

## Conference Paper

# The Relationship between Online Learning Motivation and Student Learning Achievement in Prosthetic Orthotic Major at Health Polytechnic Surakarta

Nur Rachmat and Bambang Kuncoro

Poltekkes Kemenkes Surakarta, Surakarta

**ORCID:**

Nur Rachmat: <https://orcid.org/0000-0002-7644-3655>

**Abstract**

Motivation to learn is a person's desire to take part in the learning process. Students are motivated to do an activity for their personal gain to achieve satisfaction from the lessons or the feeling that their needs are fulfilled. During the COVID-19 pandemic, students were forced to shift to learning online. The motivation to study online is related to the student's achievement. Learning achievement is used as an indicator of the student's competence in the teaching materials. High achievement can be reached by persistence in learning, which is formed through the learning motivation that will direct the student's behaviour towards achieving maximum learning achievement. This study aims to determine the relationship between learning motivation and student achievement in Prosthetic Orthotic Major at the Health Polytechnic Surakarta. It employs a quantitative research method using a correlation research design. The study used the Google Form Online Questionnaire as an instrument for data collection. The sample included 447 students of the Prosthetic Orthotic Major at the Health Polytechnic Surakarta. The results of the normality test showed that the data were not normally distributed. Hypothesis testing was carried out using the Spearman's test and obtained a significant value of 0.000 ( $p < 0.05$ ), indicating a relationship between online learning motivation and student learning achievement.

**Keywords:** online learning motivation, learning achievement, prosthetic orthotics

Corresponding Author:

Nur Rachmat  
nurrachmat@gmail.com

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## 1. Introduction

In the midst of the Covid-19 pandemic that is hitting the world, including in Indonesia, learning is required to be carried out online to maintain physical distancing. Based on data from the Ministry of Education and Culture in 2020, the number of students affected by Covid-19 requires them to study at home, namely 28.6 million elementary school students, 13.1 million junior high school students, 11.3 million senior high school

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students, and 6.3 million higher education students (Kemendikbud, 2020). Motivation to learn is a person's desire to take part in the learning process (Koca, 2016). Students are basically motivated to do an activity for themselves because they want to get pleasure from lessons or feel their needs are met. All potential that students have can be developed independently or with lecturers' help through the learning process. Learning is a core activity/activity/principle in an educational process. The success of achieving educational goals depends on the learning process experienced by students. Students have mental strength, which is the driving force. Students have mental strength, which is the driving force for learning in the form of desire, attention, will, or aspiration. The mental strength that drives students to learn is called learning motivation. Learning motivation is owned by students who realize that learning is necessary to try their best to get maximum results. Student learning outcomes after participating in the learning process are called learning achievement.

Learning achievement is used as an indicator of student competency mastery of teaching materials (Handayani, & Usman, 2019). High achievement can be achieved with persistence in learning, which is formed from learning motivation that will direct student behaviour towards achieving maximum learning achievement. During the Covid19 pandemic, students are required to learn online. Motivation to study online is related to student achievement. Learning achievement is used as an indicator of student competency mastery of teaching materials. High achievement can be achieved by persistence in learning, which is formed from learning motivation that will direct student behaviour towards achieving maximum learning achievement. The objective of this research is to determine the relationship between student learning motivation and student achievement in Prosthetic Orthotic Major at Health Polytechnic Surakarta

## 2. Method

This research is a quantitative study using a correlation research design, which reveals the research problem by proving the relationship between two or more variables. The time used in the study is in May 2020. The research was conducted in the Department of Orthotics Prosthetics, Health Polytechnic Surakarta. The population in this study were 447 students majoring in Orthotics and. Determination of the sample used in this study using a simple random sampling technique. Collecting data used in this study using a questionnaire with the online Google form application.

Online Learning motivation as the independent variable and learning achievement as the dependent variable. Hypothesis testing uses the SPSS 25 for Windows program.

The data analysis techniques used include (1) Description of the data, including the mean, median, and modus, (2) The prerequisite analysis consists of the normality test and linearity test, (3) Hypothesis Testing. The data normality test used the Kolmogorov Smirnov. The normality test results show that online learning motivation has a sig value of 0.000, which is <0.05, so it can be concluded that the motivation variable is not normally distributed. Meanwhile, the student achievement variable shows a sig value of 0.008 which is <0.05, so it can be concluded that the variable of achievement is not normally distributed. Because the data is not normally distributed, hypothesis testing is done using the Spearman test. Hypothesis testing to determine whether there is a relationship between variables using the Spearman test.

### 3. Findings and Discussion

#### 3.1. Characteristics according to gender

Table 1 shows that the respondents were dominant with female gender as many as 307 respondents (68.68%), followed by male respondents as many as 140 respondents (31.32%).

TABLE 1: Characteristics of respondents based on gender.

Gender	Number	Percentage
Male	140	31.32
Female	307	68.68
Total	447	100

#### 3.2. Characteristics according to the study program

Based on the characteristics according to the study program in table 2, the respondents who are dominant are Diploma IV Orthotic Prosthetics are 247 respondents (55.26%) which are then followed by Diploma III Prosthetic Orthotics as many as 202 respondents (44.74%).

TABLE 2: Characteristics of respondents based on the study program.

Study program	Number	Percentage
Diploma III	200	44.74
Diploma IV	247	55.26
Total	447	100

### 3.3. Hypothesis testing

Hypothesis testing is using a Correlation test. From the Spearman test results in Table 3, it is obtained a significant value of 0.000 ( $p < 0.05$ ), which indicates a relationship between online learning motivation and learning achievement of students majoring in orthotic prosthetics Health Polytechnic Surakarta.

TABLE 3: Spearman's test.

Correlation	Online learning motivation	Learning achievement
Correlation Coefficient	1.000	0.170**
Sig. (2-tailed)	.	0.000
N	447	447

Researchers in conducting quantitative research studies used a correlation research design for the relationship between online learning motivation and learning achievement of students majoring in orthotic prosthetics. The subjects of this study were students majoring in Orthotics and Prosthetics. The research was conducted by filling out questionnaires online using the online Google form application. The motivation questionnaire was taken from Vreedy Frans Danar (Danar, 2002), modified and tested for validity.

High learning achievement will show learning success. On the other hand, low learning achievement will indicate that the learning objectives achieved in learning activities have not been appropriately implemented. Good learning will lead to good learning achievement too, usually due to supporting learning facilities, the use of media when teaching, and students' readiness when taking lessons. Students are required to have the ability and learning power that is more than an ordinary student. Higher education's learning method requires every student to have independence and personal discipline (Wisnuyogi, 2012).

Motivation is the action taken by people to meet unmet needs. It is the desire to achieve goals or rewards to reduce the tension caused by these needs (Marquis & Huston, 2010). Motivation can likewise be supposed to be a progression of endeavours to give certain conditions, with the goal that somebody needs to accomplish something (Sardiman, 2004). Learning is a process of changing someone's behaviours based on new practices or experiences. Changes in behaviours occur as a result of interactions with existing situations, not automatically because of a person's maturity (Iskandar, 2009).

The learning process is a process that is deliberately created for the benefit of students that involves body and soul; therefore, achieving the learning process is a

change in the soul that affects behaviour (Djamarah, 2011). Achievement of a person in learning is due to several factors in the learning achievement outcomes, namely factors that come from within the person who learns and some from outside himself. Factors originating from within (internal) include health, intelligence and talent, motivation, interest and learning methods, and some from outside (external) including family, school, community, and the surrounding environment (Dalyono, 2007).

Wigunantingsih (2005) research result states that the higher the student's learning motivation, the higher the learning achievement. Strongly motivated students will have more energy to study. They can learn continuously and don't tire quickly. Motivation can maximize the achievement of student learning outcomes.

According to Djaali (2008), motivation is a physiological and psychological condition in a person that encourages him to carry out certain activities to achieve a goal (need). According to (Sardiman, 2016), the distinctive role of motivation is to foster passion, enjoyment, and enthusiasm for learning. Thus, it can be said that this motivation will encourage students to carry out learning activities.

Mukhtar (2015) research results indicate that learning achievement generally increases if the motivation to learn increases. Motivation is divided into two, namely intrinsic and extrinsic. The motivation used in this study is intrinsic motivation, in accordance with Mukhtar's opinion that student learning motivation is the driving force within students to achieve optimal learning achievement. Students who have high motivation will carry out their learning activities with full confidence and responsibility. High learning motivation is reflected in the persistence of learning. Students who have high learning motivation have a greater chance of obtaining better learning achievement than students who have low learning motivation. Learning achievement is also determined by student discipline in following the learning process.

According to Raharja et al. (2019), With an award in the form of added value for active students, it will increase students' enthusiasm for learning online. According to Aini et al. (2019), Mailing Groups can be used online in the learning discussion management process. Online discussion and monitoring can be done, which will give influence on online learning motivation. Based on the results of Fitriyani et al.'s, (2020) research that from the eight indicators of learning motivation, namely concentration, curiosity, enthusiasm, independence, readiness, enthusiasm or encouragement, never giving up, and self-confidence shows an average percentage score of 80.27. % is a very good criterion, it can be said that in the midst of the Covid-19 pandemic that has hit the world, this is not a reason for students to have high learning motivation, even though in its implementation there are deficiencies found, but there is no other choice but optimize

online learning, because in an emergency like this, technology is the only bridge in transferring knowledge from lecturers to students.

Based on Ilmiyah & Sumbawati's (2019) research, teacher observations during learning, students who are highly motivated to learn tend to have a greater curiosity and are more active in-class learning activities. Meanwhile, based on Hidayat & Noeraida (2020) research, online classes are also more flexible, not limited by time and space. The weakness of online classes is that they are unable to build student learning motivation due to limitations in two-way communication. It also results in passive students, reduced interaction with teachers and friends. Students also assessed that learning was not dynamic because neither students nor teachers could grasp the overall message, both verbal and nonverbal. The experience of online learning's strengths and weaknesses reflects two characteristics of students (1) students who feel comfortable with online classes and (2) students who prefer to learn directly in class. The characteristics of students who are comfortable learning online tend to be passive students, limit socialization, are not too active in participating in school activities such as extracurricular activities. Meanwhile, students who choose to study face-to-face in class have the opposite characteristics, such as being friendly, like to socialize, being active in class, or actively joining in school activities.

Qualitative research conducted by Darmalaksana (2020) with a participatory approach concluded that the burden of online lectures could be overcome by the chemistry of love, which tries to place obstacles as a challenge to open skill capacities to the limit.

#### 4. Conclusion and Suggestion

Research conducted in the Department of Orthotics Prosthetics in May 2020 with a sample of 447 students majoring in Orthotics Prosthetics Health Polytechnic Surakarta showed that there was a relationship between online learning motivation and learning achievement of students majoring in orthotic prosthetics.

Suggestions to students to always get used to repeating the learning that has been given, working on assignments that have been given by the lecturer on time, and forming study groups to discuss material that has not been understood or to exchange ideas to increase learning motivation and obtain high achievement

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