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Vocational Students' Learning Experience during the Covid Pandemic

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Abstract

An intriguing research topic is uncovering student learning experiences during the Covid-19 pandemic. This article assists us in discovering and investigating how to adapt new habits or learning activities in Vocational Schools in the event of a Covid-19 pandemic. The research method uses narrative inquiry. In obtaining data from participants, they used interviews with semi-structured techniques to obtain information about their background, experiences during learning during the Covid pandemic and adaptability. Five questions guided our investigation into the learning experiences of vocational students in Central Java during the Covid-19 pandemic. The learning experience of secondary vocational students in Indonesia during the Covid-19 Pandemic uses learning technology facilities that are relatively simple, affordable for students and easy to implement by students. In the learning process, students can adapt to the new learning environment by discussing, collaborating with friends, teachers, and parents. Learning strategies, students strive to find good internet access, providing quotas in order to get smooth learning. Students are motivated in learning, one of the factors is the support of friends, teachers, parents both materially and morally. This study provides an opportunity for all students, teachers, writers, and readers to make references and contribute to the advancement of learning.

Keywords: Learning Experience, Covid-19 Pandemic, Qualitative, Vocational School Students,.

Introduction

One of the current trends for school students is the possibility of studying at Vocational High Schools. This is because vocational education has been revitalized. One strategy for developing Indonesian human resources is to transform vocational high schools into vocational centers of excellence that are in line with workplace needs, producing graduates who are absorbed in the workplace and become entrepreneurs. According to BPS data, the number of vocational graduates employed in 2019 has risen. Modern manufacturing and services such as tourism, finance, and health care, according to Kuncoro, (2018), are increasingly looking for qualified graduates from vocational schools. Data on formal sector employment and wage premiums among vocational high school graduates show that vocational students who find work after graduation do better than those with general secondary education. (ADB, 2014). The Ministry of Education and Culture is in charge of revitalizing formal and non-formal vocational education (Kemendikbud, 2016). In 2017 Narti et al., (2019) argues that the selection of vocational high schools is prepared to enter the world of work. As for Mardiyati & Yuniawati, (2015) discovered that Vocational High School students' career adaptability was higher than that of High School students. On a global scale, the Chinese government invests in vocational education at all levels of the Chinese educational system Hansen & Woronov, (2013), Zimmermann, (2021) reported that vocational students had a clear career plan. Lund & Karlsen, (2020) said that vocational education institutions in Norway train skilled workers and technical technicians to apply new technologies in the manufacturing industry and become competitive producers; additionally, vocational education in Swaziland is given higher priority than non-vocational education, and parents support vocational education (Mndebele & Dlamini, 2008). Thus, motivation and work readiness are critical for students interested in attending vocational high schools.

There are numerous obstacles that vocational students must overcome in order to be ready to work. Vocational students' abilities are frequently associated with poor academic performance (Tajuddin, 2013). In China, parents are strongly opposed to this type of education (Hansen & Woronov, 2013) they prefer public schools (Xue & Li, 2021).

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These students must be able to adapt to the ever-changing needs of the market at all times. Competency certification and creative entrepreneurship skills are required in the industrial era 4.0 in order to develop learning that is oriented toward the development of student competencies. As a result, it necessitates a confident, creative, self-sufficient, and hardworking mindset. Physically and mentally, vocational students must prepare for challenges while studying.

Another issue that has arisen in the last year and a half is the COVID-19 outbreak, which has caused the cessation of learning activities in schools, causing many educational institutions to design online learning (on the network). During the Covid-19 pandemic, the Indonesian government issued supportive policies such as learning from home or Work From Home, which is done online. The objective is to prioritize health factors, but learning activities must continue. However, the policy did not run smoothly, and many issues arose, including issues with technology, the learning process, teaching staff, and student-owned facilities and infrastructure. However, distance learning must continue in order to meet learning objectives.

Online learning during a pandemic is frequently used learning. On the other hand, the management of online-based learning for teachers in the midst of the Covid-19 pandemic in Ibelum was carried out optimally (Nafiah et al., 2022). Delcker & Ifenthaler, (2021) revealed that online teaching is much more difficult than in-person teaching, and that it is frequently entirely teacher-centered. Students frequently avoid using cameras or microphones on their devices, resulting in learning that lacks student feedback. Meanwhile Palau et al., (2021) reported that when learning at school moves to the home and the digital divide as online learning occurs, emotional support for students, communication with families, and an increased workload for teachers are all required. As a result, the focus of the study will be on the implementation of online learning in the midst of a pandemic, as well as the psychological impact on vocational students.

Learning Modes in Vocational High Schools during the COVID-19 Pandemic

Full online learning in the context of Vocational High Schools is being implemented in countries all over the world as COVID-19 spreads among educational institutions. For example, the nationwide closure of schools in the first half of 2020 due to the Covid-19 pandemic was a radical step for German society. Teachers and school administrators started incorporating online learning into their schools (Delcker & Ifenthaler, 2021). In Finland, rapid and widespread changes in school learning are taking the form of a dramatic digital transformation (Iivari, Sharma, & Ventä-Olkkonen, 2020), This is due to the Covid-19 pandemic, which has prompted a significant shift away from on-site teaching and toward online teaching and learning (Krishnamurthy, 2020). When the Covid-19 pandemic forced the closure of almost all educational institutions in Ireland, the only option was to use digital technology to support the teaching and learning process in schools (Scully, Lehane, & Scully, 2021). The disruption caused by the Covid-19 pandemic has forced the Indonesian education system to revolutionize teaching methods in order to adapt to pandemic and post-pandemic conditions. Combining online and offline teaching methods has been one of the methods used (Indrawati & Kuncoro, 2021). This online learning is anticipated to be a viable option for students learning at home.

Blended learning was widely used in online learning approaches prior to the COVID-19 pandemic. This method can be used to augment or replace face-to-face classroom learning, as well as to increase student engagement and interaction in online classes. Schoology, a form of blended learning, can help vocational students in overcoming the learning process that requires a great deal of theory (Irawan, Sutadji, & Widiyanti, 2017). E-learning advantages include high teacher-student communication and interpersonal relationships, higher levels of student satisfaction, and cost savings (Callan, Johnston, & Poulsen, 2015). Efficient blended learning practices in teaching and learning in Vocational Engineering Education (Orji, Anaele, Olelewe, Kanu, & Chukwuone, 2021). Mixed learning enables engaging learning approaches that encourage reflective and critical thinking by being more effective, flexible, optimal, and inclusive of up-to-date strategies, technologies, and learning materials (Hamdi & Abu Qudais, 2018). The use of electronic technology in online learning has the capacity to resolve time and location constraints while also saving money (Widodo, 2018).

Thus, to improve the process and outcomes of online learning, Hamdi & Abu Qudais, (2018) underlined blended learning as forging genuine collaborative partnerships between institutions on team writing of open and distance learning materials, adopting a more theoretically based instructional approach, such as the cognitive apprenticeship model, which emphasizes making thinking visible, and developing a comprehensive understanding of mixed education to assist students in achieving their educational goals. In line with this idea, Kusmaryono et al., (2021) additionally suggested that teachers make the following efforts to improve distance learning: (1) greeting all students warmly and friendly at the start of the lesson to create a comfortable learning interaction; (2) creating an atmosphere of interactive discussion with students by sharing screens to present lessons and encourage students to ask questions; (3) recording the learning process

and sharing with students who cannot attend the class; and (4) providing a comfortable room to consult with students.\

Understanding the Learning Experience in the Context of Socio-Cultural Theory

To comprehend learning experiences, the framework of socio-cultural theory can be used. Socio-culture refers to how an individual interacts with his surroundings, both with others and with other objects. There will undoubtedly be cultural as well as social change. The key to cultural change is changing one's value system. Individual behaviors that are repeated, if not entrenched, can be classified as culture. Ideas, reasoning, and traditions comprise culture. All aspects of human life in society that are acquired through education, including thoughts and behavior, are referred to as culture. According to the socio-cultural perspective, individual participation in activities and socio-cultural interactions mediated by semiotic artifacts that generate learning experiences (Lantolf & Beckett, 2009)(Wertsch, 1985).

Technological advancements have an impact on socio-cultural products. Where these products are used to facilitate social interaction in cyberspace. Digital technology, such as the internet and social media, serves as a conduit for socio-cultural activities and intercultural interactions (Kusumaningputri & Widodo, 2018). The use of information technology is increasing during the pandemic. That is, the socio-cultural approach is used as a measure for interpreting learning experiences in specific situations and contexts.

The latest findings, which employed a socio-cultural theoretical framework to mediate learning and assist students in finding meaning, have been widely disseminated. Kahoot as an online learning platform for French subject at Vocational High School (Ekowati, Widyastuti, & Purbarini, 2020). Learning mathematics by mediating objects around the house from a socio-cultural perspective (Jalil, 2018). Google Classroom and WhatsApp are enlisted the help in the development of online learning systems in vocational schools (Setiawansyah, Sulistiani, & Saputra, 2020), (Utami & Utami, 2020). The use of Google Forms and Quizizz in online learning in vocational schools (Masrur, 2020).

Although the socio-cultural framework is useful for understanding student learning experiences, the use of the theoretical framework to understand the learning experiences of vocational high school students is still limited. It is very effective in exploring students' learning experiences with this socio-cultural framework, but it falls short in exploring vocational high school students' learning experiences with a socio-cultural theory approach. Therefore, it is essential to analyze the online learning experience of vocational high school students from a socio-cultural perspective during the COVID-19 pandemic. As a result, the goals of this study are to (1) determine vocational high school students' learning experiences during online learning during the COVID-19 pandemic, and (2) determine vocational high school students' adaptation during online learning during the COVID-19 pandemic. The objective of this study is to provide new insights into the learning experiences of vocational high school students during the covid pandemic from a sociocultural perspective.

Method

The research method used a narrative inquiry approach to analyse the learning experiences of vocational high school students in the midst of the covid pandemic. The narrative inquiry method seeks to investigate and describe the results of understanding or experience (Higgins & Misawa, 2021). In order to collect data from participants, semi-structured interviews were used to learn about their background, experiences while studying during the covid pandemic, and adaptability.

Participants

Participants in the study were vocational high school students from Central Java, Indonesia. When it came to recruiting participants, they were notified through the WA group, and they were notified directly when they finished learning. Participants were chosen voluntarily and without coercion. 53 students from vocational high schools agreed to participate. Participants ranged in age from 15 to 17 years old. The data from the participants is shown in Table 1.

Table 1: Vocational student (SMK) participant data.

Participants	*Gender*	*Schools*	*Grade*	*Majors*	*Age*
AF	Male	SMK A	12	DPIB	17
APA	Male	SMK A	12	DPIB	17
DLS	Male	SMK A	12	DPIB	18
BPR	Male	SMK A	12	DPIB	17
MVW	Female	SMK A	12	DPIB	18
AK	Male	SMK A	12	DPIB	17

Participants	*Gender*	*Schools*	*Grade*	*Majors*	*Age*
ANS	Male	SMK A	12	DPIB	17
IDN	Male	SMK A	12	DPIB	17
NP	Male	SMK A	12	DPIB	17
SMW	Female	SMK A	12	DPIB	17
NKAS	Female	SMK B	11	DPIB	16
JN	Female	SMK B	11	DPIB	16
AADS	Female	SMK B	11	DPIB	17
CTJN	Male	SMK B	11	DPIB	16
ZMAZ	Female	SMK B	11	DPIB	16
EPA	Male	SMK B	11	DPIB	16
MDD	Male	SMK B	11	DPIB	17
FAP	Male	SMK B	11	DPIB	16
FNI	Male	SMK B	11	DPIB	16
HSO	Male	SMK B	11	DPIB	16
MG	Male	SMK B	11	DPIB	17
MH	Male	SMK B	11	DPIB	16
SAA	Female	SMK B	11	DPIB	16
CA	Male	SMK C	10	DPIB	15
NNAM	Male	SMK C	10	DPIB	15
RR	Male	SMK C	10	DPIB	15
RNP	Male	SMK C	10	DPIB	15
ACA	Female	SMK C	10	DPIB	16
IY	Female	SMK C	10	DPIB	15
DNKK	Female	SMK C	10	DPIB	15
RAG	Male	SMK C	10	DPIB	15
IF	Male	SMK C	10	DPIB	15
NQKI	Male	SMK C	10	DPIB	16
SGA	Male	SMK D	10	DPIB	15
HSK	Male	SMK D	10	DPIB	15
AGYD	Malewww	SMK D	10	DPIB	15
AAA	Female	SMK D	10	DPIB	15
ADM	Male	SMK D	10	DPIB	15
YDS	Male	SMK D	10	DPIB	15
AST	Male	SMK D	10	DPIB	15
RDR	Male	SMK D	10	DPIB	15
AD	Male	SMK D	10	DPIB	15
RAS	Male	SMK D	10	DPIB	16
ARSZ	Male	SMK E	11	DPIB	17
NV	Female	SMK E	11	DPIB	16
DS	Female	SMK E	11	DPIB	16
TDR	Female	SMK E	11	DPIB	16
IN	Female	SMK E	11	DPIB	16
FRP	Female	SMK E	10	DPIB	15
HTW	Female	SMK E	10	DPIB	15
NDN	Female	SMK E	10	DPIB	15

Participants	*Gender*	*Schools*	*Grade*	*Majors*	*Age*
WHP	Male	SMK E	10	DPIB	16
AAAPH	Female	SMK E	10	DPIB	15

Participants are indigenous people from three districts in Central Java, Indonesia. Prior to conducting interviews, participants were asked to fill out an engagement form in this study via an online form. To maintain privacy, the participant's name is written with initials in order to adhere to research ethics (Widodo, 2014).

Research Procedure (data collection)

In qualitative studies, *study group* should be preferred instead of *sample* since such studies are conducted with few individuals or units. The individuals or units forming the study group should be introduced with all relevant characteristics. Information regarding the context of the study group should also be explained here.

Data Collection Method

Interviews were used as data collection techniques. The semi-structured interviews focused on the online learning experience and students' reflections on the learning process during the COVID-19 pandemic. Interview questions include: how is learning implemented during the COVID-19 pandemic, what obstacles are encountered during learning during the COVID-19 pandemic, what strategies are used to overcome the obstacles encountered during learning during the COVID-19 pandemic, and other agents who support learning during the COVID-19 pandemic. Pandemic COVID-19. The information is divided into four categories: (1) information about students' backgrounds; (2) students' adaptability in learning; (3) students' strategies for becoming autonomous learners; and (4) students' strategies for developing learning motivation. Participants are given the opportunity to check interview data (member checking) before the data is analyzed in order to build data trustworthiness and maintain ethics in data collection (Harvey, 2015).

Data Collection

Information regarding how, when and under which conditions data collection tools are used should be explained here. If it is an experimental research, the experiment or the manipulation conducted should be explained in detail. The procedures applied not only on the experimental group(s) but also on the control group(s) should be explained.

Data Analysis

The data collected is analyzed using thematic content analysis (Ferdiansyah et al., 2020). The researcher considers the following criteria when transcribing the interview results (Widodo, 2014), with the following process:

- repeatedly listening to recorded interview data to identify key themes;
- transcribing interview data for coding, sorting, and categorizing important information;
- interpreting interview data; (see Table 2);

Table 2: Examples of data analysis procedures carried out thematically

Interview data	*Word encoding*	*Themes*
HTW	We never use Zoom; instead, we prefer Google Classroom and WA groups for assignments that are collected first in Google Classroom or WA and then at school, if online group work has never been done and we have never worked in a group directly at a friend's house.	Learning theory during the Pandemic.
JN	Because the autocad application is not installed on the laptop, the drawing task cannot be completed. WA groups have a low level of activity, with most members simply listening. Because of self-study, I frequently feel lazy. Difficult material is simple to understand. It will be difficult to understand if only material is provided but not put into practice	Learning constraints faced during the COVID-19 pandemic
KNA	If the signal is unstable, we either wait 15-20 minutes for it to stabilize on its own or borrow our brother's cellphone. It is preferable to do it myself if there are group members who have lengthy responses. When everything is finished, we will seek another opinion. If we are having difficulty understanding the material, we will try to understand it ourselves by searching on Google, YouTube, and asking friends.	Strategies for overcoming obstacles faced while learning during the COVID-19 pandemic
AADS	Family, tethering to phone, and friends helping in understanding the material	Another agent that helps learning during the Covid 19 pandemic

- incorporating interview transcript results into the NVIVO app;
- In order to produce reliable data, participants are asked to provide feedback on the results of data interpretation (see Table 2).

Using the NVIVO application, the data transcript results are then coded according to the theme.

Findings

Interview data was discovered to include how to implement learning during the covid 19 pandemic, what obstacles were encountered during learning during the covid 19 pandemic, what strategies were employed to deal with the obstacles encountered during learning during the covid 19 pandemic, and other agents who assisted in learning during the covid 19 pandemic in this study.

Learning Theory and Practice During the Covid 19 Pandemic

Learning theory during a pandemic using an online system. The learning media used are email, Google Classroom, Google Meet, Internet, School Web, Zoom Meeting, Microsoft Teams. Some SMKs also apply the group discussion learning method. Based on data analysis from NVIVO as shown in Figure 1.

The practical learning process in schools during the Covid 19 pandemic is as follows: Most schools do not conduct practical activities in the form of practical assignments at home or at school. Students are usually only shown learning videos about practical learning. There are schools that conduct practical activities in the form of home assignments, which can be done in groups or independently. The number of schools use online discussion methods to conduct practical activities. Some schools only provide materials to supplement practical learning that cannot be accomplished at home.

Learning Constraints in Covid 19 Pandemic situation

Figure 2 shows the constraints encountered during learning based on data analysis from NVIVO.

During the Covid-19 pandemic, students faced the following obstacles while learning:

- Internet credit, Signals that are frequently unstable, as well as the limitations of students' internet credit.
- Submission Time, Some students are late in submitting assignments because the processing deadline is too close.
- Signal, Signal connections are poor in some areas especially those who live in the rural areas.
- Learning tools, Students have limited access to learning resources such as computers and laptops.
- Instructional Media, Teachers and students are both less effective in their use of learning media.
- Learning materials, It is difficult to comprehend the teacher's material because it is not directly explained.
- Learning motivation, Students' lack of motivation to learn causes them to be lazy when it comes to studying and completing assignments.
- Server down, The school's learning media server is frequently inaccessible.

Learning During the Covid-19 Pandemic: Strategies to Overcome Obstacles

Figure 3 shows the results of NVIVO's data analysis of student strategies for dealing with online learning.

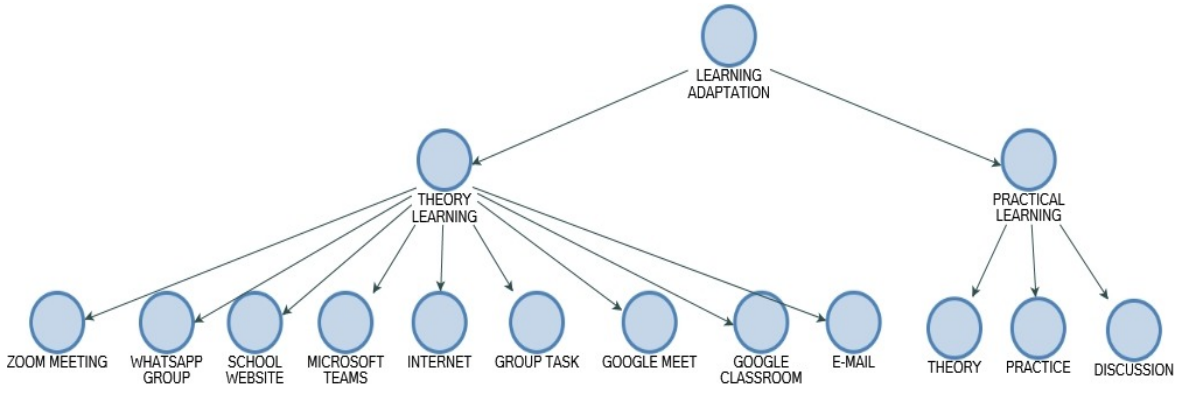

Fig. 1. Project Map Codes Learning Adaptation

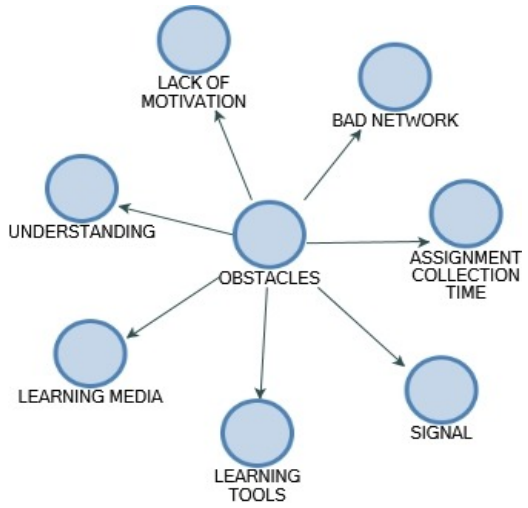

Fig. 2: Project Map Codes Learning Constraints

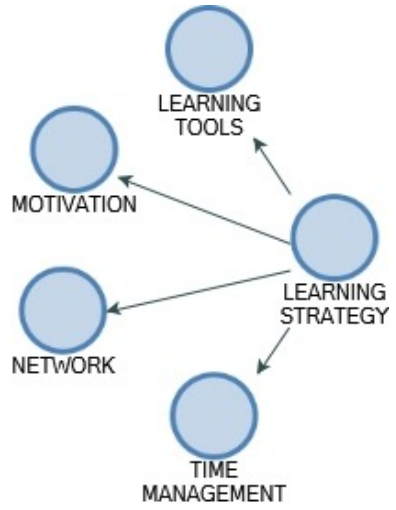

Fig. 3: Project Map Codes Learning Strategy

Strategies used in dealing with learning obstacles during the Covid-19 pandemic are as follows:

- Constraints experienced by some informants due to the unavailability of learning tools by informing the teacher or the teacher's assistant.
- Time constraints faced by some informants in the learning process or in the management of time used in the learning process. Students create a study schedule in order to overcome these challenges.
- Some informants' problem with an unstable signal network is usually postponed for a while. Students, on the other hand, will contact the teacher in question if the network fails. Students are also looking for a place to connect to the internet or requesting tethering.
- Internal (self) constraints faced by some informants, such as feeling lazy, students usually motivate themselves by improving mood and thoughts, managing time better, and keeping the mood good. Furthermore, some informants asked their peers more questions because some of the teachers did not respond quickly enough to the informants.

Parties Involved in Resolving Learning Problems

Agents who play a role in assisting the completion of learning are shown by analysis of NVIVO data as shown in Figure 4.

The following parties are involved in overcoming the barriers to learning that occurred during the pandemic:

- Friends, Friends can help in understanding difficult material and working together to complete school assignments.
- Siblings, Siblings help in the comprehension of difficult-to-understand material by lending cellphones for online activities.
- Teachers, If there are any issues with e-learning while learning, the teachers are very helpful..
- Parents, Parents can help by providing internet credit and encouraging their children to be enthusiastic about learning.
- Internet, When students run into issues such as difficulty understanding material or difficulty completing assignments, they frequently turn to the internet for help.

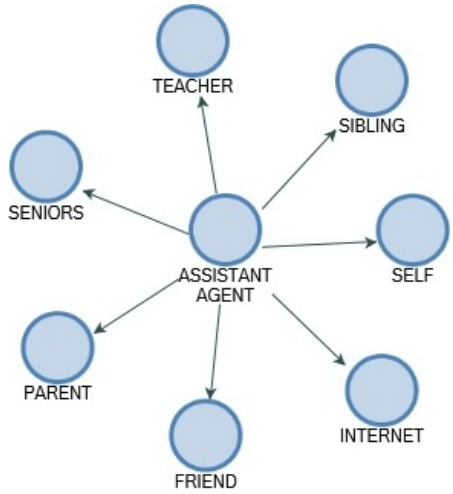

Fig. 4: Project Map Codes Agents Who Play a Role in Overcoming Obstacles

- Self, Self-help is extremely beneficial in overcoming challenges. Students' ability to self-regulate, so that they are always motivated to overcome learning challenges.
- Seniors, Because upperclassmen have already received the material being taught, senior graders play an important role in helping with difficult-to-understand material.

Discussion

The adaptability of vocational high school students to online learning during the covid pandemic.

During the pandemic, the learning system in vocational high schools was completely transformed from face-to-face learning to online learning, primarily to prioritize health factors. During this learning change, students are naturally in a new learning environment, so they must adapt to enter a new learning environment in order to meet their learning needs. The learning process, assignments, group projects, discussions, assignment collection methods, and presentations have all been modified. Based on interviews with online learning participants, it is as follows.

> *We almost never use Zoom in learning, instead favoring Google Classroom and WA groups, and while we are asked to submit assignments via Google Classroom or WA and then collect them at school, we have never worked in groups online and have always worked in groups directly at a friend's house. During the pandemic, teachers gave assignments using a number of methods, including Google Classroom, WA groups, and Zoom/Google Meet, and discussions were rarely held for more than a few months. Because our house is far away and if the lesson is discussed in the WA group, we will not understand, we usually meet directly at the house of the closest friend. For assignment collection, we can go through WA, Classroom, or directly, and for presentation assignments, we haven't. The only things collected are group projects and reports (HTW, October 5, 2021).*

> *During the pandemic, the learning experience was for giving assignments via a mix method, so there were teachers who used Google Classrome, there were also wa groups or zoom/google meet, then discussions rarely took place for the past few months, there was 1 discussion via WA group and sometimes meet in person, then for group assignments, the house is far away if discussed in the wa group, I don't understand, so usually meet directly at a friend's house, the most affodable method. (NKAS, 5 oktober 2021)*

> *The learning process is still done over the internet. Learning must be completed on time and according to the schedule, but problems with cellphones and internet credit are common. Ms. Teams and WA were used to facilitate learning. Teachers frequently use zoom/gmeet during face-to-face discussions. There are assignments for both individuals and groups. To do these tasks with WA, group assignments in the PPKN file. They continued with the presentation through the use of WA after the group assignments were completed, and representatives were gathered to meet with the subject teachers (RR, 18 October 2021).*

Online learning is primarily accomplished through the use of internet-based tools such as WA groups, Google Classrome, Zoom, Gmeet, and Ms. Teams. as stated by Rasmitadila et al., (2020) videos, WhatsApp, Google forms, worksheets, YouTube, and Zoom are all forms of media that can be used to deliver learning materials. According to interviews about internet signals, participants had difficulties with online learning. The following difficulties were encountered: signaling, application, group work, motivation, absorption of knowledge on schedule, and task activities. The interview results as revealed by the following participants.

> *The signal is frequently unstable, and the school server is frequently inaccessible. Therefore , a follow-up exam is needed, which extends the exam time. The WhatsApp group is only used to announce assignments and notify students who have not submitted their assignments. Because not all members of the WA group work, group work in the WA group is less effective. He's smart when I'm not, so he motivates me to learn from competitors. The information obtained is difficult to understand (NKAS, 4 October 2021).*

> *Because the AutoCAD application is not installed on the laptop, the drawing task can be performed. Students in the WA group were passive, only listening. Because of self-study, I frequently feel lazy. Difficult material is simple to understand. It will be difficult to understand if only material is provided but not put into practice (JN, October 4, 2021).*

> *The network is occasionally unstable, and it most often feels lazy. The knowledge provided is simple to understand; it's just that I'm sometimes lazy, able to follow learning but not being active in class. The lesson plan is set and only changes once a semester (AADS, October 4, 2021).*

> *Because of the signal so that learning outcomes are not optimal (ADM, 15 October 2021).*

Teachers must choose inexpensive online learning media because learning is not optimal with a frequently disrupted internet network. As Wulandari & Mandasari, (2021) stated previously, that WhatsApp groups such as sharing documents, photos, audio/video files, various emojis, voice notes, and audio/video conference calls, as well as cost-effective internet credit support.

Students adapt by changing their learning behaviors. The interview results are as follows.

> *If the signal is unstable, we will either wait 15-20 minutes or borrow our relative's phone until the signal is stable (NKAS, October 4, 2021).*
>
> *We occasionally look for a place that offers WiFi when we have signal problems (EPA, October 16, 2021).*
>
> *We do not squander credit on the internet. Using credit for the internet only when it's needed (MDD, 16 October 2021).*
>
> *This can be accomplished by planning ahead of time and using internet credit (ADM, 15 October 2021).*

Based on the results of the interview, students are trying to find good internet access, provide internet credit, and use it sparingly in order to have a smooth learning experience.

Online learning strategies for vocational high school students during the covid-19 pandemic

Understanding the material and completing assignments are two strategies used by vocational students in online learning to overcome learning obstacles. The following are the interview's results.

> *If I'm having trouble understanding the material, I'll try to figure it out on my own by using Google, YouTube, and asking friends. It is preferable to work on the task alone if there are group members who have lengthy responses. When everything is finished, I will seek a second opinion (NKAS, October 4, 2021).*
>
> *If I don't understand I will ask a friend privately (AADS, October 2021).*
>
> *I do my homework right away, so I'm not lazy, and I try to find a new environment, such as doing assignments in a cafe or at home field. If the material is difficult to understand, I will consult a friend. I also take classes to improve my learning outcomes. (AADS, 4 October 2021).*
>
> *To be able to overcome obstacles, I motivate myself. The state/mood and brain must be in a fresh state. Normally, I play games and then learn. I'll consult with a friend who is more knowledgeable about the material you don't understand (MH, October 13, 2021).*

Students' strategies for optimizing online learning include self-teaching the material, searching for information on the internet, meeting with study friends, and enrolling in courses. Independence has an impact on the online learning process, as can be seen here. Online learning strategies for improving student performance include: 1) developing intimacy between students and online learning platforms, 2) developing presence in a virtual environment (instructor presence is built from three dimensions: persona/personality, social/connectedness and community in online classes, and instructional/scaffolding and mentoring), 3) frequent interaction among online students (Rivera, 2018).

Motivations driving vocational high school students to participate in online learning during the Covid-19 pandemic

The Covid pandemic has significantly changed student lessons psychologically and mentally, requiring student motivation in the classroom. The interview results are as follows:

> *My learning motivation is from class rivals, if he is smart why can't ? (NKAS, 18 October 2021).*
>
> *My motivation for learning is that even during a pandemic, we must be passionate about seeking knowledge, never be lazy because education is important and education is the ticket to a better future, for the knowledge provided by teachers, some of which is understandable, and some of which is not (WHP, 22 October 2021).*
>
> *Overcoming obstacles by motivating myself is important to me. The state/mood and brain must be in a fresh state. Typically, games are played first, followed by learning. Inquire with a friend who knows more about the material that I don't understand (FAP, 16 Oct 2021).*
>
> *My motivation is my brother, who lent me a cellphone so that I could take online classes (NKAS, October 4, 2021).*
>
> *Friend, she is delighted to teach me material that I do not understand (JN, October 4, 2021)*
>
> *Parents who help me in buying internet credits so that I can participate in online learning (MG, 13 Oct 2021).*

Based on the information presented above, the role of friends, relatives, parents, self-reflection, and the availability of technology devices for online learning all play a significant role in student learning motivation. Learning motivation is influenced by mastery of technology (El Janous, El-Hassouny, Laafou, & Madrane, 2022); (Net, Saputra, Hambali, & Wahyuni,

2022). This is supported by Smith et al., (2021) that changes in the transitional environment from face-to-face learning to distance teaching influenced students' motivation Use educational technology data instead of traditional assessments, and emphasize access and motivation during learning from home (Rutherford, Duck, Rosenberg, & Patt, 2021). Learning motivation is influenced by belief in competence, interest in learning, the value of learning usefulness, mastery, and performance goal orientation (Smith et al., 2021). Motivation is critical in students' self-regulation and achievement of academic results (Cho, Cheon, & Lim, 2021).

Conclusion

The learning experiences of vocational high school students in Indonesia during the COVID-19 pandemic using learning technology facilities that are relatively inexpensive, affordable to students, and simple to use. During the learning process, vocational high school students can adapt to a new learning environment, namely using online learning, both synchronous and unsynchronous, by discussing and collaborating with friends, teachers, and parents. Students' study strategy is to seek out good internet access, provide internet credit, and use it minimally in order to achieve smooth learning. Students are motivated to learn for a number of reasons, one of which is the material and moral support of friends, teachers, and parents. Students' strategies for understanding the material include self-teaching, searching for information on the internet, and sharing with study buddies.

Suggestion

From a series of research results, it can be seen that the experience of student learning using online facilities makes students become independent in learning. This is certainly supported by student motivation, the willingness to be sustainable, especially in the learning environment which is influenced by technological changes. Therefore,this research will be more effective in learning if it is carried out after the end of covid-19, namely blended or hybrid learning. Students will be more flexible in exploring teaching materials, working on assignments, and managing learning.

Limitation

This research was conducted only in a few vocational high schools in one of the cities in Indonesia. The school is managed by the Indonesian government.

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