Analysis of Online Learning Activities Among Vocational High School Students

Santoso Sri Handoyo*, Tuti Iriani

Civil Engineering, Universitas Negeri Jakarta, Jakarta, Indonesia
** Email Address: santoso_handoyo@unj.ac.id*

ABSTRACT

This study aims to objectively obtain information about online learning activities among Vocational High School (VHS) students. The method used in this study is descriptive method in the form of survey research with data collection tools through distributing questionnaires using Google Forms. The total number of respondents in this study are 279 students from seven VHS in Jakarta. Based on the factor loading coefficient value, the most dominant statement item represents the success of student activities in online learning by 86.50%, namely the statement "I study discipline every day" on the indicator of student learning independence (KBS) and student learning activity makes the biggest contribution to learning online. Meanwhile the weakest item in measuring the success of student activities in online learning is the statement "I always turn on the camera (on camera) during online learning" on indicators of student learning activity and students' ability to use technology. Thus, it can be concluded that Student Learning Activeness has an influence in increasing the success of online learning student activities, while the weakest indicator is students' ability to use technology.

Keywords: *Activity, Student, Online Learning.*

1. INTRODUCTION

Online learning is learning that takes place remotely through media in the form of the internet and other supporting tools such as cellphones and computers, and during online learning there are applications that are used as supports such as zoom meeting, google meet, google classroom, and WhatsApp [1-3]. According to Andriyanto et al. [4], online learning is a type of learning that participants who have access to the internet can use in a flexible setting and at their own pace. In addition, blended learning, which combines online and face-to-face learning, is an option. However, the application of online learning has an impact on changes in the learning culture, namely the position of students is required to be more individual in managing their learning.

There are various studies that have been conducted regarding the application of online learning which has an influence on student behavior. The results of research by Hardiansyah et al. [5] found that online learning has an influence in various ways, not only in the academic field of students, but also social change has decreased. This is because online learning is very closely related to gadgets and the internet which makes students do things outside of learning such as playing games, opening social media outside of applications during learning, and so on. He also added that before the implementation of online learning the character values of students were quite good, but since going online they have decreased starting from behavior, manners, attitudes, and discipline including interactions between students [5]. The changes experienced by these students, according to Prananda & Hadiyanto [6] indicate the failure of educational goals during online learning. The skills of students during online learning in mastering material are not optimal. In terms of activity, students seem less active and pay less attention to the material presented by the teacher. Even when learning, students only fill in attendance without participating in learning. This is in line with the results of study from Iswari et al. [7] which state that during online learning various problems were faced by students starting from not being active in participating in learning, not doing the tasks given by the teacher to the fullest, until when learning only filled attendance and did not follow the lesson.

A. Kusumastuti et al. (eds.), *5th Vocational Education International Conference (VEIC 2023)*,
Advances in Social Science, Education and Humanities Research 813,
https://doi.org/10.2991/978-2-38476-198-2_83

In addition, it is difficult for teachers to supervise students during online learning because learning is carried out remotely [8]. This causes deviations and changes in students' learning behavior during online learning. Of course, it is impossible to directly monitor the conditions of distance learning, and in the end, abnormal characteristics or behavior will appear. Indeed, students' tendency for deviations is not innate; rather, it is a result of opportunities or circumstances that may arise [2]. Some abnormal behaviors that happen when learning online include: reliance on smartphones, lack of enthusiasm in learning, lack of discipline, falsifying attendance, and falsifying learning engagement [2].

If previous study has focused more on student behavior in online learning, this study focuses more on the activities of VHS students in online learning. Learning activity is a student effort in the learning process to build knowledge within themselves. In the learning process there are changes and improvements in the quality of his abilities such as daring to ask questions, express opinions, listen well to teacher explanations, and do assignments on time [9]. According to Mirdanda [10] student activity is student involvement in the form of attitudes, thoughts of attention and activity in learning activities in the network to support the success of the teaching and learning process and benefit from these activities. According to Faradita [11], to get optimal learning results, the needs of a learning media that can supports the learning process so that the learning process can take place well, students can easily absorb material and understand the material being taught. The statement above reinforces that student activity plays a very important role in the success of the online learning process. Therefore, it is necessary to describe what activities need to be carried out during online learning. According to Dierich [10] there are several student activities that are carried out when conducting online learning with video conferences, namely (1) paying attention to material during online learning, (2) listening to the teacher during online learning, (3) actively asking questions when online learning, (4) the discipline of copying material provided by the teacher in online learning, (5) being creative in responding to teacher explanations during online learning, and (6) being enthusiastic about participating in online learning from the beginning to the end of the lesson. Discipline when online learning is also needed so that it can run well.

The types of learning activities classified by Paul D. Diedrich [12] divide learning activities into 8 groups, which is: (1) Visual activities, such as reading, looking at pictures, observing experiments, demonstrations, exhibitions, and observing other people working or playing, (2) oral (oral) activities, presenting a fact or principle, connecting a goal, asking a question, giving suggestions, expressing opinions, interviews, discussions, and interruptions, (3) listening activities. Listening to the presentation of material, listening to conversations or group discussions, listening to a game, and listening to the radio, (4) Writing activities. Writing stories, writing reports, checking essays, copying materials, making summaries, taking tests, and filling out questionnaires, (5) Drawing activities, such as drawing, making graphs, charts, map diagrams, and patterns, (6) Metric activities , doing experiments, looking at tools, carrying out exhibitions, organizing games, dancing and gardening, (7) mental activities, contemplating, remembering solving problems, analyzing factors, seeing relationships, and making decisions, and (8) emotional activities. discriminating interest, brave, calm, and others. the activities in this group are found in all types of activities overlapping one another.

According to Djamarah & Zain [13], learning activities carried out by students can be physical and psychological, such as: (1) listening, (2) looking, (3) touching, smelling and tasting/tasting, (4) writing or taking notes, (5) reading, (6) reading summaries or summaries and underlining, (7) observing tables, diagrams, and charts, (8) compiling papers, or working papers, (9) remembering, (10) thinking, and (11) training or practice.

Learning activities in the classroom that involve students directly, will get a high learning advantage. This was stated by Little II et al. 14]. The need for appropriate instruments in characterizing activities in the classroom. The instrument developed to assess student activity in integrated learning materials between science, technology, engineering, and mathematics (science, technology, engineering, art, and mathematics, or STEM) is the Student Class Activity and Engagement Instrument (SCAEI). SCAEI is based on the Interactive, Constructive, Active, and Passive (ICAP) framework. The ICAP framework differentiates classroom activities into four categories (interactive, constructive, active, or passive) and posits a hierarchy of which types of classroom activities lead to higher student learning outcomes (higher interactive than constructive, higher constructive than active, and more active). high from passive). The definitions and guidelines for measuring ICAP used in the development of SCAEI, are (1) Interactive, activities where students participate in an activity with other people (teachers, instructors, or classmates). Knowledge, or cognitive acquired,

is not possible without help, or input from others. Examples include working with peers to build deeper understanding of subject matter through group activities, or interacting with teachers (instructors) in ways that add to understanding; (2) Constructive, activities where students' cognitive load increases, and asks them to "produce output that contains ideas that go beyond the information presented". For example, making diagrams to organize learning content, repeating lecture material that has been delivered by the lecturer in the students' own words, etc., (3) Active, activities where students are only cognitively involved at a basic level, such as taking notes, gesturing or pointing, or repeating information. Examples include writing, or viewing notes, watching videos, and pausing/playing/rewinding/fast forwarding, given course material, etc., and (4) Passive, activities where students are minimally involved, such as just sitting around, and watching/listening lectures or videos without doing anything else. Examples include, listening without relating what is heard to previous subject matter.

Based on the concepts stated above, the learning activities in this study are activities carried out by students during the learning period, or during the teaching and learning process taking place online.

2. METHOD

The research method used is quantitative descriptive research. This study aims to collect data on the activities of VHS students during their studies, especially Construction and Property Engineering (TKP) Expertise Program VHS students, in Jakarta. The population in this study were all students of the TKP Expertise Program. The sample of this study is students of SMKN 1 Jakarta, SMKN 4 Jakarta, SMKN 26 Jakarta, SMKN 35 Jakarta, SMKN 52 Jakarta, SMKN 56 Jakarta, and SMKN 58 Jakarta. The number of students is 916 people. The number of samples is 279 students.

The data collection technique was carried out by distributing instruments using Google Form regarding learning activities using indicators: (1) students' ability to use technology, (2) student learning independence, (3) students' communication skills, (4) students' collaboration skills, and (5) student learning activeness. Instrumental measurements of student activity in online learning at SMK use a Likert scale, with 5 (five) answer options, namely: (a) strongly disagree, (b) disagree, (c) doubtful, (d) agree, and (e) strongly agree.

Table 1. Score Percentage Interpretation of Each Question Item

No	Interval (%)	Category
1	20 – 40	Very Low
2	41 – 60	Low
3	61 – 80	Mid
4	80 – 100	High

3. RESULTS AND DISCUSSION

Analysis of student activity during online learning at VHS is the description presented in this study. Following is a discussion of the results of data on student activity in participating in online learning based on students' ability to use technology, independent learning, student communication skills, student collaboration skills and student learning activity.

At SMKN 1 Jakarta, the data shows that student activity which is classified as high in online learning is student activity in: (1) paying attention to the lessons given by the teacher, (2) doing individual and group assignments seriously, and (3) utilizing technology in discussing and communicating about lessons with friends. Meanwhile, student activity that is classified as low, or that students do less in online learning is student activity in: (1) greeting teachers and fellow students, and (2) taking the initiative to answer teacher questions, if there are friends who cannot answer teacher questions.

At SMKN 4 Jakarta the data shows that student activity which is classified as high is: (1) attendance online on time, (2) turning on the camera, (3) paying attention to the teacher teaching from the beginning to the end of the lesson, and (4) record the important points of the material given by the teacher. This shows that online learning at the TKP Expertise Program at SMKN 4 Jakarta runs smoothly, and students are generally enthusiastic about participating in teaching and learning activities.

Student activity that is classified as low is student activity in: (1) taking the initiative to answer teacher questions, if there are friends who cannot answer teacher questions, (2) discussing lessons with friends via zoom meeting, or google meet, or WAG, or WA video, and (3) doing school assignments with friends in a group via zoom meeting, or google meet, or WAG, or WA video.

At SMKN 26 Jakarta, it shows that student activity which is classified as high is student

activity in: (1) looking for references to lessons that are poorly understood via the internet, books, or other media, (2) being present on time, (3) doing assignments individuals and groups, and (4) using zoom meetings, or Google meet, or WA groups to communicate lessons with friends outside of study hours. This shows that online learning at the TKP Expertise Program at SMKN 26 Jakarta runs smoothly, and students are enthusiastic about participating in teaching and learning activities. Meanwhile, student activity that is classified as low is student activity in: (1) turning on the camera during online learning, (2) taking the initiative to answer teacher questions, if there are friends who cannot answer teacher questions, and (3) greeting the teacher during online learning.

At SMKN 35 Jakarta, student activity that is classified as high is student activity in: (1) working on individual and group assignments, (2) looking for references to lessons that are poorly understood via the internet, books, or other media, (3) paying attention to the teacher who is teaching, and (4) using various online learning platforms used by teachers, such as zoom meeting, google meet, LMS, Microsoft Team. This shows that online learning at the TKP Expertise Program at SMKN 35 Jakarta runs smoothly, and students are enthusiastic about participating in teaching and learning activities. Student activity that is classified as low is student activity in: (1) turning on the camera during online learning, (2) taking the initiative to answer teacher questions, if there are friends who cannot answer teacher questions, and (3) greeting the teacher at online learning time.

At SMKN 52 Jakarta, student activity that is classified as high is student activity in: (1) working on individual and group assignments, (2) looking for references to lessons that are poorly understood via the internet, books, or other media, (3) being present on time for online learning, and (4) pay attention to the teacher who is teaching. This shows that online learning at the TKP Expertise Program at SMKN 52 Jakarta runs smoothly, and students are enthusiastic about participating in teaching and learning activities. Meanwhile, student activity that is classified as low is student activity in: (1) turning on the camera during online learning, (2) greeting the teacher during online learning, and (3) noting the subject matter points given by the teacher.

At SMKN 56 Jakarta, student activity that is classified as high is student activity in: (1) using zoom meetings, or Google meet, or WA groups to communicate lessons with friends outside of study hours, (2) pay attention to the teacher who is teaching, and (3) work seriously individually and in groups. This shows that online learning at the TKP Expertise Program at SMKN 56 Jakarta runs smoothly, and students are enthusiastic about participating in teaching and learning activities.

Student activity that is classified as low is student activity in: (1) taking the initiative to answer teacher questions, if there are friends who cannot answer teacher questions, (2) using various features, although different platforms, and (3) reviewing the subject matter provided by the teacher.

At SMKN 58 Jakarta, student activity that is classified as high is student activity in: (1) easy to join (join) online learning links, (2) pay attention to teachers who are teaching, and (3) do individual and group assignments seriously. This shows that online learning at the TKP Expertise Program at SMKN 56 Jakarta runs smoothly, and students can take part in teaching and learning activities.

Based on the results of study on learning activities at 7 VHSs in Jakarta, it shows a high category for student activity, which means that during the online learning process students are relatively active in participating in learning activities. The average results of student activity in the high category are (1) students attend on time, (2) students attend lessons from start to finish, (5) students pay attention to the material taught by the teacher, (3) students note important points in the material provided by the teacher, (4) students study discipline every day, (5) students work on assignments independently, and in groups, (6) students use information technology to communicate about lessons with their schoolmates outside of study hours, and (7) look for independent references through internet, books, or other media, if there is subject matter that is not understood, and (8) students study, if there is an assignment from the teacher.

While student activity is classified as low, meaning that during the online learning process students are relatively less involved in learning activities, namely: (1) reviewing the subject matter provided by the teacher, (2) doing assignments, with friends in a group via zoom meeting, or google meet, or WAG, or WA video, (3) discussing with friends in a group via zoom meeting, or google meet, or WAG, or WA video and (4) taking the initiative to answer teacher questions, if there are friends who could not answer the teacher's questions.

Furthermore, based on data from 7 VHSs, a Measurement Model Test (Outer Model) was carried out. Evaluation of the measurement model (outer model) in the PLS SEM analysis method aims to prove the validity of the data and estimate

the reliability of the instrument. This study consists of 5 indicators measuring the success of student activities in online learning, namely (1) students' ability to use technology (KMT), (2) student learning independence (KBS), (3) student communication skills (KKS), (4) students' collaboration skills (KLS), and (5) student learning activeness (KRS) using smart PLS software. In the evaluation of the outer model, convergent validity, discriminant validity and internal consistency reliability were tested. The evaluation of the outer model is based on the cut-off point value of the PLS-SEM analysis method [15-23]. Figure 1 is the result of testing the outer model on the output of the SmartPLS Algorithm.

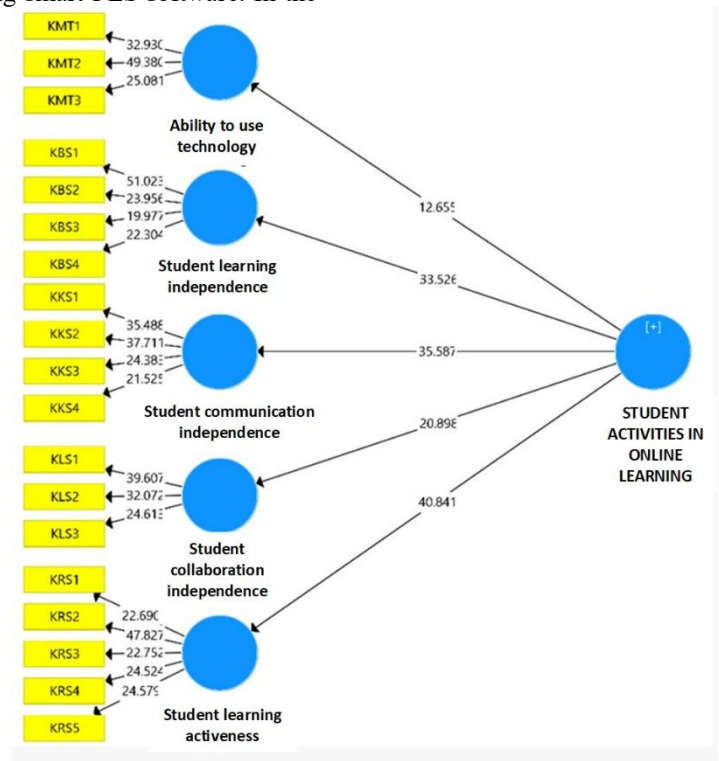

Figure 1. Measurement Model Test (Outer Model)

3.1 Convergent Validity

The convergent validity value is the factor loading value on the latent variable with its indicators. Convergent validity is assessed based on the correlation between the item score and the construct score calculated by PLS-SEM. Constructs can have a good validity value when the loading factor value is more than 0.70 and the AVE value is more than 0.50. Table 1 is the result of convergent validity, reliability, and AVE testing on the output of the PLS Algorithm.

Table 2. Convergent Validity, Reliability, and VIF Test Results

No	Indicator	Construct	Convergent Validity		Internal Consistency Reliability			VIF (<5.00)
			FL (>0.70)	AVE (>0.50)	CA (>0.70)	rho_A (>0.70)	CR (>0.70)	
1	students' ability to use technology (KMT)	KMT1	0.815	0.676	0.762	0.775	0.862	1.402
2		KMT2	0.858					1.738
3		KMT3	0.792					1.637
4	student learning independence (KBS)	KBS1	0.865	0.607	0.782	0.788	0.860	2.246
5		KBS2	0.765					1.499
6		KBS3	0.745					1.741
7		KBS4	0.736					1.433
8	student communication skills (KKS)	KKS1	0.812	0.624	0.798	0.802	0.869	1.649
9		KKS2	0.843					2.057
10		KKS3	0.768					1.659
11		KKS4	0.730					1.398
12	students' collaboration skills (KLS)	KLS1	0.862	0.699	0.783	0.783	0.874	1.995
13		KLS2	0.860					1.992

No	Indicator	Construct	Convergent Validity		Internal Consistency Reliability			VIF (<5.00)
			FL (>0.70)	AVE (>0.50)	CA (>0.70)	rho_A (>0.70)	CR (>0.70)	
14		KLS3	0.784					1.371
15	student learning activeness (KRS)	KRS1	0.755					1.878
16		KRS2	0.851					2.387
17		KRS3	0.709	0.589	0.824	0.826	0.877	1.480
18		KRS4	0.772					1.645
19		KRS5	0.741					1.656

Based on Table 2, the overall loading factor value for each item is above 0.70. The average extracted variance (AVE) value for each variable has a value above 0.50 (0.589 to 0.699). Therefore, it can be concluded that each item and indicator on the instrument has met the requirements of convergent validity. The overall factor loading coefficient obtained a value of 0.709 (KRS → KRS3) to 0.865 (KBS → KBS1). This means that the level of relationship between indicators and items can be explained by 70.90% to 86.50%. Based on the factor loading coefficient value, the most dominant statement item represents the success of student activities in online learning by 86.50%, namely KBS1 item with the statement "I study discipline every day" on the student learning independence indicator (KBS). Meanwhile, the weakest item in measuring the success of student activities in online learning is KRS3 with the statement "I always turn on the camera during online learning" on the student learning activity indicator (KRS).

3.2 Structural Model Testing (Inner Model)

The initial stage of structural model analysis is to look at the value of determination (R^2), effect size (f^2), predictive relevance (Q^2), VIF (Table 1), path coefficient (influence test between indicators) and model fit [15, 17, 24-29]. R-square describes the number of construct variants described by the model. Q-square predictive relevance is used to measure how well the observed value is produced by a structural model. Model fit is used to provide a predictive measure of the overall model and parameter estimates. Figure 2 is the result of testing the outer model on the SmartPLS Bootstrapping output.

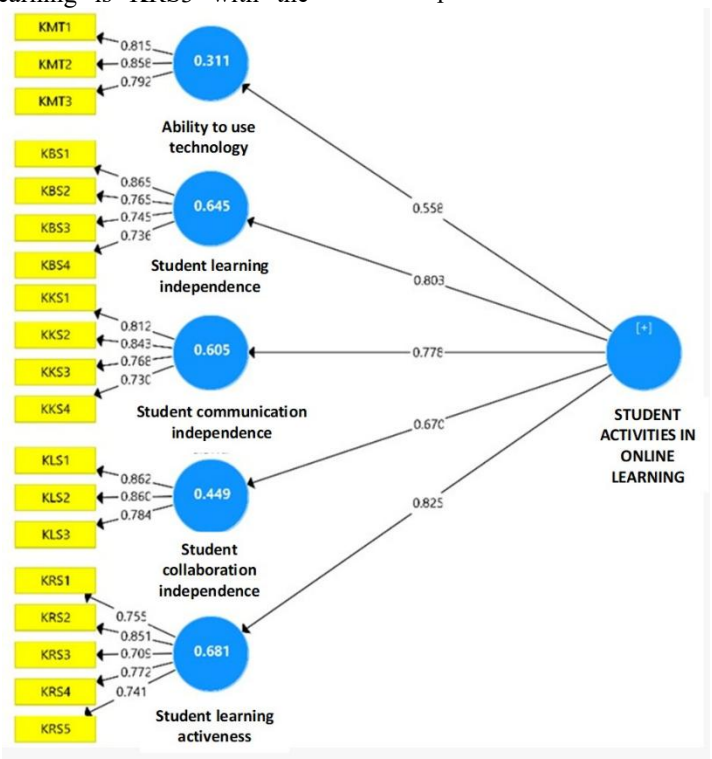

Figure 2. Structural Model Testing (Inner Model)

3.3 Coefficient of Determination (R^2) and Effect Size (f^2)

Based on Table 3, the R^2 value in the Student Learning Activeness indicator (KRS) obtained a value of 0.681, meaning that the student learning

activeness indicator has an influence on the success of student activities in online learning by 68.10% and the remaining 31.90% is influenced by other variables outside the research model. The magnitude of the influence on the KRS indicator contributed in the substantial category with a value of 0.681 (> 0.670), while other indicators contributed a large influence in the moderate category (0.330 to 0.670). So that the most dominant indicator influencing the success of student activities in online learning is Student Learning Activeness (KRS: 0.681) and the weakest indicator is the Ability to Use Technology (KMT: 0.311). In calculating the effect size (f^2) on student activity in online learning, all indicators fall into the category of high influence. Acquired effect size value (f^2) between 0.452 to 2.130 (>0.35).

Table 3. Coefficient of Determination (R^2) and Effect Size (f^2) Result Test

Indicator	R^2		f^2	
	Value	Decision	Value	Decision
student learning activeness (KRS)	0.681	Substantial	2.130	Large
students' collaboration skills (KLS)	0.449	Moderate	0.816	Large
student communication skills (KKS)	0.605	Moderate	1.530	Large
students' ability to use technology (KMT)	0.311	Moderate	0.452	Large
student learning independence (KBS)	0.645	Moderate	1.816	Large

R^2 (0.190 weak; 0.333 moderate; and 0.670 substantial); f^2 (0.02 small; 0.15 medium; and 0.35 large)

3.4 Predictive Relevance (Q2)

Next, an assessment of the Q^2 predictive relevance results was carried out using Blindfolding in SmartPLS. Subsequent tests by looking at the value of predictive relevance (Q^2) which aims to validate the predictive ability of the model according to the reality in the field. Based on table 6, all Q^2 values exceed the cut-off point (greater than zero). Construct Cross validated Redundancy measures the ability of a path model to predict endogenous measurement items indirectly from predictions of the endogenous variables themselves using related structural relationships. The results of predictive relevance Q^2 calculations obtained values of 0.203 and 0.391 which explain that the analysis results model can explain 20.30% and 39.10% of the phenomenon studied. However, with a Q^2 value >0.35 (35.00%), this explains that the exogenous latent variable as an explanatory variable is able to predict its endogenous latent variable well. In terms of the predictive relevance of the Construct Cross validated Communality, the value of Q^2 is calculated through the ability of the measurement model to assess the direct path model of its own latent variable. The Q^2 values in Table 4 show three with strong predictive power and two with moderate predictive power. The results of the two procedures show that the model for measuring the success of student activities in online learning has great predictive power.

Table 4. Predictive Relevance (Q^2)

Indicator	Construct Cross validated						
	SSO	Redundancy			Communality		
		SSE	Q^2 (>0.35)	Predictive	SSE	Q^2 (>0.35)	Predictive
student learning activeness (KRS)	1395	849.127	0.391	Strong	865.202	0.380	Strong
students' collaboration skills (KLS)	837	578.031	0.309	Moderate	511.882	0.388	Strong
student communication skills (KKS)	1116	702.807	0.370	Strong	702.433	0.371	Strong
students' ability to use technology (KMT)	837	667.230	0.203	Moderate	545.314	0.348	Moderate
student learning independence (KBS)	1116	686.320	0.385	Strong	728.213	0.347	Moderate

3.5 Path Analysis and Hypothesis Testing

The path analysis test in this study aims to analyze the influence of indicators on Online Learning Student Activities (ASPD). Path analysis shows that the statistical significance value (T-statistic) is greater than the T-table value with (α 0.05; t-table 1.96) for the effect of the significance of the indicator, and the β-values indicate the direction of positive or negative influence. The values of the significance results can be seen in Table 5.

Table 5. Path Analysis and Hypothesis Testing Results

Hypothesis	Path	β-values	Std.	T-Statistics	P-Values	Decision
P1	ASPD → student learning activeness (KRS)	0.825	0.020	40.841	0.000	Accepted
P2	ASPD → students' collaboration skills (KLS)	0.670	0.032	20.898	0.000	Accepted
P2	ASPD → student communication skills (KKS)	0.778	0.022	35.587	0.000	Accepted
P3	ASPD → students' ability to use technology (KMT)	0.558	0.044	12.655	0.000	Accepted
P4	ASPD → student learning independence (KBS)	0.803	0.024	33.526	0.000	Accepted

Based on Table 5, the value of the T-statistic explains that the hypothesis can be accepted if it has a value above 1.96 while the coefficient β-values indicate the direction of positive or negative influence. Hypothesis P1 obtains β-values = 0.825 (positive decimal), T-Statistics = 40.841 (>1.96) and P-Values = 0.000 (<0.05). This shows that Online Learning Student Activity (ASPD) has a significant and positive effect on Student Learning Activeness (KRS). Furthermore, hypotheses P1 to P4 were stated to have a positive and significant effect on the indicator's influence on Online Learning Student Activity (ASPD). In terms of β-values, the highest score was obtained on the Student Learning Activeness indicator (KRS) of 0.825, so that the Student Learning Activeness indicator (KRS) made the biggest contribution in influencing the success of online learning student activities.

3.6 Model Fit

The final step after examining the predictive power of the model is to assess model fit (Table 6). Model fit addresses the issue of how well the model that best represents the data reflects the underlying theory. In PLS-SEM, the ft model is assessed using three fit criteria [15, 25, 26, 27, 30, 31]. Standardized Root Mean Square Residual (SRMR) which is the absolute size of the proposed ft model to avoid model specification errors. The cut-off value used for SRMR is ≤0.08. Using the SmartPLS software, the SRMR for this study was 0.078 which is less than the cut off value suggested in the literature. Root Mean Square Residual (RMStheta) assesses the extent to which the residuals of the outer model are correlated. This size should be ≤0.12 to represent a good ft model. Using SmartPLS the RMStheta is 0.114 which indicates a good leg model. The NFI value in the model coverage explains the model for measuring student activity in online learning of 0.231 in the moderate fit category.

Table 6. Model Fit

Criteria Fit	Cutt-off Point	Saturated Model	Decision
SRMR	≤0.08	0.078	Good Fit
d_ULS	-	1.278	Good Fit
d_G	-	97.981	Good Fit
Chi-Square	-	9301.294	Good Fit
NFI	>0.36	0.231	Marginal Fit
rms Theta	≤0.1	0.114	Good Fit

	2		

Learning activities in essence really need activities, because in the absence of activities learning activities will not take place properly. In the process of learning activities must involve all aspects of students, both physically and spiritually so that changes in behavior can change quickly, precisely, easily and correctly, both related to cognitive affective and psychomotor aspects [32]. In online learning activities students are no longer just passive by waiting for material from the teacher, this is due to the role of a teacher as a full facilitator. As stated by Robin and Frank [33] that in online-based learning, teachers, lecturers, tutors, instructors become facilitators, guides, or even expert resource persons, and are no longer the sole determinants of student learning experiences.

Chandrawati [34] explains that online learning requires students to be able to organize and direct themselves independently, at least there are four important components to building a learning culture; (1) students are required to be able to manage themselves independently with an appropriate approach so that they are able to motivate and direct themselves, (2) teachers facilitate and develop knowledge, skills and understand the things needed, (3) provide adequate media, and (4) facilitate creative learning. This is in accordance with the understanding of the learning, where there are three elements, namely 1) Subjects (teachers and students) who are active in learning activities, 2) there is activity and interaction between subjects, 3) learning environment.

The above is in accordance with what was conveyed by Gagne, Briggs & Wager that learning is a series of activities designed to facilitate the student learning process [35]. So, the purpose of learning is an effort to make students learn. Then students become active subjects in the learning environment. In order to achieve the objectives of the learning, the teacher plays a role and is responsible for selecting, determining, and designing the order of learning activities to be effective. Therefore, the teacher must plan and design learning activities well, determine learning methods, find the right learning model, so that students are expected to be successful in learning.

With the diversity of communication media at this time, it is possible for students to choose and use them easily and effectively. Today's online intrapersonal communication is believed to facilitate communication between individuals. From the results of the data that have been obtained above in terms of intrapersonal communication

outside of online lecture time to discuss preparations or discussions show low results. However, most students also feel that they are sufficiently able to carry out intrapersonal communication through online activities. This is due to the distribution of students returning to their homes with different internet network conditions at each student's residence. The collaboration aspect is something that cannot be separated from learning activities at this time. In line with what was stated by Hapsari and Yonata [36] that collaboration skills can train in exchanging ideas and information to find creative solutions and success in completing.

With online learning activities that replace face-to-face learning, students based on data show a lack of collaboration in online learning activities, this is in line with the study of Hasanah et al. [37] which states that the implementation of online learning requires students to carry out online learning activities independently. In line with Pratama and Pratiwi [38] which state that the learning outcomes of students who have high learning independence are better than the learning outcomes of students who have low learning independence. This is because when students have high learning independence it is easier to recognize self-control that exists in themselves and others.

4. CONCLUSION

Based on the results of the study, it can be concluded that online learning activities among VHS students show the most dominant indicator is student learning independence and Student Learning Activeness independently makes the biggest contribution to increasing the success of online learning, while the weakest indicator in online learning is students' ability to use technology.

REFERENCES

[1] H. Putria, L.H., Maula, & D.A. Uswatun, Analisis Proses Pembelajaran dalam Jaringan (DARING) Masa Pandemi Covid- 19 Pada Guru Sekolah Dasar, Jurnal Basicedu, 4(4), 2020, pp. 861–870. DOI: https://doi.org/10.31004/basicedu.v4i4.460.

[2] N. Mahrani, A. Ritonga, M.K. Hasibuan, & S.E. Harahap, Analisis Sisi Negatif moralitas Siswa Pada Masa Pembelajaran Jarak Jauh. Thoriqotuna: Jurnal Pendidikan Islam, 3(1), 2010, pp. 56–63. DOI: https://doi.org/10.47971/tjpi.v3i1.227.

[3] F. Fathurrahman, H. Susanto, R.D.A. Yuliantri, & E.W. Abbas, Analisis Pembelajaran Kooperatif dalam Penerapan Blended Learning Masa Pandemi Covid-19, Jurnal Pendidikan Dan Konseling, 4(3), 2022, pp. 733–739.

[4] A.R. Andriyanto, I. Santosa, A. Syarif, Memahami perilaku generasi Z sebagai dasar pengembangan materi pembelajaran daring, Seminar Nasional: Seni, Teknologi, dan Masyarakat, 2, 2019.

[5] M. A. Hardiansyah, I. Ramadhan, S. Suriyanisa, B. Pratiwi, N. Kusumayanti, & Y. Yeni, Analisis Perubahan Sistem Pelaksanaan Pembelajaran Daring ke Luring pada Masa Pandemi Covid-19 di SMP. Jurnal Basicedu, 5(6), 2021, pp. 5840–5852. DOI: https://doi.org/10.31004/basicedu.v5i6.1784

[6] G. Prananda & Hadiyanto, Korelasi Antara Motivasi Belajar dengan Hasil Belajar Siswadalam Pembelajaran IPA di Sekolah Dasar, Jurnal Basicedu, 3(3), 2019, pp. 909–915. DOI: https://doi.org/10.31004/basicedu.v3i3.181

[7] D. R. Iswari, D. Setiawan, & W. N. Huda, Analisis Kemampuan Berkomunikasi siswa Kelas IV di SD Bulungcangkring Selama Pembelajaran Daring, Jurnal Prasasti Ilmu, 2(1), 2022, pp. 42–47. DOI: https://doi.org/10.24176/jpi.v2i1.7181

[8] G. A. Sari, Dampak Sistem Kegiatan Belajar Mengajar (Kbm) Daring Akibat Covid-19 Terhadap Siswa. Jurnal IKA PGSD (Ikatan Alumni PGSD) UNARS, 8(2), 2020, p. 462. DOI: https://doi.org/10.36841/pgsdunars.v8i2.848

[9] M. Yamin, Kiat membelajarkan siswa (p. 219) [GEN], Jakarta: Gaung Persada Press, 2007.

[10] A. Mirdanda, Mengelola Aktivitas Pembelajaran di Sekolah Dasar, 1 ed. Kalbar: Yudha English Gallery, 2019.

[11] M. N. Faradita, Penerapan Multimedia Interaktif Untuk Meningkatkan Aktifitas Dan Hasil Belajar IPA di SD Tawangsari, Proceedings Conference of Elementary Studies 2020, pp. 309-317.

[12] O. Hamalik, Proses Belajar Mengajar (18th ed.), Bumi Aksara, 2016.

[13] S. B. Djamarah & A. Zain, Strategi belajar mengajar (Ed. rev), Rineka Cipta, 2006.

[14] D.L. Little II, K.Q. Fisher, S.A. Brown, M. Koretsky, & J. Bouwma-Gearhart, Measuring Student Perceptions of Engineering Classroom

Activities and the Use of Such Measures by STEM Faculty: The Development of the Student Class Activity and Engagement Instrument, American Society for Engineering Education, 2015.

[15] D. Al-Fraihat, M. Joy, R. Masa'deh, & J. Sinclair, Evaluating E-learning systems success: An empirical study, Computers in Human Behavior, 102, 2020, pp. 67–86. DOI: https://doi.org/10.1016/j.chb.2019.08.004

[16] F. A'mar & D. Eleyan, Effect of Principal's Technology Leadership on Teacher's Technology Integration, International Journal of Instruction, 15(1), 2022, pp. 781–798. DOI: https://doi.org/10.29333/iji.2022.15145a

[17] G. Dash & J. Paul, CB-SEM vs PLS-SEM methods for research in social sciences and technology forecasting, Technological Forecasting and Social Change, 173, 2021, pp. 121092. DOI: https://doi.org/10.1016/j.techfore.2021.121092

[18] A. Fauzan, M.B. Triyono, R.A.P. Hardiyanta, R.W. Daryono, & S. Arifah, The Effect of Internship and Work Motivation on Students' Work Readiness in Vocational Education: PLS-SEM Approach, Journal of Innovation in Educational and Cultural Research, 4(1), 2023, pp. 26-34. DOI: https://doi.org/10.46843/jiecr.v4i1.413

[19] V. L. Hariyanto, R.W. Daryono, N. Hidayat, S.H. Prayitno, & M. Nurtanto, A framework for measuring the level of achievement of vocational students' competency of architecture education. Journal of Technology and Science Education, 12(1), 2022, pp. 157–171. https://doi.org/10.3926/jotse.1188

[20] P. M. Kurup, X. Li, G. Powell, & M. Brown, Building future primary teachers' capacity in STEM: Based on a platform of beliefs, understandings and intentions, International Journal of STEM Education, 6(1), 2019, pp.1–14. DOI: https://doi.org/10.1186/s40594-019-0164-5

[21] A.H. Ngah, N.I. Kamalrulzaman, M.F.H. Mohamad, R.A. Rashid, N.O. Harun, N.A. Ariffin, & N.A.A. Osman, The sequential mediation model of students' willingness to continue online learning during the COVID-19 pandemic, Research and Practice in Technology Enhanced Learning, 17(1), 2022, pp. 1–17. DOI: https://doi.org/10.1186/s41039-022-00188-w

[22] A. Probst, C. Nitzl, F. Kraus, & R. Förstner, Cost estimation of an asteroid mining mission using partial least squares structural equation modelling (PLS-SEM). Acta Astronautica, 167, 2020, pp. 440–454. DOI: https://doi.org/10.1016/j.actaastro.2019.07.032

[23] F. H. Wang, On the relationships between behaviors and achievement in technology-mediated flipped classrooms: A two-phase online behavioral PLS-SEM model. Computers & Education, 142, 2019, pp. 1–12. DOI: https://doi.org/10.1016/j.compedu.2019.103653

[24] N.P. Danks, P.N. Sharma, & M. Sarstedt, Model selection uncertainty and multimodel inference in partial least squares structural equation modeling (PLS-SEM). Journal of Business Research, 113, 2020, pp. 13–24. DOI: https://doi.org/10.1016/j.jbusres.2020.03.019

[25] J.F. Hair, M.C. Howard, & C. Nitzl, Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. Journal of Business Research, 109, 2020, pp. 101–110. DOI: https://doi.org/10.1016/j.jbusres.2019.11.069

[26] S. A. R. Khan, Assessing the eco-environmental performance: An PLS-SEM approach with practice-based view. International Journal of Logistics Research and Applications, 24(3), 2021, pp. 303–321. DOI: https://doi.org/10.1080/13675567.2020.1754773

[27] L. Law & N. Fong, Applying partial least squares structural equation modeling (PLS-SEM) in an investigation of undergraduate students' learning transfer of academic English, Journal of English for Academic Purposes, 46, 2020, pp. 100884. DOI: https://doi.org/10.1016/j.jeap.2020.100884

[28] M. Sarstedt, L. Radomir, O.I. Moisescu, & C.M. Ringle, Latent class analysis in PLS-SEM: A review and recommendations for future applications, Journal of Business Research, 138, 2022, pp. 398–407. https://doi.org/10.1016/j.jbusres.2021.08.051

[29] S. Supriyanto, S. Munadi, R.W. Daryono, Y.A.E. Tuah, M. Nurtanto, & S. Arifah, The Influence of Internship Experience and Work Motivation on Work Readiness in Vocational Students: PLS-SEM Analysis, Indonesian Journal on Learning and Advanced Education

(IJOLAE), 5(1), 2023, pp. 32-44. DOI: https://doi.org/10.23917/ijolae.v5i1.20033

[30] M. Astiana, M. Malinda, A. Nurbasari, & M. Margaretha, Entrepreneurship Education Increases Entrepreneurial Intention Among Undergraduate Students. European Journal of Educational Research, 11(2), 2022, pp. 995–1008. DOI: https://doi.org/10.12973/eu-jer.11.2.995

[31] M. N. Masrek, H.P. Yuwinanto, R.T. Atmi, T. Soesantari, & F. Mutia, Cultural intelligence and job performance of academic librarians in Indonesia, The Journal of Academic Librarianship, 47(5), 2021, pp. 1–9. https://doi.org/10.1016/j.acalib.2021.102394

[32] N. Hanafiah, Konsep Strategi Pembelajaran, Bandung: Refika, 2010.

[33] R. Masson and F. Rennie, E-learning Panduan Lengkap Memahami Dunia Digital dan Internet, Yogyakarta: Pustaka Baca, 2010.

[34] S. R. Chandrawati, Pemamfaatan Elearning dalam Pembelajaran, Jurnal Cakrawala Kependidikan, 8(2), 2010, pp. 218616.

[35] R. M. Gagne, L.J. Briggs, & W.W. Wagner, Principles of instructional design (Fourth Edition), Holt, Reinhart and Winston, 1992.

[36] S.N. Hapsari and B. Yonata, Keterampilan Kerjasama Saat Diskusi Kelompok Siswa Kelas XI IPA pada Materi Asam Basa melalui Penerapan Model Pembelajaran Kooperatif di SMA Kemala Bhayangkari 1 Surabaya, Unesa Journal of Chemical Education, 3(2), 2014, pp. 181-188.

[37] A. Hasanah, A.S. Lestari, A.Y. Rahman, Y.I. Danil, Analisis Aktivitas Belajar Daring Mahasiswa Pada Pandemi COVID-19, 2020.

[38] R. A. Pratama & I.M. Pratiwi, Hasil Belajar Sejarah Indonesia Melalui Pembelajaran Aktif Tipe Everyone is a Teacher Here Berdasarkan Kemandirian Belajar, Sosial Horizon: Jurnal Pendidikan Sosial, 6(1), 2019, pp. 96-107.

[39] Hair, J. F., Howard, M. C., & Nitzl, C. (2020). Assessing measurement model quality in PLS-SEM using confirmatory composite analysis. Journal of Business Research, 109, 101–110. https://doi.org/10.1016/j.jbusres.2019.11.069