



The Effect of Blended Learning and Teacher-Student Interaction on the Learning Motivation of SMAN 1 Depok City Students

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Abstract

The purpose of this study is to determine the influence of blended learning and teacher-student interaction on student learning motivation at senior high school 1 Depok City. This research uses quantitative methods with the paradigm of positivism. The data collection technique was through the distribution of questionnaires with a total population of 600 students and a sample of 263 students in class X and XI of senior high school 1 Depok City. The results of the influence of blended learning on student learning motivation are categorized in terms of online content indicators, live events and collaboration. The results of the study on the effect of teacher-student interaction on student learning motivation well categorized in terms of indicators of openness, empathy, support, a sense of positivity and equality. The results of analysis and hypothesis testing show that blended learning and teacher-student interaction have a positive and significant effect on the learning motivation of students of senior high school 1 Depok City. From the results, the research can influence blended learning and teacher-student interaction on the learning motivation of students of senior high school 1 Depok City by 27.5% and the remaining 72.5% is influenced by other factors, namely factors of the students themselves, adequate facilities and infrastructure, family environment, school and social. It is recommended that in blended learning teachers are required to be more creative, innovative and communicative when delivering material, and the interaction between teachers and students is further improved in order to generate student learning motivation.

Keywords:

*Blended learning
Learning motivation
Teacher-Student interaction.*

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Publisher:

Scientific Publishing Institute

Received: 4 October 2022

Revised: 18 November 2022

Accepted: 2 December 2022

Published: 15 December 2022

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Funding: This study received no specific financial support.

Competing Interests: The authors declare that they have no competing interests.

1. Introduction

The Covid-19 pandemic, which has lasted for about two years, has disrupted the living system, as well as the education system. At the beginning of the pandemic, learning was carried out 100% online. Through the Circular Letter of the Minister of Education and Culture of the Republic of Indonesia No. 4 of 2020 (Kemdikbud, 2020) concerning the Implementation of Education Policies in the Emergency Period of the Spread of Covid-19, the Minister of Education and Culture appealed to all levels of schools, universities, and other educational institutions that teaching and learning activities take place online from home, and the process of face-to-face learning in schools is temporarily suspended. The teaching and learning process, which was initially carried out conventionally, then followed a new policy that has been changed by the Minister of

Education and Culture, namely by implementing Distance Learning (DL) where the teaching and learning process is 100% online without *face-to-face*.

In the field of online learning or distance learning this did not go well, many obstacles were found. Learning that must use internet network facilities with computer devices or cellphones turns out to cause complaints in the community, especially people with lower middle income. Many obstacles are encountered regarding the limited cost of buying a device and internet quota. Although the government has issued a policy of distributing internet quotas for students, students and teachers, the policy has not been able to reach all parties.

Other impacts of online learning affect the quality of learning. Student interactions that are usually established directly with teachers at school during online learning can only be done in the *virtual* room via *zoom* or *google meet*. And many students choose to *off* camera compared to *on camera* so that the communication that occurs only takes place one way. As a result, teachers complain that many students are less motivated when participating in learning. Because the teacher cannot monitor the conditions that the students are experiencing directly. In addition, not all students respond and work on assignments given online through *WhatsApp*, social media and Learn Management System. Based on all the obstacles and complaints of the community, the government issued a decree of four ministers through the minister of education and culture regarding the policy of limited face-to-face learning.

Schools conduct this limited face-to-face learning by setting out the applicable conditions. When limited face-to-face learning students enter the school only 50% of the total number of students and are carried out alternately. During limited face-to-face learning the number of face-to-face hours is limited to two hours and students are not allowed to bring food supplies to school. Based on this policy, many schools implement a *blended learning* system. A *blended learning* system is learning that combines or mixes face-to-face learning in schools with e-learning learning.

According to Dwiyogo (2018) *Blended Learning* refers to learning that combines or mixes face-to-face learning and computer-based learning (*Online and offline*). Setiawan, Juliantine, and Komarudin (2020) stated that *blended learning* is the development of a learning method that mixes conventional methods face-to-face with the e-learning system. Along with that, Chaeruman (2013) revealed blended learning as learning that brings together *synchronous* and *asynchronous-based* learning methods to realize the learning goals to be achieved. The learning process consists of two different designs, namely asynchronous learning where students learn and work on learning activities at the same time. On the contrary, *synchronous* learning design of learners carries out learning activities at the same time but at a certain period of time (Chaeruman, 2013).

It can be concluded that *blended learning* is learning that combines face-to-face or conventional learning with learning using advances in information and communication technology (ICT) such as computers, the internet, video conferencing and others. With limited face-to-face learning based on *blended learning*, it is hoped that students will be motivated to participate in learning again and actively participate during learning both *offline* when face-to-face at school and online.

At senior high school 1 Depok, limited face-to-face learning is carried out with a blended learning system *synchronous* and *asynchronous*. Students who choose limited face-to-face learning study at school and students who choose distance learning at home study simultaneously at the same time. Teachers carry out learning simultaneously using *zoom meetings*. Students present at the school are scheduled in turn. With this blended learning-based face-to-face learning, it is hoped that students will be motivated and excited to follow the learners. Based on the background, the formulation of the problem in this study is how *blended learning* and teacher-student interaction affect student learning motivation at senior high school 1 Depok City.

The purpose of this study was to determine the effect of *blended learning* and teacher-student interaction on student learning motivation at senior high school 1 Depok City.

2. Research Methods

This research method uses quantitative methods and positivism paradigms. Quantitative methods are used to research a particular population or sample. The sampling technique is carried out randomly by distributing questionnaires, for the calculation of the analysis of research results using statistics (Sugiyono, 2019). The *independent* variables in this study are *blended learning* and teacher-student interaction. The *dependent* variable is the student's learning motivation. This research was conducted at senior high school 1 Depok City which is located at Jalan Nusantara Raya No 317 Depok. Data collection is carried out by distributing questionnaires *online* through *google forms* to class X and XI students of senior high school 1 Depok City. This research was conducted in the even semester of the 2021/2022 school year. Calculation and processing and analysis of research data by multiple regression using Statistical Program for Social Science (SPSS) 25.

This quantitative method is used to see the influence of learning motivation on class X and XI students of senior high school 1 DEPOK on the use of *blended learning systems*. Does the *blended learning* system increase students' enthusiasm for learning compared to *online learning*? And also looking at the influence of the interaction formed between teachers and students, with a *blended learning* system and *online*, whether there is an influence on the learning motivation of students of senior high school 1 Depok City. If during online learning the interaction of teachers and students is only through social media such as *whats App* and through

video conferences such as *zoom meetings* or *google meet*. In *blended learning*, students can meet face-to-face and establish direct communication with the teacher.

3. Results and Discussion

The research entitled the influence of interpersonal communication between teachers and students in blended learning on student learning motivation was carried out at senior high school 1 Depok City with respondents of class X and XI students by distributing questionnaires using google forms in the even semester of the 2021/2022 school year.

3.1. Result

From the results of questionnaire deployment and multiple regression analysis using SPSS 25. The description of the data from this research questionnaire includes data on Student Learning Motivation (Y) as a *dependent* variable, Teacher-Student Interaction (X₁) and *Blended Learning* (X₂) as an independent variable. The description of the questionnaire data in this study is useful for determining the mean, standard deviation, minimum and maximum values of each indicator.

Table 1. Descriptive indicators.

Mean Indicator				
Variable	N	Indicator	Mean	Std. Deviations
Blended Learning	263	X1 minute	3.57	1.050
	263	X1 max	4.49	0.756
Teacher and Student Interaction	263	X2 minutes	3.31	0.954
	263	X2 max	4.37	0.789
Student learning motivation	263	Then min	3.13	1.150
	263	And max	4.33	0.797

In Table 1. The indicator with the average value in the *Blending learning* variable (X1) is 4.49. With the statement "References that students use in addition to textbooks, can be through the internet". *Blended learning* is a combination of conventional face-to-face learning and e-learning. *Inan* independent manner, students can search for other sources of reference through the internet and choose the reference sources of interest. On the Teacher-Student Interaction variable (X2), the indicator with the highest average score of 4.22, with the statement "The teacher greets and asks how the students are doing before starting the lesson". Interpersonal communication between teachers and students that is formed effectively during activities inside and outside the classroom is a factor to establish interaction between teachers and students with good interaction so that students will feel comfortable and motivated to learn. For the variable Student Learning Motivation (Y) the highest average score was 4.29 with the statement "Students are not excited about doing assignments if the material is not understood". When learning takes place online one hundred % *online*, many students are confused and complain because they cannot understand well the material provided by the teacher. And students also do not have the courage to ask the teacher because they have never met in person and interacted with the teacher, this causes students not to be eager to do the tasks given.

The results of statistical testing on the t test coefficient value for *blended learning* variables (X1) were 0.207 with t-statistical values of 3.194 (>1.96) and p-value of 0.002 (<0.05). From the results of the t test, it indicates that the *blended learning* system has a positive and significant influence on the learning motivation of students of senior high school 1 Depok City. The value of the t-test coefficient for the teacher-student interaction variable (X2) was 0.494 with a t-statistical value of 8.111 (>1.96) and a p-value of 0.000 (<0.05). The results stated that the interaction between teachers and students had a positive and significant effect on increasing the learning motivation of students of senior high school 1 Depok City. From the results of the t-test, the two dependent variables of *blended learning* and teacher-student interaction influenced an independent variable, namely the learning motivation of students of senior high school 1 Depok City.

In the simultaneous test, an F-statistical value of 49.218 with a p-value of 0.00 (less than 0.05) was produced. This shows the influence caused by the *blended learning* variable (X1) and teacher-student interaction (X2) on student learning motivation (Y). And there is a positive and significant simultaneous influence on *Blended Learning* (X₁) and Teacher-Student Interaction on Student Learning Motivation. This means, the better *blended learning* and teacher-student interaction will work, the more motivated students will be to learn at senior high school 1 Negeri Kota Depok.

In the coefficient of determination analysis, an R-Square value of 0.275 was obtained, which showed that student learning motivation could be represented by *blended learning* variables and teacher-student interaction of 27.5%. While the remaining 72.5% is represented by other variables, namely the availability of sufficient learning facilities and infrastructure, student personality, teacher readiness, family environment, socio-cultural background and so on.

3.2. Discussion

The first hypothesis testing resulted in *that blended learning* had a positive and partially significant effect on student learning motivation. This shows that the better and smoother the process of implementing *blended learning* carried out by all parties, especially teachers as facilitators, will increase student learning motivation, especially during the Covid-19 pandemic, where learning is not carried out entirely face-to-face.

Blended Learning has an influence on the learning motivation of students of senior high school 1 Depok City with the highest indicator on: Independent Learning. The highest item of statement with a mean of 4.49 is: The references that students use in addition to textbooks, can be through the internet. This states that *blended learning* that combines face-to-face learning and e-learning encourages students to learn independently by seeking information from various sources, especially through the internet which is one of the learning resources in the 21st century.

According to Carman (2005) in Sheren (2018) identified five basic keys to *blended learning*, namely: 1). *Live Events*. 2). Self-study with *Online Content*. 3). *Collaboration*. 4). *Assessment* (assessment). 5). *Performance support materials*.

In the *blended learning* system, students are required to be more independent in finding the references needed through various sources of information, such as utilizing the internet to find the information they need, video - learning videos and so on. Students no longer rely on information obtained directly from teachers and certain reference books.

Chaeruman (2013) revealed *blended learning* as learning that brings together *synchronous* and *asynchronous-based* learning methods to realize the learning goals to be achieved. The process consists of two different learning designs, namely students learning and working on learning activities at the same time as *asynchronous* designs. In contrast, *synchronous* learning design usually students carry out learning activities at the same time, but at a certain period of time (Chaeruman, 2013).

This is in accordance with the research of Widyasari and Rafsanjani (2021) the results of the study show that learning using *blended learning* is considered to be able to encourage learning motivation and a significant increase in student learning outcomes. This is expected to be able to provide new strategies in learning with the application of asynchronous synchronous-based *blended learning* to be applied in distance learning by teachers, to be more optimal in providing learning activities

Research Osman and Hamzah (2020) the results of the study show that the application of *blended learning* has a positive impact on students' interest and motivation in learning. Students recognize the learners given, using a *blended learning* system attracts their attention more and they are also motivated when participating in learning.

Learning with a *blended learning* system is a challenge for students to motivate and organize their learning. Learning that takes place from home online requires clear online instruction and strategies in such a way that students can maintain learning motivation and engage in the learning process. Sweller (2011) theory of cognitive load is a good way to understand online learning and *online* instruction.

In the second hypothesis test, teacher-student interaction showed a positive and significant influence on increasing the learning motivation of students of senior high school 1 Depok City, with the highest indicator on "Openness". The statement with the highest average score of 4.22 was: "The teacher greets and asks how the students are doing before starting the lesson". With the frequent communication of teachers with students, such as greeting and asking how students are doing, it will establish interaction between teachers and students, well-formed interactions will increase the enthusiasm and motivation for learning students of senior high school 1 Depok City, especially during the Covid-19 pandemic. The interaction between teachers and students is strongly influenced by the interpersonal communication of teachers and students.

According Onong (2003) *Communication is in the process of modifying the behavior of other individuals*, communication can be a process to change the behavior of others. Furthermore, Tubbs and Moss (1974) states, *Interpersonal communication refers only to face-to-face communication, two-way, "Interpersonal events include more informal exchanges, every day than they do any other type of communication"*.

That interpersonal communication refers to two-way communication that occurs directly, interpersonal usually occurs in informal situations, which is commonly done every day.

DeVito (2013) stated, interpersonal communication aims to: (1) find, (2) relate, (3) convince, and (4) to play. The first goal, related to how a person can better understand oneself and others as interlocutors. The second goal, in communication how a person relates to others, through communication there will be both verbal and nonverbal communication that will usher in an atmosphere of interaction with others. The third purpose, communication is carried out to convince meaning that with confidence in what you want to convey, it does not rule out the possibility of directing someone to act or behave. The fourth goal, usually a person communicates to play and entertain himself.

Interpersonal communication is a factor to shape the interaction between teacher and student. With good interpersonal communication between teachers and students, it will create harmonious interaction between teachers and students during face-to-face and online learning. So that it causes motivation in students to learn. With effective interpersonal communication between teachers and students learning will run effectively, students will be actively involved throughout the learning process.

Based on research conducted by Sareong and Supartini (2020) results of the study show: The interaction that is established between teachers and students will create communication between two or more people in learning so as to be able to create supportive educational interactions, so that students with teacher guidance can learn actively which begins with asking, answering friends' questions and practicing the material being studied.

Munawarah and Novianty (2020) the results of the study showed: interpersonal interaction and communication between lecturers and students which includes openness, empathy, support, positive attitudes and equality affect student learning motivation and academic achievement.

Research Timothius (2017) the results of the study showed: The interaction and interpersonal communication used between conselir guide teachers and students in dealing with the problem of students skipping school is an effective communication for both parties during the counseling process, because interpersonal communication plays an important and very influential role in helping the counseling process.

Blended Learning and teacher-student interaction have a positive and significant effect on increasing the learning motivation of students of senior high school 1 Depok City. This means that the more it increases and runs well in *blended learning* and teacher-student interaction, the more motivation to learn from students of senior high school 1 Depok City will also increase.

Dwiyogo (2018) stated that, "Blended learning is learning that combines various learning delivery strategies, namely face-to-face learning, computer-based learning (*offline*), and *e-learning* (*online*). Learning that takes place online which generally uses the internet and multimedia is greatly influenced by the readiness of teachers in mastering the information technology used during learning. The technique of presenting and delivering learning materials is an important factor in attracting interest in learning and motivating students.

According to Sweller (2011) theory, explaining the act of learning is a mental construct in the mind in which students process, manage new information in short-term memory (memory) and integrate it with prior *knowledge* about how students absorb new information.

Students have limited memory capacity to learn and are very easily burdened with new information. Students' memory is burdened by three kinds of cognitive load, namely, intrinsic load (intrinsic load), extrinsic load (*extraneous* load) and generative load (generative load / *germany* load). These three cognitive loads become the cause of cognitive impairment of students at the time of understanding the material studied. In order for students to have no difficulty in learning, the three cognitive loads must be reduced by reducing the intrinsic and extrinsic loads and strengthening the generative/*german* load.

The intrinsic burden experienced by students in online learning 100% can be reduced by applying *blended learning* so that learning becomes more effective. The intrinsic burden that students experience when understanding difficult material in learning *can be* overcome during face-to-face learning where students can directly interact with the teacher and ask about the difficulties faced in understanding the material. Extrinsic load is a disturbance from outside the student such as the sound of background music in learning videos, power point animations that are irrelevant to the material being taught, delivery sentences that are too exaggerated and deviate from the learning material, the surrounding environment that is not conducive and others that can interfere with student concentration. This is a special concern for teachers to anticipate these disturbances so that students' concentration and understanding are focused on the material.

The generative/*german* burden is in the form of a burden caused by the instruction given by the teacher after optimizing the subject matter so as to make students to learn. The generative/*german* burden is increased by increasing teacher-student interaction during face-to-face learning. Teachers with their interpersonal communication provide instruction that can motivate students to learn.

According to Thomas M. Risk in Ristawati (2017) the definition of motivation in learning is: "*We may define motivation, in a pedagogical sense, as the conscious effort on the part of the teacher to establish in students motives leading to sustained activity toward the learning goals*", (*motivation is an effort realized by the teacher to cause motives in students / learners that support activities towards learning goals.*

Sardiman in Asparinda (2015) "Learning motivation is the overall driving force from within the learner that gives rise to learning activities, which guarantees the continuation of learning activities and gives direction to learning activities, so that the desired goals of the learning subject can be achieved".

So it can be concluded that learning motivation means an impulse that arises from inside and outside the student, which can cause a sense of interest and desire for students to do learning.

From the results of the research, the influence of *blended learning* and teacher-student interaction on the learning motivation of students of senior high school 1 Depok City was 27.5% and the remaining 72.5% was influenced by various factors, namely internal factors which are factors from within the students themselves and external factors such as the family environment, socio-cultural environment, carrying capacity of adequate learning facilities and infrastructure, and so on.

4. Conclusions and Suggestions

From the formulation of the problem, hypothesis and research results, it can be concluded that there is a positive and significant influence on the research entitled "The Influence of *Blended Learning* and Teacher-Student Interaction on Student Learning Motivation at senior high school 1 Depok City". From the data that

has been collected and tests that have been carried out using statistics with the multiple linear regression method, the following conclusions can be drawn:

1. In testing the research hypothesis, there is a positive and partially significant influence between *blended learning* on student learning motivation. Evidenced by the value of the t test results which showed that the t-statistic was 3.194 (>1.96) and the p-value was 0.002 (<0.05). Thus, there is a positive and significant influence between *blended learning* and the learning motivation of students of senior high school 1 Depok City so that the Ha1 hypothesis is accepted based on previous assumptions.

2. In hypothesis testing, there is a partial positive and significant influence between teacher-student interaction on student learning motivation. This means that teacher-student interactions that are well established during learning and outside of learning have a positive influence on student learning motivation. In this study, it was proven by the value on the t test which showed that the t-statistical value was 8.111 (>1.96) and the p-value was 0.000 (<0.05). Thus, there is a positive and significant influence between teacher-student interaction and the learning motivation of students of senior high school 1 Depok City so that the Ha2 hypothesis is accepted based on previous assumptions.

3. *Blended Learning* and Teacher-Student Interaction have a positive and significant effect on student learning motivation at senior high school 1 Depok City. This means that blended learning, which is learning that combines face-to-face and online learning, has a positive and significant influence on student learning motivation during the Covid-19 pandemic. Likewise, the better and more *intense* the teacher-student interaction that is established between teacher and student, the more it will have a positive and significant influence on increasing student learning motivation.

5. Suggestion

Based on the results of previous research, the author realizes that there are still many limitations and errors in this study. However, with this research, it is hoped that it can provide a useful contribution.

1. For teachers, it is recommended to further improve their ability to master ICT in learning. *Blended learning* combines face-to-face learning and *e-learning*, so teachers are required to master ICT, be more creative and innovative when presenting learning materials.

2. Teachers are advised to have closer interaction and more effective communication with students so that a good relationship is established between teachers and students. With a good relationship between the teacher and the students, it causes a sense of closeness of students to the teacher, so that students will be more open and do not feel embarrassed or reluctant to talk and ask questions to the teacher.

3. For subsequent researchers, student learning motivation is not only influenced by *blended learning* and teacher-student interaction during the Covid-19 pandemic, but there are still many other variables such as student personality, self-efficacy, school environment, home environment, supportive learning advice and infrastructure and so on. In addition, research development can be carried out by expanding the range of populations, methods and samples of research locations.

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