

The Relationship Between Teaching Efficacy and Teachers' Perceptions of Student Engagement in Online Learning During the Covid-19 Pandemic

Egi Yolanda Putri^{1*}, Narulita Septa Aminingtyas², Mia Dwi Pratiwi³

^{1,2}Universitas Persada Indonesia Y.A.I

³Universitas Pancasila

Corresponding Author: Egi Yolanda Putri egiyolandaputri@gmail.com

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ABSTRACT

This research aims to determine the relationship between teaching efficacy and teachers' perceptions of student engagement in online learning during the Covid-19 pandemic. This research used quantitative methods. Respondents in this study amounted to 202 people obtained using an online questionnaire on teachers who conducted online learning with non-probability sampling techniques. Tools to measure teaching efficacy using Teacher Efficacy Scale (TES). The tool to measure teachers' perception of student engagement used Student Engagement Instrument (SEI). The data in this study were analyzed using Pearson correlation technique. The results in this study showed that there was a positive relationship among teaching efficacy and teachers' perceptions of student engagement ($r = 0.552$; $p < 0.05$).

INTRODUCTION

Covid-19 pandemic has not just influence the economy and politics, but as well the education. According to UNESCO's monitoring, since 2020 there have been 102 countries have conducted nationwide school closures, due to efforts to ward off the widespread spread of the Corona or Covid- 19 virus. This has left more than 850 million students around the world out of school learning activities at school (Ferginadira, 2020). Indonesia is also doing the same thing, according to Kementerian Pendidikan dan Kebudayaan (2020) there were hundreds of educational institutions were forced to temporarily close their operations, resulting in nearly 68 million students having to undergo the learning process from their respective residences. The extraordinary circumstances brought about by the spread of the Covid-19 virus made it impossible to carry out teaching and learning activities using conventional methods, necessitating a complete shift towards a distance education approach. The policy is carried out to reduce physical interaction as an effort to stave off the Covid-19 transmission. Online learning is a solution so that learning can continue even in situations where students and teachers cannot meet in person.

Online learning facilitates the connection between students and their educational resources such as databases, teachers/instructors, and libraries, regardless of geographical separation, enabling communication, interaction, and collaboration (Kudwadi & Suryadi, 2010). This makes during online learning students and teachers do not meet directly and rely on the internet network as a medium in learning. As stated by Imania (2019) online learning is a digital format of conventional educational delivery through the internet. This mode of learning will make students and teachers unable to interact directly, teacher supervision of their students will be more difficult because it is only limited through online learning meetings, unlike face-to-face learning as usual which makes teachers and students have direct interaction and students are easier to supervise. According to Kuntarto (2017), online learning brings together students and teachers to conduct learning interactions via the internet. However, since learning is confined to virtual spaces, the monitoring of student involvement becomes less effective.

This change certainly requires adaptation from various parties including teachers as educators who provide learning to students. The difference in the application of this learning also makes teachers and students who previously could interact freely, when online learning is limited by virtual space which makes teachers have to adapt more in providing learning to students because the conditions are different from before. According to Nurfitriani (2020), online learning can potentially lead students to undervalue the learning process, including disregarding schedules, attendance requirements, and assignments provided by teachers, resulting in an uncondusive environment during online learning sessions. The learning provided by the teacher is not optimal and students become less involved in the learning process.

Cahyani, Listiana, and Larasati (2020) also suggested that the problems that are often faced by some teachers during online learning such as only a few participating and active in learning. This is a difficult challenge because teachers cannot directly see their students' involvement. Student engagement with school is evidenced by students' positive and active attitude towards the learning opportunities they get (Skinner & Belmont, 1993). According to the Direktorat Jenderal Guru dan Tenaga Kependidikan Kementerian Pendidikan dan Kebudayaan (2020) in online learning, teachers assume a crucial role in maintaining student engagement to facilitate the continuity of the learning process, even when regular school activities are disrupted. Consequently, this situation may lead teachers to perceive that their students' engagement in the provided online learning is suboptimal.

Teachers' perceptions of student engagement will influence classroom practices, teaching effectiveness, and their own feelings of reward, burnout and stress (Poulou, 2007). Teachers' perception of their students' engagement is an important thing that can have an impact on the learning provided to students. One of the things that makes teachers have the perception that their students are engaged in learning is their belief as a teacher in providing effective student learning to students that can bring positive changes to students (Pappa, 2014). This teacher belief is also referred to as teaching efficacy. Teaching efficacy is a teacher's belief in his or her ability to perform actions that lead to learning (Poulou, 2007).

Teachers with high teaching efficacy will consider their relationships with students more important for engagement students' emotional and overall engagement with school (Ross, Cousins, & Gadalla, 1996). When teachers are confident in their ability to provide effective teaching that can be understood by their students, then the teacher will have the perception that their students are engaged in learning because of the teacher's ability to provide learning. However, online learning makes teachers' teaching efficacy difficult to improve due to the obstacles that occur during online learning. According to Rigianti (2020), numerous educators confront diverse challenges in facilitating online learning, including issues pertaining to learning applications, internet connectivity and technological resources, effective instructional management, assessment methodologies, and monitoring student engagement. In addition, a significant number of educators, particularly those from older generations or with more conventional teaching approaches, exhibit deficiencies in scientific and technological knowledge, rendering online learning environments less captivating or stimulating for their students (Anggianita, Yusnira, & Rizal, 2020).

Data Ikatan Guru Indonesia (IGI) also reveals that, based on the implementation of distance learning over the past three months, 60% of educators demonstrated very poor capabilities in leveraging information technology for teaching purposes (Ilham, 2020). This deficiency in IT understanding compelled many teachers to resort to merely assigning reading materials and tasks, with the primary objective of ensuring that children

continued learning from home and remained engaged. However, as a consequence of this approach in the long run, students experienced learning fatigue and boredom, as they felt deprived of a memorable and enriching online learning experience (Satariyah, 2020). This lack of understanding of technology can make teacher readiness in providing online learning cannot be said to be optimal. Online learning relies heavily on technology so that these shortcomings can be an obstacle for teachers in providing online learning.

Bybee (1997) suggests that teaching efficacy is an aspect that affects teacher practice and student learning. Teachers who have the belief that with their ability to provide learning to students in any condition will make the learning they provide more conveyed to their students. According to Pappa (2014) teaching efficacy is the key to understanding their teaching practices and strategies. Therefore, when teachers are confident in their ability to provide learning to their students, the teacher will have a way to be able to continue teaching even in different conditions such as online learning, so that with confidence in their abilities will make the teacher's perception that students are involved in the learning provided.

Teaching efficacy is very important, especially when teaching online which has a different method from the usual face-to-face learning. Teachers' belief that they are able to provide teaching to their students can make the teacher's view that their students are engaged in the learning provided. Teachers who have confidence in their ability to deliver effective teaching will make the view that their students during online learning have not been fully engaged in following the learning (Ross, Cousins, & Gadalla, 1996). Therefore, when teachers Confidence in their ability to provide learning to their students in any situation will make teachers have the perception that their students are fully engaged in learning.

The subjects in the study were senior high school or vocational school teachers. Secondary school teachers will be more likely to expect their students to discuss ideas about the progress of life in society even though it is still an unrealistic thought (Desmita, 2012). Student involvement from the teacher's perspective becomes more visible based on these discussions. Senior high school students have achieved emotional independence from parents and other adults. Therefore, the education pursued is fully in their responsibility and no longer depends on parents or other adults around them (Desmita, 2012). In addition, Senior High School students are faced with many demands and rapid changes, they encounter a lot of homework, curriculum changes that take place quickly, dividing time between doing homework, hobbies and activities their social lives (Rainhm, 2004 in Desmita, 2012). This will have an impact on their engagement in the learning process because they have to deal with their education and other lives.

Harris (2011) limited research has been dedicated to exploring teachers' perceptions of student engagement. In addition, like student engagement from the teachers' perspective, teacher efficacy in secondary education has not been widely researched (Pappa, 2014). Consequently, building upon these

observations and the discussions surrounding teacher perceptions of student engagement and teaching efficacy in learning environments, this study was undertaken to examine the relationship between teaching efficacy and teacher perceptions of student engagement, particularly in the context of online learning during the Covid-19 pandemic.

LITERATURE REVIEW

Teaching Efficacy

According to Bandura (1977) self-efficacy is an individual's belief in their ability to successfully master or pursue the skills needed to complete a given task. Teacher self-efficacy according to Bandura (1997) encompasses the environment created by the teacher for students, the teacher's assessment of the tasks assigned to students, and the use of those tasks to improve student learning.. Teaching efficacy is a teacher's belief in his or her ability to perform actions that lead to learning (Poulou, 2007). In addition, according to Pappa (2014) teaching efficacy is the key to understanding teaching practices and strategies. Therefore, when teachers believe in their ability to provide learning opportunities for their students, they will find ways to continue teaching even in different conditions, such as online learning. This confidence in their abilities will shape the teacher's perception that students are engaged in the provided learning. According to Bandura (1986), factors that play a role in determining the level of self-efficacy differences are the nature of the task at hand, the rewards that individuals receive from others, the status or role of individuals in the environment and information about their abilities.

Student Engagement

According to Jimerson, et al (2003) student engagement is an involvement that involves students emotionally with teachers, schools and friends students are involved in school learning activities such as participating in extracurricular activities, having good grades and having good self-confidence. According to Fredricks, et al (2004) student involvement is seen from the extent to which students are able to be actively involved in school emotionally, cognitively and behaviorally. Factors that influence student engagement are individual factors and environmental factors. Individual factors include student personality, minority groups and special needs students while environmental factors include friendship relationships, family, interactions with teachers, school climate and school rules.

Teachers' Perceptions of Student Engagement

Teachers' perceptions of student engagement will affect their classroom practices, teaching effectiveness, and their own feelings of reward, burnout and stress (Poulou, 2007). Teachers' perceptions of student engagement are important and can have an impact on the learning provided to students. One of the things that makes teachers have the perception that their students are engaged in

learning is their belief as a teacher in providing effective student learning to students that can bring positive changes to students (Pappa, 2014).

Online Learning

According to Imania (2019) online learning represents a digital mode of conventional educational delivery facilitated through the internet. During a pandemic crisis, online learning emerged as the sole medium enabling the continuation of teaching and learning between instructors and students. For elementary school teachers accustomed to face-to-face instruction, this shift posed challenges in adjusting their lesson preparation. The rapid and sudden changes precipitated by the Covid-19 outbreak necessitated widespread technological adoption. Technology became the exclusive bridge connecting teachers and learners, enabling educational activities without physical interactions. Online learning can incorporate diverse resource types, such as documents, visuals, videos, and audio, to enhance the learning experience. Learners can access and engage with these materials through viewing or reading. Such learning resources form the core assets for developing effective online learning environments. By curating engaging and student-centric online lessons, educators can ensure that learning objectives are achieved despite the virtual format.

METHODOLOGY

Research Respondents

Respondents in this study are senior high school or vocational school teachers who are actively teaching during the Covid-19 pandemic and providing online learning to their students during the Covid-19 pandemic. Consideration of this research Desmita (2012) explains that senior high school students have achieved emotional independence from parents and other adults, so that the education they take is fully in their responsibility and no longer depends on parents or other adults around them (Desmita, 2012). Teachers have a full role in conducting learning because the learning has become the full responsibility of students.

Research Design

This study uses a quantitative approach with a non-experimental type of research. The quantitative approach is a scientific research process and in the form of numbers analyzed using statistics (Sugiyono, 2016). The quantitative research methodology was employed to examine the correlation between the variables of teacher perceptions of student engagement and teaching efficacy. Considering the temporal aspect, this study can be classified as a cross-sectional research endeavor, which is a form of momentary investigation, wherein time is not the variable under scrutiny.

The Research Instrument

This study uses two measuring instruments, namely the Student Engagement Instrument (SEI) developed by Pappa (2014) and the Teacher

Efficacy Scale (TES) developed by Gibson and Dembo (1984). Teachers' perceptions of student engagement were measured using the *Student Engagement Instrument* (SEI) measure developed by Pappa (2014) which comprised 23 items rated on a 1-4 point Likert scale, with 4 representing "strongly agree," 3 for "agree," 2 for "disagree," and 1 for "strongly disagree". The SEI consists of 6 aspects namely *teacher- student relationships, peer support for learning, social relationships, observing student development, future goals and extrinsic motivation*. Teaching efficacy was measured using the *Teacher Efficacy Scale* (TES) developed by Gibson & Dembo (1984), consisting of 16 items measuring two aspects namely, *Personal Teaching Efficacy* and *General Teaching Efficacy*. (TES) scores were scored using a Likert scale of 1-6 i.e., 1 "strongly disagree", 2 "disagree", 3 "somewhat disagree", 4 "somewhat agree", 5 "agree", and 6 "strongly agree".

Research Procedures

Data collection in this study was carried out after *expert judgment*, followed by conducting a measuring instrument trial which was carried out on several participants with the same characteristics as the specified research sample. This trial stage was carried out on June 29 - July 09, 2021. Then testing the validity and reliability of the measuring instrument and continued to stage *field study*. The sampling technique used *non-random sampling accidental sampling. online* data collection via *google form* and the data obtained in this study amounted to 202 people.

Data Analysis

Data analysis was conducted, namely the normality test to determine whether the data was normally distributed or not, a correlation test to identify the relationship between the studied variables and its homogeneity, and a t-test to ascertain differences in variables based on demographic data. These analyses were carried out through the SPSS 24 program. The data analysis performed on the collected data was divided into summary statistics that provided information about normality tests and correlation tests using the Pearson correlation test to measure the relationship between teaching efficacy and teacher perceptions of student engagement. According to Gio, Kurniawan, and Nazriani (2018) the Pearson correlation can be used to see how close the linear relationship between two variables (linear relationship) is and can determine the direction of the relationship.

RESEARCH RESULT

Hypothesis testing in this study used Pearson correlation to measure the relationship between teaching efficacy and teachers' perceptions of student engagement. According to Gio, Kurniawan, and Nazriani (2018) Pearson correlation can be used to see how close the linear relationship between two variables (linear relationship) and can determine the direction of the relationship. Pearson correlation testing was conducted using the SPSS

application to see the relationship between teaching efficacy and student engagement teacher perception of student engagement with a significant level of 5%.

Table 1. Correlation Results of Teaching Efficacy with Teachers' Perception of Student Engagement

R	Sig.
0.552	.000

The correlation analysis examining the relationship among teaching efficacy and teachers' perceptions of student engagement yielded a significant correlation value of 0.00 ($p < 0.05$), resulting in the acceptance of the alternative hypothesis (H_a). This finding suggests a significant association between teaching efficacy and teachers' perceptions of student engagement in online learning contexts during the Covid-19 pandemic. Additionally, the results indicated a positive correlation coefficient of $r = 0.552$ between teaching efficacy and teachers' perceptions of student engagement. Based on these outcomes, it can be inferred that as teachers perceive higher levels of student engagement, their sense of teaching efficacy in online learning environments also increases.

DISCUSSION

The primary objective of this study was to investigate the existence of a relationship between teaching efficacy and teachers' perceptions of student engagement in online learning environments during the Covid-19 pandemic. The findings of this research unveiled a significant correlation between teaching efficacy and teachers' perceptions of student engagement in online learning settings. The relationship between teaching efficacy and teachers' perceptions of student engagement shows a positive direction. That is, the higher the teaching efficacy is high, the teacher's perception of student engagement will be high, and vice versa when teaching efficacy will be low, the teacher's perception of student engagement is low. This illustrates that when teachers' teaching efficacy in online learning is enhanced and teachers are more confident that they have the ability to teach online effectively, teachers' perceptions of student engagement increase even though students only learn online in a limited virtual space.

This study is consistent with the results of Pappa's (2014) research which suggests that teaching efficacy will be higher when teachers perceive higher student engagement as well. Ross, Cousins, and Gadalla, (1996) also suggested that teachers with teaching efficacy that is high will consider their relationships with students more important for emotional engagement of and their overall engagement with the school. Therefore when teachers feel confident in their ability to deliver learning to students, teachers will feel more that their students are also engaged in learning. online learning in this pandemic makes limitations in meeting directly which makes student learning

can *only* be monitored through their *online* participation. However with high teaching efficacy will make teachers feel their students are engaged and actually fully following the learning.

Teachers with high self-efficacy will exert greater effort in teaching and be more persistent in helping students learn, and conversely, teachers who have low efficacy easily give up if they encounter difficulties when teaching students (Bandura, 1997). Therefore, when teacher efficacy is high The teacher's view of student engagement coordinates with their beliefs about how well they are performing as professionals to influence classroom practices, teaching effectiveness, and their own feelings of reward, burnout, and stress (Pappa, 2014). Teachers' views of their students' engagement coordinates with their beliefs about how well their performance as professionals affects classroom practice, teaching effectiveness, and their own feelings of reward, burnout, and stress (Pappa, 2014). Teachers who have a view that their students are well engaged in learning will boost their confidence in their ability to manage the classroom and can affect their performance in educating students.

The findings of this study further reveal a positive relationship between personal teaching efficacy and teachers' perceptions of student engagement. Consequently, it can be concluded that higher levels of personal teaching efficacy in online learning environments correspond to greater perceived student engagement among teachers. Teacher's perception of Student engagement in PTE learning indicates that teachers have a high level of confidence in exerting extra effort to match students' levels, finding effective teaching methods, guiding difficult students, and using more effective ways of facilitating learning. Confidence in their ability as teachers to overcome factors that can make it difficult for students to learn (Cerit, 2010). This means that when teachers believe that they are able to deliver online learning effectively, they will have the view that their students are fully engaged in the learning process.

The results of this study also show that there is a relationship between teacher perceptions of student engagement and teaching efficacy in the *general teaching* efficacy dimension, this relationship shows a positive direction. Therefore, it can be said that the higher the teacher's perception of student engagement, the higher the *general teaching efficacy* in online learning. GTE refers to the belief that teachers are able to bring students to the classroom. students' changes despite obstacles outside the school (Woolfolk, Rosoff & Hoy, 1990). Teachers' perceptions of students will be a factor in increasing confidence in their ability to provide better learning, especially in external matters outside the school, such as parents, friends, and the environment around their students. Teachers' perceptions of good student involvement will increase internal teaching efficacy, the view of their students' involvement will make them confident in their abilities that come from outside. Based on this explanation, teachers who have good GTE will have confidence that even though the teacher is not near the student or directly monitoring the student, the student will still

apply the learning provided by the teacher and the teacher will have the view that the student is really involved in the learning that has been given.

The results also show that there is a significant difference in average teaching efficacy based on gender. Female teaching efficacy high compared to men. This means that women have more confidence in providing teaching to students. This is in line with Kalaian dan Freeman (1994) teaching efficacy will be stronger for women because female teachers' beliefs are more aligned with the dominant ideology of the school, such as a commitment to a student-centered approach. According to Apple & Jungck (1992) this may be because teaching is seen as women's work and women are more satisfied with teaching. Teaching efficacy in women is more directed at the students, not only about the learning provided, but also at the individual students themselves. However, this is not in line with Tran's research (2015) which suggests that male teachers exhibit higher teaching efficacy compared to their female counterparts. This is attributed to greater professional interest, stronger affiliation, higher mission consensus, increased student support, adequate resource availability, and effective leadership among male teachers, coupled with lower levels of classroom stress and reduced workload pressure. It is believed that both male and female teachers possess the potential for strong teaching efficacy, especially in the context of online learning, which presents unique challenges distinct from in-person educational settings.

CONCLUSIONS AND RECOMMENDATIONS

The results of this study demonstrate a significant positive correlation between teaching efficacy and teachers' perceptions of student engagement in online learning during the Covid-19 pandemic. The relationship exhibits a moderately positive correlation, indicating that higher levels of perceived student engagement correspond to greater teaching efficacy among teachers in online learning environments. Conversely, lower perceptions of student engagement are associated with reduced teaching efficacy in online learning settings.

Another finding reveals a positive relationship between personal teaching efficacy and teachers' perceptions of student engagement. This suggests that higher personal teaching efficacy leads to greater perceived student engagement in online learning. Additionally, a positive relationship exists between general teaching efficacy and student engagement perceptions. Consequently, higher perceptions of student involvement correspond to increased general teaching efficacy in online learning environments. Furthermore, this study concludes that a significant average difference in teaching efficacy exists based on gender.

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