology-based evaluation tools in learning assessment courses, but students as prospective teachers sometimes still feel confused using

technology for the appropriate data analysis process so that there are still not ready to use technology as much as 10.9%.

B. Technological Competency Aspects

In the aspect of competency in technology expertise, the readiness of vocational teacher candidates can be seen in Figure 9 below:

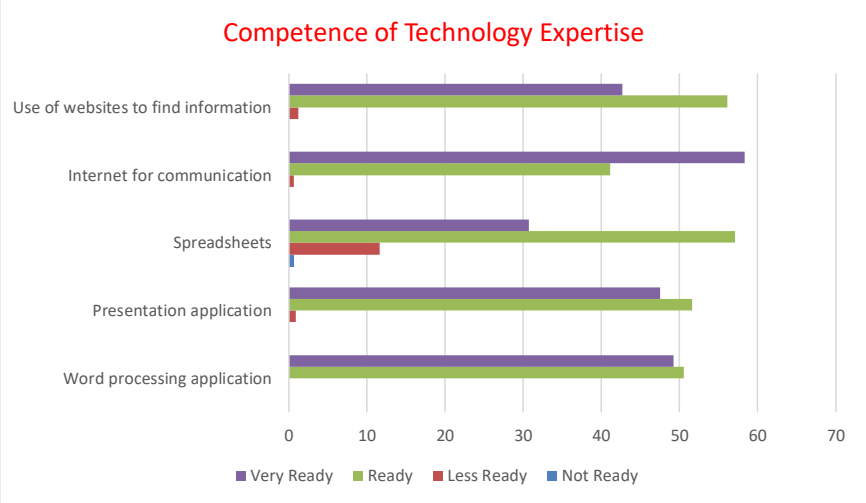

Figure 9. Competence of Technology Expertise

Based on Figure 9 above, it can be seen that the indicator of the use of word processing applications as much as 49.2% of students feel very ready and as much as 50.5% of students feel ready. These results indicate that all prospective vocational teachers already have good skills in using word processing applications, such as Microsoft Word. Students are already accustomed to using this application during learning in college so they find no obstacles in its use.

In the indicator of the use of presentation applications as many as 47.5% of students feel very ready, 51.6% of students feel ready, and only as much as 0.9% of students feel less ready. These results indicate that 99.1% of vocational teacher candidates already have good skills in using presentation applications, such as Microsoft Power Point. Students have often been trained to use this application to present assignments given during lectures. The remaining 0.9% feel they have not yet cheered because they have not mastered all the features provided in the Microsoft Power Point application.

On the indicator of the use of spreadsheets as much as 30.7% of students feel very ready, 57.1% of students feel ready, 11.6% of students feel less ready, and as much as 0.6% of students feel not ready. These results indicate that 87.8% of vocational teacher candidates already have good skills in using the Spreadsheet application. Students have been equipped in depth about this application program in excel automation courses while in college. Students who feel not ready to use this spreadsheet application because they still feel confused using the functions provided in the application.

On the internet usage indicator for communication as much as 58.3% of students feel very ready, 41.1% of students feel ready, and only as much as 0.6% of students feel less ready. These results indicate that 99.4% of vocational teacher candidates already have good skills in using the internet for communication, such as the use of email, whatsapp, and others. The use of the internet is very helpful in facilitating between teachers and students.

Then in the use of website indicators to look for information as much as 42.7% of students feel very ready, 56.1% of students feel ready, and only as much as 1.2% of students feel less ready. These results indicate that 98.8% of vocational teacher candidates already have good skills in using websites to search for information. The ease of accessing this information is also influenced by the availability of free Wi-fi services provided by the Faculty of Economics during lectures.

C. Aspects of Training the Use of Technology

In the aspect of training in the use of technology the readiness of vocational teacher candidates can be seen in Figure 10 below:

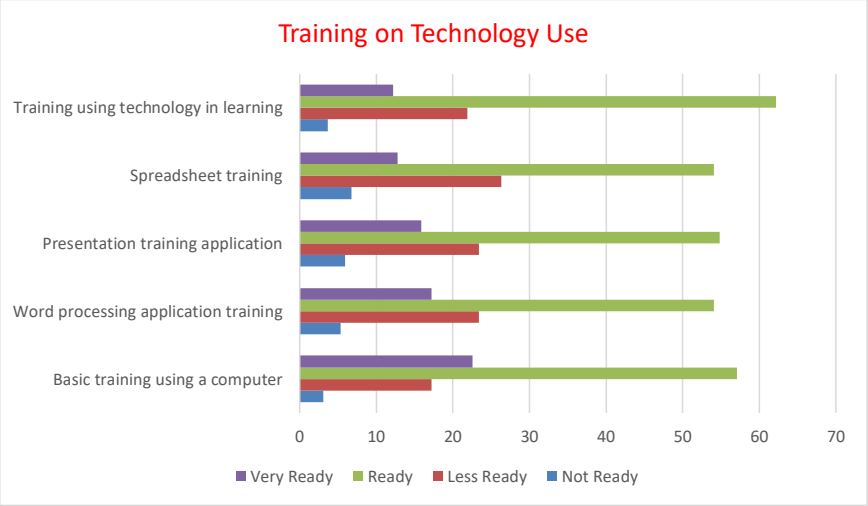

Figure 10. Training on Technology Use

Based on Figure 10 above, it can be seen that the basic training indicators using computers as much as 22.6% of students feel very ready, 57.1% of students feel ready, 17.2% of students feel less prepared, and as much as 3.1% of students feel not ready. These results indicate that 78.7% of vocational teacher candidates have attended basic training using computers during lectures. By having the basic training provision, students have good readiness in dealing with the world of work in any field other than in education.

In the word processing application training indicators as many as 17.2% of students feel very ready, 54.1% of students feel ready, 23.4% of students feel less ready, and as much as 5.3% of students feel not ready. These results indicate that 71.3% of vocational teacher candidates have participated in word processing application training. These skills are needed in entering the workforce in any field so that mastery of skills illustrates good readiness in dealing with the world of work.

In the presentation application training indicator, 15.9% of students felt very ready, 54.8% of students felt ready, 23.4% of students felt less ready, and only 5.9% of students felt unprepared. These results indicate that 70.7% of vocational teacher candidates have participated in a presentation application training. As many as 30% master the presentation application from the results of following the tutorial on the internet and their peers. This presentation application training is really needed by students as prospective teachers, because at present almost all learning material is explained using power point media.

In the spreadsheet training indicator as many as 12.8% of students feel very ready, 54.1% of students feel ready, 26.3% of students feel less prepared, and as much as

6.8% of students feel not ready. These results indicate that 68.9% of vocational teacher candidates have participated in spreadsheet training so they feel ready to face the world of work. Mastery of this application is needed especially for graduates majoring in Economic Education related to financial management.

Then in the training indicators using technology in learning as many as 12.2% of students feel very ready, 62.2% of students feel ready, 21.9% of students feel less ready, and only as much as 3.7% of students feel not ready. These results indicate that 74.4% of vocational teacher candidates have participated in training using technology in learning obtained from workshops and seminars. This training is needed as a provision to optimize the use of technology in learning in the 21st century.

Based on the above research results it can be concluded that vocational teacher candidates have good readiness in the ability to master technology. During their education at the tertiary level, prospective graduates have been accustomed to using various technology-based applications and programs. Therefore, the use of technology in education continues to be developed in all levels of education (Lai, 2008: 18). Technology mastery is the employability skills needed by prospective teachers in the current age of learning (Winterton & Turner, 2019: 536). Prospective teachers must have a good mastery of technology to be able to provide information and learning experiences for their students. Especially in today's fast-paced world, technology-facilitated activities have become an integral part of providing educational services and in various companies (Ramaseshan, Kingshott & Stein, 2015: 754). The use of technology in learning will facilitate the learning process and create a pleasant learning atmosphere (Pratiwi, Bahtiar, & Hardini, 2019: 186). Thus, teacher candidates who have good mastery of technology will be able to create optimal learning.

CONCLUSION

Based on the above research results it can be concluded that vocational teacher candidates have good job readiness in dealing with the world of work in the 4th industrial era viewed from teaching skills and mastery of technology. The average student stated that he already had enough to face the world of work from the lecture process that he had obtained so far. Graduates' job readiness is now an important criterion for getting a job (in this study as a prospective vocational teacher) and has become increasingly demanded in the development of university graduate skills (Cavanagh et al., 2015: 279; Hager & Holland, 2006: 67). Prospective teachers are expected to be in job-ready mode and with a level of employability that can be demonstrated when they drop out of university studies (Clarke, 2018: 1924; Prikshat, Kumar, & Nankervis, 2019: 568).

Prospective teachers already have good teaching skills because they are equipped with various theories and practices directly to school so that prospective teachers have the experience they are ready to use in dealing with the world of work. In the ability to master technology, vocational teacher candidates already have a good readiness in the use of technology in learning. Indonesia as a developing country has the opportunity to encourage the growth of information and communication technology (such as: internet, telecommunications and social media). Moreover prospective teachers will face students in their teens who have become critical consumer segments because of the continuous exposure and familiarity with digital technology everywhere so prospective teachers must be prepared to face these challenges (Mishra, Maheswarappa, & Colb, 2018: 592).

In other hand, the prospective teachers feel they are still not optimal in mastering the spreadsheet application. Though this application is one of the applications most demanded to be mastered in the world of work in the industrial revolution era which is closely related to the use of technology. Excel automation courses can be optimized for learning at university. Work skills can be improved by applying effective work practices, readiness to learn through various trainings, and competency-based technical skills according to the area of expertise they are capable of (Fitriyanto & Pardjono, 2019: 132).

Commented [A13]: Tuliskan data kuantitatifnya

Commented [A14]: Konsistensi penulisan work readiness atau job readiness

Commented [A15]: Semua sitasi dalam kesimpulan dipindahkan ke bagian diskusi hasil penelitian

Commented [A12]: Kesimpulan disesuikani dengan tujuan penelitian

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