

Self-Confidence, Learning Motivation and Students Achievement: The Mediating Role of Digital Literacy

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Abstract: Accomplishing educational goals is challenging during the Covid-19 pandemic, and it has been covered by adopting technology in the educational process. This study examines driving factors affecting students' learning achievement by incorporating some variables, including self-confidence and learning motivation. This study also investigates the mediating role of digital literacy. This study was conducted in a vocational school in Jakarta of Indonesia by involving 188 respondents. The data in this study involved primary data from questionnaires which provided in Google form and distributed to the respondents through WhatsApp. A path analysis was involved in gaining an understanding of this relationship. The findings remark that vocational students' learning achievement in Indonesia can be explained by self-confidence and students' learning motivation. These results also confirm the mediating role of digital literacy in understanding the connectivity between self-confidence and learning achievement as well as learning motivation and learning achievement. The implications are also presented in this paper.

Keywords: Digital Literacy, Learning Achievement, Learning Motivation, Self-confidence

INTRODUCTION

The global coronavirus (Covid-19) pandemic has challenged the educational sides to keep their students accomplishing their academic goals. This is a matter for students to achieve academic reports that can be useful for a further grade or educational level. In doing so, the educational process has been provided remotely, adopting technology (Vargo et al., 2021; Jiang et al., 2021). In its implementation, the learning system using technology faces some obstacles for both educators and students. The problem that arises is varying: the lack of internet, facilities, and anxiety in using learning technology (Siron et al., 2020; Churiyah et al., 2021). Concerning Indonesia, the government has supported by serving free internet packages for students and educators.

At the vocational school level, having a good academic record is essential to bring a huge impact on workers or job creators, where they are required to have high competence, expertise and professionalism (Apriana et al., 2018; Kaden, 2020). Therefore, education is crucial to gaining one's competence and expertise, education will certainly help someone to obtain certain skills. In reality, there are still many people who do not pay attention to the pivotal role of education. They do not want to try to learn and pursue education; therefore, they cannot acquire a decent job because they do not have certain competencies and skills (Pambudi & Harjanto, 2020). For this reason, an individual education can run well and reach maximum results that can be provided from learning outcomes.

Some scholars are in agreement that learning accomplishment can be linked with the students' learning motivation (Riswanto & Aryani, 2015; Fitriwati et al., 2018; Zheng et al., 2020). Learning motivation is divided into two: intrinsic motivation and extrinsic motivation (Ryan & Deci, 2020). Intrinsic motivation is an encouragement to do something that comes from within oneself without being influenced by outside circumstances, while extrinsic motivation is an encouragement to do something that comes from outside, including environment and support from those closest to them. In internal factors, when a person does not have high motivation to learn, the learning outcomes will be inadequate and vice versa. While external factors can be given, an example of a student who is in a family environment regarding education tends to have low learning motivation because the people or friends around him or her also have a bad educational record (Chiang & Lee, 2016; Locke & Schattke, 2019).

In addition to students' learning motivation, digital literacy takes a crucial point for success students' accomplishments (Lubis, 2018; Sttati & Torres, 2020; Silamut & Sovajassatakul, 2021). The basic rationale is that the educational model is mostly adopting technology during this pandemic. Therefore, digital literacy will be beneficial to reach the educational goal. Digital literacy is defined as the ability to understand, analyze, assess, organize, evaluate information using digital technology (Kim, 2019; Jin et al., 2020). The use of useful literacy to find learning materials to make it easier for students to receive additional lessons and information outside of classroom learning. The use of digital literacy is important during this pandemic because students must also actively participate in learning by utilizing technology-based media and sources (Susilawati & Supriyanto, 2020).

Concerning vocational school, another problem in the world of education, especially in terms of learning, is the problem of students' self-confidence in learning. The problem of self-confidence is highly concerned in the world of education; if students do not have confidence in themselves to study well, how can they have confidence in themselves in dealing with test questions and exams at school (Bessa et al., 2021). Students who feel they are unable to learn will acquire poor learning outcomes because there is no confidence in themselves to learn, so they feel pessimistic and the learning outcomes achieved are insufficient. Therefore, this study examines the driving factors affecting students' achievement by elaborating learning motivation, self-confidence and digital literacy.

This study will contribute to the literature on how to enhance learning achievement by using educational technology. It also adds insight into the role of digital literacy that has been concerned among policy researchers primarily when the pandemic hampered throughout the world. The role of digital literacy is often overlooked by Indonesian scholars, which gives advantages for further researchers and be beneficial in tuning digital literacy for students. Additionally, the concerned study in vocational school is unique as the graduates are ready to work or create their own work. The implication of this study will be expected to provide suggestions for educational sides to improve educational quality.

This paper is provided as follows. Section 1 concerns the current issue of education, followed by the methodology adopted in Section 2. Section 3 and Section 4 focuses on findings and discussion, respectively. The conclusion part is provided in Section 5.

METHODS

A quantitative approach with an exploratory method was involved in reaching an understanding between variables: students' learning motivation, self-confidence, digital literacy and learning achievement. This study was conducted in a vocational school in Jakarta of Indonesia by involving 188 vocational school students as respondents. The respondents in this study are volunteers and ensure to keep their anonymity. The data in this study involved primary data from questionnaires which provided in Google form and distributed to the respondents through WhatsApp. Participants were asked to respond using a 5-point Likert scale ranging from 1 for "strongly disagree" and 5 for "strongly agree". The framework of the study was developed from prior literature review and preliminary relevant research. The detail of the research framework is presented in Figure 1. In this study, self-confidence was measured using several criteria, including self-concept, self-esteem, experience, and education Instrument. Students' learning motivation was calculated using indicators from Riswanto and Aryani (2015); Fitriwati et al. (2018), which consists of intrinsic and extrinsic with five sub-indicators, namely the desire to succeed, the encouragement of learning needs, future aspirations, praise or appreciation, and a conducive environment. Digital literacy is measured using an instrument by Kim et al. (2019), which purposed to understand the learners' abilities to use digital tools toward learning. Students' achievement was measured from the value of knowledge by making an average on the value of the Mid-Semester Examination. More precisely, the gathered data were calculated using path analysis. This study also incorporated some tests of classical assumption calculation, including normality estimation, multicollinearity calculation, and heteroscedasticity test.

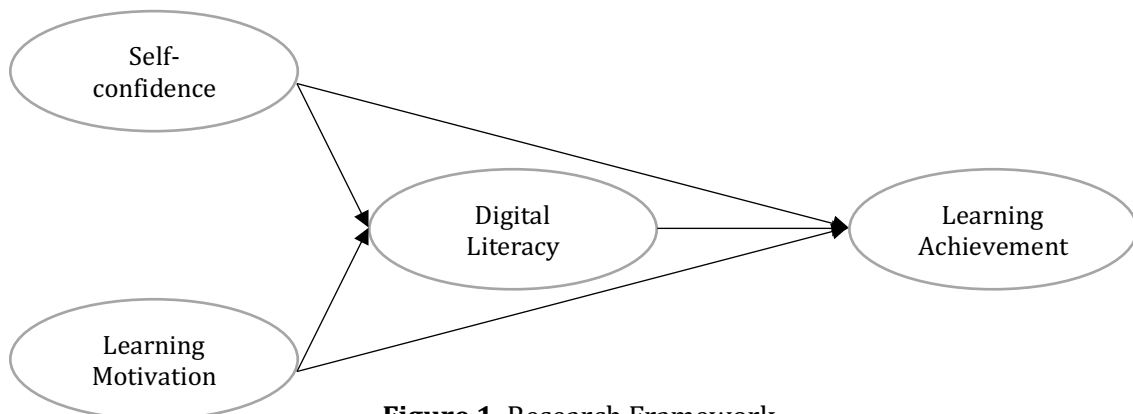


Figure 1. Research Framework

RESULTS & DISCUSSION

Hypothesis Testing

Table 1 informs the hypothesis calculation using regression analysis. From the Table, it shows that the value of the standardized beta coefficient of the variable involved in this study ranges from 0.388 to 0.703, with a significant value of under

< 0.05. The findings indicate that the hypotheses are confirmed. This research also confirms the role of digital literacy in mediating self-confidence to students' learning achievement and learning motivation to learning achievement.

Table 1. The Hypothesis Testing

	Variables	Direct Impact	Indirect Effect	Total	Sig.	Accepted
H1	SC → LA	0.454	-	0.454	0.001	Yes
H2	SC → DL	0.554	-	0.554	0.000	Yes
H3	DL → LA	0.703	-	0.703	0.000	Yes
H4	LM → LA	0.388	-	0.388	0.003	Yes
H5	LM → DL	0.497	-	0.497	0.001	Yes
H6	SC → DL → LA	0.454	0.081	0.081	0.000	Yes
H7	LM → DL → LA	0.497	0.084	1.558	0.000	Yes

Note(s): SC: Self-confidence, DL: Digital Literacy, LM: Learning Motivation, LA: Learning Achievement

This study found that the majority of respondents have moderate and high self-confidence. Confidence in an individual is influenced by several factors, both internal factors and external factors. Among these factors are as follows: self-concept, self-esteem, experience, and education. Individual characteristics that have low self-confidence tend to have characteristics, including perfectionism, negative judgment, surrender and despair, thoughts that are shallow, anxiety, thinking like a victim. Self-confidence shows the highest class frequency of the learning outcome variable is 14, which is located in the class interval 126-130 and 131-135 with a relative frequency of 20.8%. Meanwhile, the lowest class frequency of the learning outcome variable is six, which is located in the class interval 111-115 and 141-145 with a relative class frequency of 8.3%.

The results show that vocational schools students have inadequate learning achievement. Learning outcomes indicate that the highest class frequency of the learning outcome variables is 18, which is located in the class interval 73-75 with a relative frequency of 26.4%. Meanwhile, the lowest class frequency of the learning outcomes variable is two and located in the 61-63 interval class with a relative class frequency of 2.8%. This learning achievement data is obtained from the value of knowledge by making an average on the value of the Mid-Semester Examination. Indicators to measure learning motivation are intrinsic and extrinsic with five sub-indicators, namely the desire to succeed, the encouragement of learning needs, future aspirations, praise or appreciation, and a conducive environment. Based on the data on the questionnaire filling the learning motivation variable, the highest score was 106, and the lowest score was 65 with an average score of 86.4 variance scores (86.30 and the standard deviation (S) of 9.30. Based on the calculation results, the score range was obtained. Its value is 41 with the number of interval classes of 7.12, which is set to 7 and with a class length of 5.85, which is rounded up to 6.

Self-confidence, Digital Literacy and Learning Achievement

This study confirms that there is a robust relationship between self-confidence and learning' achievement. Almeida et al. (2015) argued that self-confidence is

something with which individuals are able to channel everything they know and do. Self-confidence can also be interpreted as a positive attitude of an individual that enables him/her to develop a positive assessment of them and the environment or situation he/her faces (Yaniawati et al., 2020). On the other hand, the purpose of learning is to gain knowledge, skills, and inculcate mental attitudes or values. The achievement of learning objectives means that it will produce learning outcomes (Kivunja, 2015). A teacher must be able to foster enthusiasm and confidence in their students so that they are motivated to develop their potential (Urhahne, 2015). This finding is in agreement with some major findings by Setyowati and Widana (2016); Tran (2019); Karsudianto (2020); Panjaitan et al. (2020), which remarked on this robust relationship.

In addition, digital literacy has been proven as the essential variable in determining students learning achievement both directly and indirectly. This study supports some preliminary studies which note that there is a link between digital literacy and learning achievement. The fundamental rationale is that the learning process during a pandemic (Covid-19) is adopting technology. In this matter, students with a high digital literacy tend to obtain better understanding which in turn into learning achievement. Digital literacy is essential for students as it is the basic need for the learning process. Digital literacy is a person's ability to use computer devices to access various information in the digital space.

This study also notes the connectivity between self-confidence and digital literacy among Indonesian vocational school students. This study supports some studies which remarked this correlation (Jannah, 2019; Yustika & Iswati, 2020). There are several components of digital literacy, namely: (1) functional skills and beyond, (2) creativity which is a digital literacy component related to creative thinking using ICT in building knowledge; (3) collaboration which is a digital literacy component related to building knowledge through a process of discussion and giving each other input in the digital space; (4) communications that is a digital literacy component related to the ability to hear, understand, and convey ideas; (5) the ability to find and select information; (6) Critical thinking and evaluation; (7) Cultural and social understanding; and (8) e-safety (Savage, 2015; Alt & Raichel, 2020).

The underlying reason to support these findings is that self-confidence enables students to more active and creative in adopting technology which is educational technology. In this matter, students who have a more confidence level tend to have better their digital literacy. The next finding also confirmed that digital literacy can explain the connectivity between students' self-confidence and learning achievement. The learning process using technology during the pandemic allows students to have digital literacy. In doing so, digital literacy takes a pivotal role in education as it's the main component of education. Self-confidence raises their digital literacy, which in turn affects students learning accomplishment (Rohatgi et al., 2019; Jannah, 2019).

Learning Motivation, Digital Literacy and Learning Achievement

This study noted that learning motivation has an acquaintance with learning achievement. This corroborates some previous studies by Riswanto and Aryani (2015); Fitriwati et al. (2018); Zheng et al. (2020) that shows students' learning

motivation can enhance academic achievement. The rationale behind this finding is that learning motivation is one of the supporting factors for the successful achievement of individual learning goals. Balance good motivation to learn will make individual is able to understand the purpose of learning experienced and play an active role in achieving achievement, but if each individual's learning motivation is too low and strong will actually result in a negative impact on student. Learning motivation acts as a driving force in oneself students as a whole that can generate intentions to encourage students to carry out learning activities so that they are able to achieve the goals desired by these students.

Further findings remarked that learning motivation has been able to boost students' digital literacy. Literacy can be interpreted as the ability to access, understand and use information intelligently. Yuliati (2017) states the importance of literacy because literacy is a fundamental thing that must be possessed by students in facing the global era to be able to meet the needs of life in various situations. This supports some earlier studies that confirm this relationship (Mudra, 2020; Widana et al., 2020). The last finding revealed that digital literacy can mediate the link between learning motivation and students' learning achievement. The explanation for this finding is that to improve student learning outcomes, it is not only necessary to have awareness within students or internal factors, but digital literacy to support learning and obtain high learning outcomes.

CONCLUSIONS

In this study, it is proven that learning motivation and trust have an important role in improving student learning outcomes. This indicates that if a student has high learning motivation, he will have the drive to learn. The encouragement he gets can come from within himself and from outside influences. By having high self-confidence, students will be enthusiastic in learning because they feel the ability to learn and do school assignments. This study also confirmed the crucial role of digital literacy that is a matter for enhancing students' learning achievement. This study also has some implications. For students, it is expected to be able to foster learning motivation within themselves, namely by having a high awareness of wanting to learn. When a student has high learning motivation, the learning outcomes obtained will be high as well. Student learning motivation can also be influenced by external factors, namely educators and parents. Therefore, it is also hoped that parents and teachers must have ways of increasing the learning motivation of children or students. Additionally, it is also expected to grow and increase confidence in learning and in doing school assignments, to grow the level of confidence in learning a course, students must understand the lesson first, namely by studying diligently and having confidence in understanding the lesson and asking questions in class. For teacher, if they do not understand the subject matter. This study lies that learning outcome variables are not only influenced by learning motivation and self-confidence, therefore for further research, but it is also expected to be able to add research variables so that research can be more varied and diverse, for example, by adding independent variables that affect learning outcomes, namely independent learning, infrastructure, teaching methods, and other variables.

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