

THE EFFECTIVENESS OF DISTANCE PRACTICE LEARNING FOR FACING COVID-19 PANDEMIC IN INDONESIA

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ABSTRACT

The Covid-19 pandemic has transformed learning that is usually conducted by direct learning into indirect learning, especially distance learning. During the Covid-19 pandemic, schools in Indonesia adjusted the learning to distance learning. The purpose of this study is to determine the effectiveness of distance practice learning and to find out what factors affect distance learning conducted in vocational high schools for facing the Covid-19 pandemic in Indonesia. This research was conducted by a mixed-method using the pretest-posttest nonequivalent control group design and in-depth interviews to dig the factors that influence the phenomenon. This research was conducted by involving 53 students and 4 teachers in Yogyakarta. Test data were analyzed by using the N-Gain Test, and interview data were analyzed using the Miles & Huberman Model. The results of this study indicate that students who use distance practice learning that is packaged with collaborative learning get better cognitive results than direct practice learning, but students' affective and psychomotor assessment of distance practice learning gets a lower score than direct practice learning, meanwhile, the score is a good category. The phenomenon occurs due to the students' good understanding of utilizing information technology contained on the internet, and the good communication between students and teachers in completing practical assignments.

Keywords: *Covid-19, Distance Learning, Practical Learning, Vocational High School*

1. INTRODUCTION

Covid-19 is an infectious disease caused by severe acute respiratory syndrome-coronavirus 2 (SARS-CoV-2) [1–3]. This virus has spread and affected all aspects of life throughout the world, including education [4]. Because the level of malignancy of transmission resulted in a global health crisis. The rapid transmission to almost all countries in the world has made the World Health Organization (WHO) issued a decision that what happens due to Covid-19 is called a pandemic. To control and reduce the spread of Covid-19, many countries have implemented lockdowns, self-quarantine, and social distancing [5]. It is added by [6,7] that some recommended precautions are washing hands frequently, maintaining physical distance from other people, covering mouth when coughing, conducting self-isolation for people suspected of having the virus, and complying with health protocols.

[8] stated that due to the worsening of the Covid-19 pandemic, children and adolescents cannot attend school as usual. For this reason, almost all governments in the world, including Indonesia, are increasing their movement of learning towards distance learning because schools and colleges have been temporarily closed to reduce the impact of the Covid-19 pandemic. The consequences of closing schools and campuses physically are, replacing them with learning from home, as the Indonesian government policy, resulting in a change in the learning system from face-to-face learning to distance learning. The existence of social restrictions in the school is stated in the Secretary-General Circular Letter number 15 of 2020 concerning Guidelines for Implementation of Learning from Home during the Covid-19 emergency, in which the letter states that this learning from home program is not fully implemented through an online system, but we can be implemented through an outside network system (offline). Distance learning is carried out by

teachers and students using several learning media, in which learning is carried out by online and offline systems. Thus, teachers must rethink how to change and redesign suitable learning to be carried out in a pandemic situation like today.

However, there is an assumption that no one pedagogical approach can replace face-to-face learning because face-to-face learning has direct interactions between students and teachers so the delivery of material can be accepted directly by students. This is in line with the obstacles experienced by teachers, based on the results of short interviews, that teachers have difficulty in (1) providing practical learning online, (2) providing practical teaching materials that can be used to improve student abilities by including cognitive, affective, and psychomotor, and (3) assessing the practical learning that is being carried out. After the crisis that occurred during the pandemic, learning that was originally carried out by face-to-face or direct learning at school or campus must be conducted by a distance learning model. It is carried out from home by utilizing conference applications, web-based learning media, and group-based communication media. In Indonesia, teachers usually implement distance learning by utilizing various virtual applications that are already available, such as Learning Management System, or conference and conversation applications which include: Moodle, Edmodo, Edlink, Google Classroom, Google Meet, Zoom, Webex applications, even WhatsApp.

As a result of the Covid-19 pandemic, teachers and students are starting to realize that they are in a condition where they are encouraged to collaborate with the digital aspect as part of online teaching and learning [9]. In other words, the Covid-19 pandemic requires teachers and students to develop digital skills because the success of education during this pandemic depends entirely on learning both online and offline by using internet media. In distance learning of schools and colleges, there are two types of learning, namely learning that is minds on (theoretical) and hands-on (practicum).

For minds-on learning, the use of learning applications such as Google Classroom, Google Meet, Zoom, Webex, and Learning Management System is proven to replace the role of face-to-face learning or direct learning. It is because the teacher can send material and assignments to the application, then, students can read the material, send assignments, and follow instructions in the application used. However, in contrast to hands-on subjects, practicum subjects, require more direct

skills and activities for students. Practicum during the pandemic ran into obstacles and difficulties in the implementation because the laboratory used for student practice was suspended.

The suspension of schools including school laboratories has a profound impact on vocational high school students. It is because vocational schools have more practical learning compared to non-vocational schools, so students need a laboratory as a place to improve and support their expertise based on their fields [10]. For that reason, teachers in vocational high schools strive continuously to create practical learning innovations that are in line with the pandemic conditions. One of the practical learning innovations that can be conducted is by implementing a virtual laboratory which is termed distance practice learning. Distance practice learning is a term for practicum activities in laboratories that are carried out virtual or digital. Through distance practice learning, practicum subjects can be carried out according to the needs of teachers and students in schools, and following the conditions, the Covid-19 pandemic.

Practical implementation through distance practice learning can be used in various subjects including vocational and non-vocational schools. The results of the previous studies prove that the use of virtual laboratories can affect a positive aspect of students' understanding [11] and mastery of their concepts [12,13]. Also, the concept of distance practice learning can improve students' critical and creative thinking skills [14]. Consistent with the previous study, teachers who apply distance practice learning are proven to be able to influence student learning outcomes for the better than before [15,16]. It is also added, the use of digital laboratories, which is remotely carried out, can increase student motivation and learning activities [17]. Thus, the implementation of practicum learning through distance practice learning is expected to provide a better understanding of students, especially during a Covid-19 pandemic.

From the results of previous studies, many references discuss the benefits and impacts of using distance practice learning, but these references to the use of distance practice learning in vocational high schools are still rarely studied. Therefore, this study aims to determine the effectiveness of distance practice learning and to find out what factors affect distance learning conducted in vocational high schools for facing the Covid-19 pandemic in Indonesia. After knowing the research objectives, it is also necessary to know the benefits of research, namely to make it easier for teachers to obtain

information related to practical learning innovations carried out by using collaborative learning.

The results of the research which is used for primary of this research are the research conducted by [10], which is about the importance of practicum learning for vocational school students, where practical learning should be (1) structured based on industrial needs, (2) utilizing tools available around students, (3) using flexible time. Besides, [18] added that there are new types of the industry that must be adjusted in practical learning of Vocational High School of Office Automation and Management Program in Indonesia, so the competencies possessed by students is always in line with the needs of the industry. Meanwhile, [19] stated that distance learning has several obstacles and challenges, namely: (1) schools have not been able to fully provide standardized learning where each school carries out learning according to environmental conditions, (2) the teacher finds the difficult to modify the learning plan that has been made with the needs of each student, and often the majority's needs cannot be fulfilled, (3) teachers are hampered in making learning media because of limited abilities about information technology, and (4) teachers are hampered in making assessments that can represent students' abilities.

Based on the results of previous research, researchers identified that the problem of practical learning in schools during the Covid-19 pandemic had not yet experienced problems because there were no supporting learning media in the current situation. In addition, practical learning in vocational schools is still not in line with industry needs. For this reason, researchers want to experiment with practical distance learning carried out by collaborative learning. This research will contribute to teachers, lecturers, researchers, and practitioners as a reference for developing practicum. The purpose of this research is to develop online practice distance learning media and blended learning. It needs to be done because the level of student participation in practicum is decreasing. This decrease in student activity also decreases competence and expertise because their ability or competence becomes less trained. Especially in the conditions of the Covid-19 pandemic, practicum learning activities are hampered because schools and laboratories are closed until an undetermined time. Therefore, the development of distance learning-based practical learning innovations is needed at this time. On the other hand, this research also dramatically contributes to students because it can improve their abilities and competencies in their vocational fields.

2. METHOD

This research is a mixed-method study with an experimental study using a quasi-experimental design and qualitative study. The quasi-experimental design was chosen in this study because it is difficult to measure between the control class and the experimental class appropriately [20]. The design of this study is the development of Nonequivalent Control Group Design which is almost the same as Pretest-posttest Control Group Design [21], and this design uses experiment 1 and experiment 2 that were not randomly selected. Besides, the qualitative data was used to dig the factors that influence the phenomenon.

This study used the test and non-test assessment instruments, in which the instrument was used to measure students' cognitive, affective, and psychomotor abilities. Non-test instruments were also carried out to explore what factors influenced the results of this study, and how the students' affective and psychomotor abilities after they do the learning in the Covid-19 pandemic. The test assessment instrument was conducted to measure students' cognitive abilities using the pretest-posttest design assessment. The test assessment instrument consists of 25 questions covering all the chapters that are studied in the office practice module.

To measure the students' affective and psychomotor abilities, the researcher used a non-test instrument in the form of a learning process assessment sheet. The criteria assessed in the affective aspect are independence, discipline, and student responsibility, and the criteria assessed on the psychomotor aspects of students are the completion of tasks, problem-solving, teamwork, communication, and leadership. Moreover, non-test instruments were also used to dig deeper regarding the phenomena that occurred. Researchers extracted this information using an in-deep interview method. Interviews were conducted with teachers and students in schools that were used as research objects, where the aim was to explore what factors influenced the research being carried out. This research was conducted on practice learning in the Vocational High School of Office Automation and Management Program which uses an office practice module. This research was conducted from August to October 2020, where distance learning is still being carried out due to social restrictions in schools.

2.1 Participants and Research Data

This research was conducted by involving 53 students and 4 teachers in Yogyakarta. This research was conducted on ten-grade students of Vocational

High School in the Office Automation and Management Program.

The research was conducted using a class in Yogyakarta 1 State Vocational High School and Yogyakarta 7 State Vocational High School. The control class in this study was Yogyakarta 1 State Vocational High School, while the experimental class was Yogyakarta 7 State Vocational High School. The control class is carried out by class meetings using health protocols that have been socialized by the government to maintain security and safety for the risk of contracting Covid-19, while the experimental class is carried out by using distance learning. Research conducted in the experimental class was carried out using collaborative learning, where the researcher combined online-based learning and offline-based learning. This research was conducted on practical learning using an office practice module that has been equipped with instructions for implementing learning, learning materials, practical instructions, and questions used for the pretest and posttest.

Besides, the informants of interviews conducted were four teachers and randomly selected from the student. Interviews were carried out privately by using a telephone to explore more deeply related to informants' answers that could potentially explain related phenomena that occurred in the field.

2.2 Data Analysis Technique

The results of the pretest-posttest experiment were analyzed using the N-Gain Test.

$$N\text{-Gain} = \frac{\text{Posttest} - \text{Pretest}}{\text{Ideal Maximum Score} - \text{Pretest}} \quad (1)$$

The results of the N-Gain Test analysis can be seen in the increase in learning outcomes conducted by students in table 1.

Table 1. Criteria for Improvement of Learning Achievement

Interval	Criteria
N-Gain > 0.7	High
0.3 < N-Gain < 0.7	Middle
N-Gain < 0.3	Low

The assessment is carried out by using the learning process assessment sheet to measure the affective and psychomotor abilities of students using a scale of 5, [22] where the assessment criteria used are 5) very good, 4) good, 3) sufficient, 2) less, and 1) very less. The data collected was based on the results of observations of the implementation of learning using an assessment sheet for the learning process, then the average was calculated so that the researcher could conclude that the affective and psychomotor scores were included in the criteria.

Additionally, the interview data which was conducted by phone was analyzed by the Miles & Huberman Model. [23] state that the data analysis is done by data reduction, data presentation, data verification, and data conclusion.

3. RESULT

Practical learning using the office practice module in this study was carried out by direct learning and distance learning. The practical learning was conducted to coincide with the Covid-19 pandemic in Indonesia so that practical learning was carried out with distance learning, except for schools that had received approval to be done by direct learning. The Vocational High School of Office Automation and Management Program also applies practical learning conducted by direct learning and distance training. Therefore, in this study, some schools carry out direct practice learning and distance practice learning.

Practice learning in the Vocational School of Office Automation and Management Program using the direct learning model produces a good N-Gain score, where the average N-Gain of all students is in the middle criteria with a score of 0.38. Direct practice learning was carried out at Yogyakarta 1 State Vocational High School with 21 students. The N-Gain score data obtained by each student are shown in table 2 as follows.

Table 2. N-Gain Score of Direct Practice Learning

Name	Pretest	Posttest	Score	Criteria
Student 1	18	21	0.42	Middle
Student 2	15	17	0.20	Low
Student 3	17	20	0.37	Middle
Student 4	16	18	0.22	Low
Student 5	13	18	0.41	Middle
Student 6	14	19	0.45	Middle
Student 7	11	20	0.64	Middle
Student 8	10	15	0.33	Middle

Student 9	15	20	0.50	Middle
Student 10	16	18	0.22	Low
Student 11	10	14	0.26	Low
Student 12	12	15	0.23	Low
Student 13	9	17	0.50	Middle
Student 14	17	23	0.75	High
Student 15	11	19	0.57	Middle
Student 16	14	19	0.45	Middle
Student 17	12	16	0.30	Middle
Student 18	16	18	0.22	Low
Student 19	13	17	0.33	Middle
Student 20	18	19	0.14	Low
Student 21	9	17	0.50	Middle
Mean			0.38	Middle

The N-Gain score of direct practice learning shows that every student gets the increase between pretest and posttest conducted by researchers. The score of the N-Gain test is mostly in middle criteria and low criteria, but only one student has high criteria with a 0.75 score. This phenomenon occurs because indeed, in the beginning, this practical learning was planned to be carried out in the second term, but due to the Covid-19 pandemic, this learning was carried out in the first term. Also, students have just done practical learning directly, so they are not used to carrying out practical learning, yet.

“...indeed, this module should be taught in the second term, because of the Covid-19 pandemic, you can only do it in the first term so that students have not fully obtained the basic materials that should be obtained...” (GUR03)

“...most of us are confused at the beginning... the problem is we haven't got any practical materials at all... usually, we just type the assignments given by the teacher, then they are collected in the Google Classroom, sometimes they are also sent to WA... we just learned practical face-to-face lessons just last week...” (SIS001)

At the same time, practice learning by using the distance learning model resulted in an N-Gain score higher than direct learning, where the average N-Gain score of all students was 0.50, the middle criteria. The distance practice learning was carried out at Yogyakarta 7 State Vocational High School with 32 students. The N-Gain score data obtained by each student are shown in table 3 below.

Table 3. N-Gain Score of Distance Practice Learning

Name	Pretest	Posttest	Score	Criteria
Student 1	21	22	0.25	Low
Student 2	18	23	0.71	High
Student 3	17	22	0.62	Middle
Student 4	15	20	0.50	Middle
Student 5	19	21	0.33	Middle
Student 6	20	22	0.40	Middle
Student 7	13	19	0.50	Middle
Student 8	18	20	0.28	Low
Student 9	13	20	0.58	Middle
Student 10	16	21	0.55	Middle
Student 11	16	22	0.66	Middle
Student 12	14	18	0.36	Middle
Student 13	15	20	0.50	Middle
Student 14	18	22	0.57	Middle
Student 15	15	22	0.70	High
Student 16	13	18	0.41	Middle
Student 17	13	17	0.33	Middle
Student 18	15	19	0.40	Middle

Student 19	20	23	0.60	Middle
Student 20	18	21	0.42	Middle
Student 21	9	16	0.43	Middle
Student 22	19	23	0.66	Middle
Student 23	14	17	0.27	Low
Student 24	19	24	0.83	High
Student 25	12	18	0.46	Middle
Student 26	17	23	0.75	High
Student 27	20	23	0.60	Middle
Student 28	15	20	0.50	Middle
Student 29	10	17	0.46	Middle
Student 30	19	21	0.33	Middle
Student 31	14	17	0.27	Low
Student 32	18	23	0.71	High
Mean			0.50	Middle

It can be seen that the N-Gain Test score obtained by students who carry out distance practice learning is higher than those who carry out direct practical learning. This phenomenon occurs because students in the test group with distance practice learning can flexibly take advantage of the information technology contained in the internet media. Also, they often communicate with the teacher if they have difficulty with the practical assignments that they are doing. The following are the results of the interviews given by informants.

“...since the beginning, before they enter, we have been provided how to learn in the era of the Covid-19 pandemic, how to use online media, how to find information using the internet...” (GUR004)

“...I looked for material on the internet.. then, I continued to share it with my group ... my group did its work in the morning, at night we discussed it in the WA group, I also often asked you if there was something we didn't understand...” (SIS002)

In addition to the cognitive aspects that were analyzed using the N-Gain Test, researchers also provided an assessment of the affective and psychomotor aspects of students. In the effective aspect, students who carry out direct practice learning and those who carry out distance learning get good scores. The affective score data of students who carry out direct practice learning are shown in table 4 below.

Table 4. Affective Score of Direct Practice Learning

Name	Independence	Discipline	Responsibility	Mean
Student 1	4	5	5	4,66
Student 2	3	4	4	3,66
Student 3	4	5	4	4,33
Student 4	4	4	4	4,00
Student 5	4	4	5	4,33
Student 6	5	4	5	4,66
Student 7	4	4	4	4,00
Student 8	4	4	5	4,33
Student 9	3	5	5	4,33
Student 10	4	4	4	4,00
Student 11	4	5	3	4,00
Student 12	5	3	3	3,66
Student 13	4	3	4	3,66
Student 14	5	5	4	4,66
Student 15	5	4	4	4,33
Student 16	4	5	4	4,33
Student 17	4	4	4	4,00
Student 18	4	5	5	4,66

Student 19	3	4	5	4,00
Student 20	4	4	4	4,00
Student 21	5	3	4	4,00
Mean	4,09	4,19	4,23	4,17

Slightly different from the results of the affective assessment above, the affective assessment of students who carry out distance practice learning shows a lower average rating. It is because researchers find the difficult to assess students'

affective attitudes when students are less active in online meetings. The affective score data of students who carry out distance practice learning are shown in table 5 below.

Table 5. Affective Score of Distance Practice Learning

Name	Independence	Discipline	Responsibility	Mean
Student 1	5	5	4	4.66
Student 2	4	4	4	4.00
Student 3	4	5	4	4.33
Student 4	4	4	4	4.00
Student 5	4	4	5	4.33
Student 6	3	4	5	4.00
Student 7	4	4	5	4.33
Student 8	3	4	3	3.33
Student 9	3	5	5	4.33
Student 10	4	4	3	3.66
Student 11	4	5	5	4.66
Student 12	5	5	3	4.33
Student 13	4	5	4	4.33
Student 14	5	5	4	4.66
Student 15	5	4	4	4.33
Student 16	4	5	4	4.33
Student 17	4	4	3	3.66
Student 18	4	5	5	4.66
Student 19	3	4	5	4.00
Student 20	4	4	4	4.00
Student 21	5	3	3	3.66
Student 22	4	4	3	3.66
Student 23	4	5	5	4.66
Student 24	5	4	4	4.33
Student 25	4	4	4	4.00
Student 26	5	5	4	4.66
Student 27	3	4	3	3.33
Student 28	4	5	5	4.66
Student 29	5	4	4	4.33
Student 30	4	3	3	3.33
Student 31	3	3	3	3.00
Student 32	4	5	4	4.33
Mean	4.06	4.31	4.00	4.12

In the table, it can be seen that students who carry out direct practice learning get independence, discipline, and responsibility assessments with an average score of 4.09, 4.19, and 4.23 respectively. The general average assessment of students who carry out direct practice learning gets a score of 4.17, where this assessment implies that students have good independence, discipline, and responsibility.

Meanwhile, students who carry out distance practice learning get a general average score of 4.11. The table also states that the independence, discipline attitude, and responsibility assessment of students who carry out distance practice learning have scores of 4.06, 4.31, and 4.00. Thus, in general, the assessment of the affective aspects of students who carry out direct practice learning and distance

practice learning has a good attitude, and this assessment implies that students who have good attitudes have a good work readiness.

The assessment of the psychomotor aspects carried out by the researcher showed that students who carried out direct practice learning got better scores than students who carried out distance

practice learning where each got an average score of 4.30 and 4.28. The assessment is taken directly by observing the implementation of practical learning, the results of practical work, and the completion of practical assignments carried out by students, so the assessment can directly show students' abilities. The psychomotor assessment score of students who carry out direct practice learning is shown in table 6 below.

Table 6. Psicomotoric Score of Direct Practice Learning

Name	Completion of Tasks	Problem-Solving	Teamwork	Communication	Leadership	Mean
Student 1	5	5	4	5	5	4.80
Student 2	3	4	5	4	4	4.00
Student 3	4	3	4	5	4	4.00
Student 4	5	4	3	4	5	4.20
Student 5	3	5	5	4	5	4.40
Student 6	5	5	5	3	3	4.20
Student 7	4	4	5	4	3	4.00
Student 8	4	4	4	3	3	3.60
Student 9	4	3	5	3	4	3.80
Student 10	4	4	4	5	5	4.40
Student 11	4	5	4	5	5	4.60
Student 12	5	4	5	5	3	4.40
Student 13	4	5	5	4	4	4.40
Student 14	3	4	5	5	4	4.20
Student 15	5	4	5	5	4	4.60
Student 16	5	4	5	4	4	4.40
Student 17	5	4	5	5	4	4.60
Student 18	4	5	4	5	4	4.40
Student 19	5	4	4	5	5	4.60
Student 20	4	4	3	5	4	4.00
Student 21	5	5	5	4	5	4.80
Mean	4.28	4.23	4.47	4.38	4.14	4.30

The assessment of the psychomotor aspects of distance practice learning shows a lower result than direct practice learning. It happens because, at distance practice learning, researchers have difficulty assessing students who are less active in

online meetings and in completing the assigned tasks. The psychomotor assessment score of students who carry out distance practice learning is shown in table 7 below:

Table 7. Psicomotoric Score of Distance Practice Learning

Name	Completion of Tasks	Problem-Solving	Teamwork	Communication	Leadership	Mean
Student 1	3	3	5	4	5	4.00
Student 2	5	4	5	4	4	4.40
Student 3	4	5	5	4	5	4.60
Student 4	5	5	4	4	4	4.40
Student 5	4	3	5	5	5	4.40
Student 6	4	5	4	5	5	4.60
Student 7	4	3	4	3	4	3.60
Student 8	3	4	5	5	4	4.20
Student 9	5	4	3	3	4	3.80
Student 10	4	5	4	5	5	4.60
Student 11	5	4	5	3	5	4.40

Student 12	5	5	3	5	5	4.60
Student 13	5	4	4	3	4	4.00
Student 14	4	5	4	4	3	4.00
Student 15	4	5	5	5	5	4.80
Student 16	4	4	5	4	3	4.00
Student 17	5	4	5	4	3	4.20
Student 18	3	5	4	5	4	4.20
Student 19	4	4	5	5	5	4.60
Student 20	4	4	5	4	5	4.40
Student 21	5	4	5	5	5	4.80
Student 22	5	5	5	4	5	4.80
Student 23	4	3	3	4	5	3.80
Student 24	5	4	4	4	4	4.20
Student 25	3	5	4	3	4	3.80
Student 26	5	4	5	5	5	4.80
Student 27	5	5	5	4	4	4.60
Student 28	5	4	4	4	4	4.20
Student 29	4	4	5	4	5	4.40
Student 30	3	4	4	4	4	3.80
Student 31	3	4	3	4	3	3.40
Student 32	5	4	5	4	5	4.60
Mean	4.25	4.21	4.40	4.15	4.37	4.28

In the tables, it can be seen that the score of psychomotor aspect obtained by students who conduct direct practice learning and distance practice learning shows a good assessment. The students' psychomotor assessment in direct practice learning shows that the score for the completion of tasks aspect is 4.28, the score for the problem-solving aspect is 4.23, the score for the aspect of teamwork is 4.47, the score for the aspect of communication is 4.38, and the score for the aspect of leadership is 4.14. Meanwhile, the students' psychomotor assessment on distance practice learning shows that the score for the completion of tasks aspect is 4.25, the score for the problem-solving aspect is 4.21, the score for the aspect of teamwork is 4.40, the score for the aspect of communication is 4.15, and the score of the leadership aspect is 4.37. Based on the data, all the aspects assessed on the psychomotor aspect show an average score above 4. Therefore, the assessment can imply that based on the psychomotor aspect assessment students have good skills that are following the objectives of practical learning at the Vocational High School of Office Automation and Management Program in Indonesia.

4. DISCUSSION

Learning in the era of the Covid-19 pandemic is indeed a little difficult for schools to do, especially in practical learning at Vocational High School. The restrictions imposed due to the Covid-19 pandemic

are intended to reduce transmission of the virus which can spread rapidly through schools [24,25].

The Covid-19 pandemic has made schools gradually change practical learning, which is usually done through direct learning, into distance learning. The sudden changes make challenge for teachers to provide learning that is following the learning objectives in Vocational High School [19], where the learning must be packaged to produce graduates who are competent in their expertise learned. In the technological era, changes that occur due to a pandemic should not be a serious problem because technological advances have the ability of flexibility that is not limited by space and time [26].

[27] said that distance learning can use a variety of features in learning that is supported by the use of technology. Office practice learning carried out by distance learning utilizes web conferencing features, peer-to-peer file sharing, instant messaging, and communication by phone which is conducted by high intensity, so students' understanding of the competencies being learned is higher than students who learn using direct learning. The phenomenon is caused by a good understanding of students in utilizing information technology contained on the internet, and good communication between students and teachers in completing the practical assignments that have been provided. Thus, the learning orientation must be carried out by teachers and

students [28], so that they can reach the learning objectives that have been set.

Furthermore, [19] said that the ability of teachers in designing learning is an important factor that must be fulfilled to provide good quality e-learning. [29] also said that a good design of e-learning will increase student motivation and achievement. Besides, e-learning, which is well packaged, can improve students' cognitive abilities [30,31]. It is in line with the results of this research that the N-Gain analysis of students conducting distance practice learning gets better scores than students conducting direct practice learning, where students using distance practice learning get 0.5 score, and students using direct practice learning get 0.38 score. The phenomenon is in line with research conducted by [32,33], where they state that collaborative learning shows more effective results compared to students who carry out direct learning. The results of this study are caused by collaborative learning allows students to use many media to find information, utilize many sources, and easily access the material needed.

Slightly different from the assessment of cognitive aspects, the assessment of affective aspects, at the independence, discipline, and student responsibility, shows that students who carry out direct practice learning get a better average score, where students using direct practice learning get 4.17 average score, and students using distance practice learning get 4.12 average score, although students' affective assessments of these learning are still classified as good criteria. Also, the assessment of psychomotor aspects, at the completion of tasks, problem-solving, teamwork, communication, and leadership, shows that students using direct practice learning get 4.30 average score, and students using distance practice learning get 4.28 average score, although the assessments of these learning are still classified as good criteria. This phenomenon occurs that teachers who carry out distance practice learning have difficulty in making appropriate assessments that can be used to measure the affective and psychomotor abilities possessed by each student appropriately. Previous research conducted by [19] showed that indeed teachers still have difficulty making fair judgments because they cannot see directly the learning activities carried out by students, whereas affective and psychomotor assessments will be more real if the teacher can see their activities directly. So, further research can develop an assessment system for affective and psychomotor aspects of distance practice learning to assess all students' abilities appropriately.

5. CONCLUSION

Distance practice learning that is packaged with collaborative learning in the Vocational High School of Office Automation and Management Program in Indonesia gives better cognitive assessment results than direct practice learning. Students' affective and psychomotor assessment of distance practice learning gets a lower score than direct practice learning, meanwhile, the score is a good category. Thus, distance practice learning provides effective learning, increasing cognitive assessment of students, in the practice learning in Covid-19 pandemic.

The phenomenon occurs due to students' good understanding of utilizing information technology contained on the internet, and good communication between students and teachers in completing practical assignments. Furthermore, teachers and students have the same orientation in the implementation of learning, where the goal that they have is to gain understanding and skills of the fields that they learn in school.

The limitation of this research lies in the difficulty in determining fair assessment in the affective and psychomotor aspects of students who conducting distance practice learning because the teacher cannot see the activities carried out by students directly. Thus, further research should research and develop an assessment system for affective and psychomotor aspects of distance practice learning that can be used by teachers to assess students' real abilities, so that all students' abilities can be assessed fairly and well in distance practice learning.

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