Vocational skills learning model strategies during covid-19

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Abstract. The focus of this research is the skills learning model used by teachers, especially those who teach practical subjects. In accordance with the purpose of vocational education which says that graduates from vocational high schools are graduates who are ready to work in the industrial and business world. The purpose of this study is to describe the skills learning model strategy used by teachers when Covid-19 hit Indonesia. The research method used is a qualitative research method with a descriptive approach. Collecting data using observation, interviews, and documentation. The results obtained are: (1) teachers who teach subjects related to the practice of getting obstacles and difficulties because online learning is very influential on internet networks, (2) teachers only use online learning models using video learning media, so that the teacher only sends a learning link to students via WhatsApp Class group, (3) some students experience difficulties in learning online because the internet signal or network is not always good. (4) with the covid-19 all learning in schools is required online, so that teachers must be proficient in using technology.

1. Introduction

The labor market in the current era of globalization requires more skilled personnel to use sophisticated technological tools. On the other hand, labor competition is getting tougher because the population of Indonesia is increasing, and industrial machines are also very much replacing human labor because they have experienced the industrial revolution 4.0. On that basis, educational institutions, especially those with the aim of preparing skilled workers such as vocational education or other names of vocational high schools, must strive to produce a workforce that is ready to use in accordance with the needs of the job fields desired by the industry. Vocational education must strive to educate students in accordance with the required job requirements so that students after completing vocational education can be accepted in a job that is needed [1].

One of the efforts made in Indonesia is to provide vocational education as an education that can reduce high unemployment. This education is intended so that students will later have special skills or skills according to the needs of the job field. Even before students finish attending education, there is already a job field that is ready to accept students without looking for a place of work. Further than this goal, students should be able to become entrepreneurs so that they do not depend on certain companies or institutions to accept them as laborers.

To achieve 21st century competence in vocational learning requires motivation, namely by integrating ICT into the learning system. This ICT integration is done by combining face-to-face...
learning with online learning or better known as blended learning. The type of blended learning that can be used is face-to-face online. Students first take part in online activities to get the same initial supplies then continue activities with the teacher in face-to-face learning. Blended learning is a form of electronic learning that is suitable for use as a supplement in learning because it combines the face-to-face learning process with online learning. Blended learning optimizes services and learning processes, both online, traditional, media and even computer-based learning into a single whole. Skills are a description of a person's proficiency level in mastering certain motor movements or dexterity in carrying out a task [2]. Someone is said to have skills if they have mastered certain tasks, so that they are able to do something independently with good results.

Vocational skills are part of the concept of life skills in the school system [3]. So far, vocational skills are mostly given to Vocational High Schools, while for Senior High School students, such vocational skills are not so important. Vocational skills in high school students can be provided through skills lessons. This is in line with the statement that local potential-based learning can be carried out in three ways, namely integration in relevant subjects, local content, and skills-oriented subjects that are oriented towards making work supported by the knowledge, attitudes, skills, and products produced [4]. The main objective of vocational skills is to increase the relevance of vocational education and guidance to the development needs of the world of work in realizing a prosperous country and society that is competitive and oriented towards sustainable development. Therefore, vocational skills should not be trapped only in a narrow market orientation. Vocational must build a prosperous society for now and in the future. Vocational skills also carry the vision and mission of building and maintaining the universe and all its contents to become "hamemayu ayuning bawana". The world is beautiful or good to be repaired continuously to get better. Vocational skills should not be trapped in a momentary need, let alone threaten survival. This is a moral message of vocational skills through vocational and vocational education. Vocational and vocational education is not solely for obtaining pleasure, convenience, comfort, temporary security, but for further purposes, namely a happy and peaceful life together [5].

Thus, the purpose of vocational skills education is a concept designed to facilitate students to develop skills or potential that they have from birth, so that this potential can develop to face the progress of globalization in the public. Vocational mental enhancement for students is very important to be actualized. Because this effort will be directed at developing skills in an educational institution. Increased vocational mentality can welcome a bright future, full of competitiveness and be able to face life's challenges in the future. Life's increasingly challenging challenges require our readiness to enter the world of work. Even if they are not ready to work but being able to build their own business and jobs is a must that need to be implemented. Armed with the skills possessed, the opportunity to compete in the world of work is very open. In this context, the skills acquired in school need to be manifested in the realities of life. In this case, it will describe the efforts that can be made to improve students' mental.

The Covid-19 pandemic has hit all countries in the world, including Indonesia. According to the latest data from the World Health Organization (WHO) on April 24, 2020, 213 countries have contracted Covid-19, 2,631,839 of which have been confirmed positive and 182,100 have died. Covid-19 is a contagious disease, which means it can spread, either directly or indirectly, from one person to another. This condition attacks the respiratory system such as the nose, throat, and lungs. The complexity of handling the outbreak, the absence of vaccines and drugs to cure Covid-19 patients and the limited personal protective equipment (PPE) for health workers have made the government implement strict policies to break the chain of Covid-19 spread.

One way to break the chain of spreading COVID-19 is by limiting community interaction which is applied by means of physical distancing. However, this physical distancing policy can inhibit the rate of growth in various fields of life, both in the economic, social, and of course education sectors. The government's decision to dismiss students, move the teaching and learning process at schools to at home by implementing the Work from Home (WFH) policy has made many parties nervous. WFH stands for work from home which means working from home. The WFH policy is
contained in the Circular of the Minister of State Apparatus Empowerment and Bureaucratic Reform (PAN & RB) Number 50/2020 concerning the Second Amendment to the Circular of the Minister of PAN & RB Number 19/2020 concerning Adjustment of the Work System of State Civil Apparatus in Efforts to Prevent the Spread of Covid-19 in Government Agencies. As ASN, teachers to carry out the learning process need to be done online or in a network (online). However, the implementation of the online learning process has several obstacles. One of the toughest obstacles in online learning is teaching mathematics. The problem today is that there are still many students who think that practice is more difficult to follow online.

Vocational education is education that provides basic provisions and exercises that are carried out correctly to students regarding the values of daily life so that they are capable, capable, and skilled in carrying out their lives, namely being able to maintain their survival and development. In this way, education will be more realistic, more contextual, will not uproot students from their roots, so that education will be more meaningful to students and will thrive. A person is said to have life skills if he is capable, capable, and skilled in living life happily and happily. The life in question includes personal life, family life, neighbor life, community life, corporate life, national life, and other lives [6].

Independence in children will be manifested when they use their own minds in making various decisions, from choosing the learning equipment they want to use, choosing a playmate, to things that are relatively more complicated and involve certain more serious consequences [7]. Vocational education is education in which it contains a curriculum that is sensitive to the various needs of experts needed in an industrial world. Vocational High School is one of the vocational education programs in Indonesia that prepares graduates to be ready to work with the knowledge, skills and work attitudes in certain fields that are in accordance with the needs of the business world and the industrial world (DUDI), and are expected to be entrepreneurial [8]. Vocational High Schools as one of the important roles in preparing the workforce are required to be able to keep up with the changing and developing market demands. Republic of Indonesia Government Regulation No. 29 of 1990 concerning secondary education article 3 paragraph 2 also states that vocational high schools prioritize the preparation of their students to enter the workforce / world of work and are able to develop professional attitudes in work.

Learning aims to support the delivery of knowledge by the teacher. Currently learning with the lecture method concentrates more on teacher activities, not students. Student learning activities are the main goal of learning. So that the teacher as a facilitator must be a bridge to the success of student learning achievement. Vocational High School is substantially one of the educational institutions that aims to produce graduates who are ready to work, have entrepreneurial spirit, are smart, competitive, have national identity and are able to develop local advantages and can compete in the global market. The vocational education system is required to produce learning outcomes in accordance with the needs of the world of work [9]. These objectives are stated in the National Education System Law No. 20 of 2003 Article 15 which states that the special purpose of SMK is to prepare students to become productive humans, able to work independently, to fill job vacancies in the business world and industry as middle-level workers according to the competence in the expertise program they choose. Vocational education is an effort to develop the social workforce, maintain, accelerate, and improve the quality of certain workers in the context of increasing the productivity of the community. Every human resource is required to have a certain expertise certification so that it can answer the challenge of the gap with the high need for industry players for experts who have been tested in their respective fields (Bob Azam, Director of Administration, Corporate & External Affairs TMMIN). The reality in the field at this time shows that the existence of Vocational High Schools as the holder's role in preparing the workforce is still considered insufficient for preparing ready-to-work graduates [10]. There is a difference between the goals of education and employment / industry because schools only want graduates who have high scores in a fast time, whereas in the industrial world they want graduates with technical competence and good work attitudes [11].

This study aims to describe the strategy for learning models of vocational skills when Covid-19 is based on the internet network. The results of this study are expected to provide benefits both
theoretically and practically. Theoretically, this research can add insight into the vocational skills learning model. It is hoped that it can be used as a basis for developing knowledge related to vocational education. Practically for educational institutions, it can provide consideration and input in making policies related to the vocational education curriculum.

2. Method
This study used a qualitative research approach with a descriptive research design. This research is a research procedure that will produce descriptive data in the form of written sentences. Qualitative research according to Sukmadinata is a study aimed at describing and analyzing phenomena, events, social activities, attitudes, beliefs, perceptions, people's thoughts individually or in groups [12]. In this case the researcher uses data collection methods by means of observation, interviews, and documentation. In analyzing data, researchers must also test the validity of the data to obtain valid data. To obtain valid data, this study used five checking techniques proposed by Moleong. The five techniques are: (1) continuous observation, (2) triangulation of data sources, methods, and other research, (3) member checking, (4) peer discussion, and (5) checking on adequacy of references [13]. Analysis of research data, the data reduction stage is the stage of gathering all the information needed from the interview results and then grouping the data. The data display stage is the exposure of data that is needed in research and that does not need to be discarded. The withdrawal and conclusion verification stage is the stage of interpreting research data to draw conclusions based on the phenomena obtained [14].

3. Results and Discussion
The use of online media or multimedia-based media is one solution to make students able to understand the subject matter well. This is in line with the research results which show that there is a positive effect of using e-learning on the motivation and learning achievement of students at the Yogyakarta Annual Public Elementary School [15]. Online learning using online media has been implemented in various educational schools since the implementation of work from home on March 16, 2020 during the Covid-19 pandemic. The online media used are videos, YouTube, WhatsApp group, google classroom, and quizzes. The material is given in the form of power points, short videos, and reading materials. However, in the implementation of online learning, it is necessary to evaluate to obtain clear, data-based remedial steps. That is what underlies the author to describe the effectiveness of online learning using online media in the skills learning model.

The 2019 corona virus disease (Covid-19) outbreak which has hit 215 countries in the world, presents its own challenges for educational institutions, especially universities. To fight Covid-19, the Government has prohibited crowding, social distancing, and physical distancing, wearing masks, and always washing hands. Through the Ministry of Education and Culture, the Government has prohibited tertiary institutions from carrying out face-to-face (conventional) lectures and ordered to hold lectures or learning online (Kemendikbud Dikti Circular Letter No.1 of 2020). Higher education is led to be able to organize online learning or online [16].

A form of practical learning that can be used as a solution during the Covid-19 pandemic is learning vocational skills online using YouTube video media. Online learning is learning that uses internet networks with accessibility, connectivity, flexibility, and the ability to generate various types of learning interactions [17]. The use of the internet and multimedia technology is able to change the way of conveying knowledge and can be an alternative to learning that is carried out in traditional classrooms [18]. Online learning is learning that is able to bring together students and lecturers to carry out learning interactions with the help of the internet [19]. At the implementation level, online learning requires the support of mobile devices such as smartphones or Android phones, laptops, computers, tablets, and iPhones which can be used to access information anytime and anywhere [20]. Higher education institutions during the Work From Home period need to carry out strengthening of online learning [21]. Online learning has become a demand in the world of education since the last few years [22]. Online learning is needed in learning in the era of the industrial revolution 4.0 [23]. The
use of mobile technology has a major contribution in educational institutions, including the achievement of distance learning goals [24].

Various media can also be used to support the implementation of online learning. For example, virtual classes use Google Classroom, Edmodo, and Schoology services [25], and instant messaging apps like WhatsApp [26]. Online learning can even be done through social media such as Facebook and Instagram [27]. Online learning connects students with learning resources (databases, experts / instructors, libraries) that are physically separated or even far apart but can communicate, interact or collaborate (directly / synchronously and indirectly / asynchronously). Online learning is a form of distance learning that makes use of telecommunications and information technology, for example the internet, CD-ROM [28].

The results of this study indicate that students experience learning burnout both theoretically and practically due to various factors. These factors include unattractive media or material so that the presentation of material during the online learning process is carried out monotonously. The number of tasks given is accompanied by the provision of material without in-depth explanation. This raises a lack of understanding of the material, especially in understanding the skills of students. As a result, there is a feeling of laziness, loss of enthusiasm, stress, insomnia, tiredness and boredom of school materials during online learning. This causes learning boredom in students. In addition, the influence of the learning environment at home that is less supportive such as crowded, noisy, and uncomfortable also causes boredom in learning.

Video is a very effective medium to assist the learning process of vocational practice skills, both for mass learning, individually and in groups [29]. Videos are also non-printed teaching materials that are rich in information and complete because they can reach students directly. In addition, video adds a new dimension to learning vocational skills. This is because the characteristics of video technology can present moving images to students, in addition to the accompanying sound, so that students feel like they are in the same place as the program the video is broadcast on.

It is known that the level of retention (absorption and memory) of students on vocational skills practice subject matter can increase significantly if the process of obtaining information initially is greater through the sense of hearing and sight. Video is an audio-visual learning material that can be used to convey messages / subject matter [30]. It is said to appear heard because the element of hearing (audio) and the element of visual / video (visible) can be presented simultaneously. In other words, video is a series of electronic images accompanied by audio elements poured on the video tape, and can be viewed through a video player and if it is in the form of a VCD, it uses a VCD player connected to a television monitor. So, what is meant by video learning materials, namely learning materials that are packaged via video tape and can be viewed through a video / VCD player connected to a television monitor.

Video as a medium for learning vocational skills when Covid-19 hit the Indonesian nation, because it has both advantages and disadvantages. The advantages and disadvantages of one learning material are not necessarily the same as that of other learning media. The advantages of video learning materials include: (a) it is a motion medium for combining images and sounds; (b) able to influence human behavior beyond print media; (c) can be used immediately; (d) can be used repeatedly; (e) can present material which is physically incapable of being brought into the classroom; (f) can present objects in detail; (g) does not require a dark room; (h) can present a hazardous object; (i) can be slowed down or accelerated; and (j) can be used for classical or individual use.

Furthermore, the selection and use of video and animation media for learning vocational skills is adjusted to the needs, effectiveness and efficiency based on the advantages and disadvantages of each of these learning media. An example of using video media for learning is the delivery of material that aims at practice so that step by step will be observed on the original workpiece. Meanwhile, an example of using animation media for learning is the delivery of material related to the working principle of a tool or component in which a mechanical work process occurs, fluid movement and other processes that cannot be seen directly so that it can be observed properly. In learning vocational
skills, especially teachers who teach practical training in vocational education, the creativity of a
teacher is needed in delivering material to students online.

4. Conclusion
Based on the research that has been done, it can be concluded that in order to get good cognitive
aspects of student learning outcomes in vacuuming and filling refrigerant material, you can use video
or animation learning media. Meanwhile, to get better psychomotor and affective aspects of learning
outcomes in vacuuming and filling refrigerant material, video media can be used. Vocational skills
learning media with video is a tool used to convey learning material through a moving image display
that is projected to form the same character as the original object. Learning video media can be
classified into the types of audio-visual aids (AVA) media or media that can be seen and heard. The
use of video learning media can provide positive responses from students. Students are motivated to
learn and can improve their understanding of the subject matter presented.

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