

Does Learning Motivation Essential? Examining Readiness on Self-Directed Learning and Technology Towards Cognitive Presence

Jeffri Ardiyanto^{1*}, Oktia Woro Kasmini Handayani¹, Tri Joko Raharjo¹,
RR Sri Endang Pujiastuti²

¹ Universitas Negeri Semarang

² Politeknik Kesehatan Kemenkes Semarang

*Corresponding email: jeffri_ardiyanto@hotmail.com

Abstract. Nowadays, technology is rapidly developed, which affects various aspects, including education. Technology development increase learning motivation; therefore, student motivation determines learning achievement. Technology, besides improve student understanding, it is providing engaging learning activities. Previous research has not explored student learning readiness to learning motivation; moreover, technology dynamics in the learning process are constantly evolving. The study examines the effect of learning motivation in mediating self-directed learning readiness and technology readiness on cognitive presence. This study uses a quantitative approach involving 167 students as respondents who employ a learning management system during lectures. The research distributed an online questionnaire to obtain data and analyzed using SEM AMOS. The results show that self-directed learning readiness influences motivation and cognitive presence; it means learning motivation partially mediates. This study also proves that technology readiness directly affects learning motivation and cognitive presence; learning motivation partially mediates. This study indicates self-directed learning readiness and technology readiness shape learning motivation. This research proves readiness to learn and ready-to-use technology raise learning motivation. Students are motivated to increase their understanding through technology. The research result is beneficial for understanding the urge of learning motivation to exaggerate students' cognitive aspects.

Key words: learning motivation; self-directed learning readiness; technology readiness; cognitive presence.

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INTRODUCTION

Technology is one of the elements in the field of education that is growing rapidly. The process of developing technology is very useful in education to encourage the ability to give lessons to students more interesting and diverse. Developing technology is an important part of education so that students get an adequate quality of education (Gómez-Ramírez et al., 2019). The development of technology will encourage the motivation of students who are increasingly encouraged to carry out self-development. This study aims to explore the readiness to learn by using technology with various learning methods. Learning methods that were born from technological developments are a form and effort to develop education that is more interesting and accessible. Technological development is an important element to provide a pleasant learning experience (Teo et al., 2016). Previous research has not explored much about student learning readiness and technology development (Pinto et al., 2011). Technology development is an important part of providing students with a self-

directed learning experience. Self-learning experience is an important element, especially in online technology (Briz-Ponce et al., 2017).

Technological development in the current era emphasizes the independent learning process so that the teacher is a facilitator in acquiring knowledge. Learning motivation also affects the drive to obtain material independently. Motivation plays an important role to encourage increased student learning abilities (Martin & Ertzberger, 2013). When students get motivation, it will bring up a strong desire to learn. Students' desire to learn has implications for increasing academic abilities. The development of technology and thinking skills will generally correlate with the level of intelligence of students to produce satisfactory evaluation results. Learning experiences using technology give a positive impression on students to bring up a motivation to learn. The desire to learn is an important part of motivation to improve thinking skills and knowledge. Knowledge is part of the cognitive aspect that the direct learning process can continuously improve (Larsen et al., 2009).

The use of technology plays an important role in improving cognitive thinking skills, so that students can learn independently by using educational technology. The ability to use technology is an important element in receiving technology in the field of education so that students' knowledge can be added. This study aims to explore the influence of technology on students' motivation and academic ability to provide new insights and novelties in education.

LITERATURE REVIEW

Educational technology is closely related to curriculum development so that in the learning process, educational assistance in the field of technology is prioritized. Technology can help the ability to convey knowledge to students so that students can use technology as an important part of the learning process. Educational technology gives students the ability to gain knowledge more broadly, so they don't just rely on limited textbooks and teachers as the only source of student knowledge in the process of using technology (Sadvakassova et al., 2017). The teacher acts as a facilitator who guides students to acquire knowledge by utilizing technology. Reference books are limited so that with the existence of educational technology, books can be used as a reference and development of education by utilizing the internet as an important part of the educational process in the era of increasingly developing technology. The utilization of the internet is an important part to gain knowledge more broadly so that students can learn independently and increase their knowledge potential. Motivation in educating students is by prioritizing the drive from within to have the desire to learn independently and improve their cognitive abilities (Tagoe & Abakah, 2014).

Self-Directed Learning Readiness to Learning Motivation

Readiness to learn is an important key in the educational process by utilizing technology. The use of technology is closely related to the ability to operate an educational technology. If a student is able to master the process of operating equipment and technology in the field of education, it will encourage stronger motivation in the learning process. Motivation is an encouragement that comes from internal and external to students so that the ability to learn is influenced by motivation and one of them comes from technology (Lin, 2012). The ability to utilize technology is able to encourage a student to study

hard and explore in depth the technology that is being mastered. Strengthening reinforcement in the field of education is carried out by utilizing technology so that it is able to reach a wider knowledge of students (Shamsuddin & Kaur, 2020). A student will try to explore his knowledge by utilizing the internet more deeply so that the learning process is more varied. The learning experience will increase with the use of the internet and mastery and readiness in the field of technology. Students' independence also appears when they have a strong desire to learn. Students' independence can encourage the existence of a motivation in the learning process to improve abilities in the cognitive field.

H1: Self-Directed Learning Readiness impact Learning Motivation

Technology Readiness to Learning Motivation

Motivation to learn does come from students and the readiness and infrastructure of the school. The educational preparation process has an important influence so that a student can have an interesting learning experience and infrastructure is an important part of education. The ability to provide adequate infrastructure is an important part of the educational process that utilizes technology. A school with technology will have increasing learning abilities so that a student needs infrastructure in the learning process that utilizes technology. The school will provide knowledge and skills in the field of technology to create an increasing learning motivation (Mitasari & Rusdarti, 2019). The process of making adequate infrastructure and carried out by schools so that an increasingly varied learning experience using various methods can encourage students' motivation to learn. Motivation is an important component, so that with the help of technology students' knowledge is increasing and not only limited to one particular source. The existence of technology, a student can use the computer they have so that they get wider and unlimited access. Flexibility of time and space is an important indicator in the process of using technology so that a student feels that the learning process is not hindered by time and space (Zaineldeen et al., 2020).

H2: Technology Readiness influence Learning Motivation

Learning Motivation to Cognitive Presence

Learning motivation plays an important role in the educational process so that someone who is motivated to carry out a varied learning process

will encourage stronger cognitive abilities. The existence of these cognitive abilities reflects that the learning process has achieved satisfactory results. Learning by utilizing technology will provide an opportunity for education to improve students' cognitive abilities so that they are able to provide optimal learning outcomes. The ability to learn is also supported by the existence of technology so that the readiness of students in the field of technology who can operate properly and utilize it and a student who can master and adapt technology will provide optimal opportunities (Briz-Ponce et al., 2017). The ability of students to provide opportunities to adapt using technology is one of the characteristics of adaptive students. In the current era, it is almost rare to find young students. It is difficult to use technology. This happens because students in the current era are someone called Technosavvy. Infrastructure readiness is an important part of improving students' learning abilities. A student will be motivated to carry out the learning process well if adequate technologies are provided to carry out the learning process. The existence of the learning process is an important part that supports the formation of student motivation. Motivation is a part that also affects the quality of learning so that a student who uses his motivation will have a stronger intention to carry out the learning process. Learning ability is also influenced by the existence of technology prepared by the school and the mastery of students to operate technology that can encourage the quality of learning to increase. This study suspects that the availability of technology will encourage stronger motivation so that students learn continuously (Kleinpell et al., 2011). The learning experience by utilizing technology opens up space for varied learning methods, so that these abilities are able to encourage stronger student motivation. The learning experience is an important part of the educational process so as to provide stronger opportunities in the learning process. Learning skills supported by technology will result in efficient and effective education management so that teachers as educational facilitators are able to provide a fun and varied learning process.

H3: Learning Motivation influence Cognitive Presence

H4: Self-Directed Learning Readiness impact Cognitive Presence through Learning Motivation

H5: Technology Readiness influence Cognitive Presence through Learning Motivation

METHOD

This study uses a quantitative approach so that it uses numbers that can be used as a reference in evaluating research results. This study used a sample of 167 respondents with the criteria of students using the learning management system in the learning process. Learning management system is part of the development of educational technology to facilitate the learning process effectively and efficiently. The data is distributed through online questionnaires, so that students can fill in directly and the data that has been obtained is tabulated to be further reduced and analyzed into a generalization of the study.

RESULT AND DISCUSSION

Validity

Based on the results of validity testing using Pearson correlation in Table 1, it can be concluded that all indicators in this study fall into the valid. Hence, it can be continued in reliability testing.

Table 1. Validity Test Result

Variable	Indicator	Pearson Correlation	Mean	Std Dev
Self-Directed Learning	LR1	0.857	4.5269	0.59934
	LR2	0.860	4.4790	0.62900
Readiness	LR3	0.878	4.3353	0.70805
	LR4	0.817	4.2096	0.72671
Technology Readiness	TR1	0.787	4.2695	0.68931
	TR2	0.800	4.2575	0.68516
	TR3	0.850	4.2395	0.64200
	TR4	0.836	4.2455	0.62544
Learning Motivation	LM1	0.809	4.2874	0.64099
	LM2	0.839	4.3713	0.65391
	LM3	0.805	4.5030	0.57951
	LM4	0.793	4.4012	0.60180
Cognitive Presence	CP1	0.855	4.1976	0.66077
	CP2	0.868	4.2036	0.69020
	CP3	0.771	4.3234	0.57319
	CP4	0.776	4.4431	0.61707

Reliability

Based on the reliability testing results, it can be concluded that all variables have met the Cronbach alpha indicator, which is above 0.7 points. The results of this study prove that all variables are reliable.

Table 2. Reliability Test Result

Variable	Cronbach Alpha
Self-Directed Learning Readiness	0.872
Technology Readiness	0.833
Learning Motivation	0.827
Cognitive Presence	0.836

Hypothesis Test

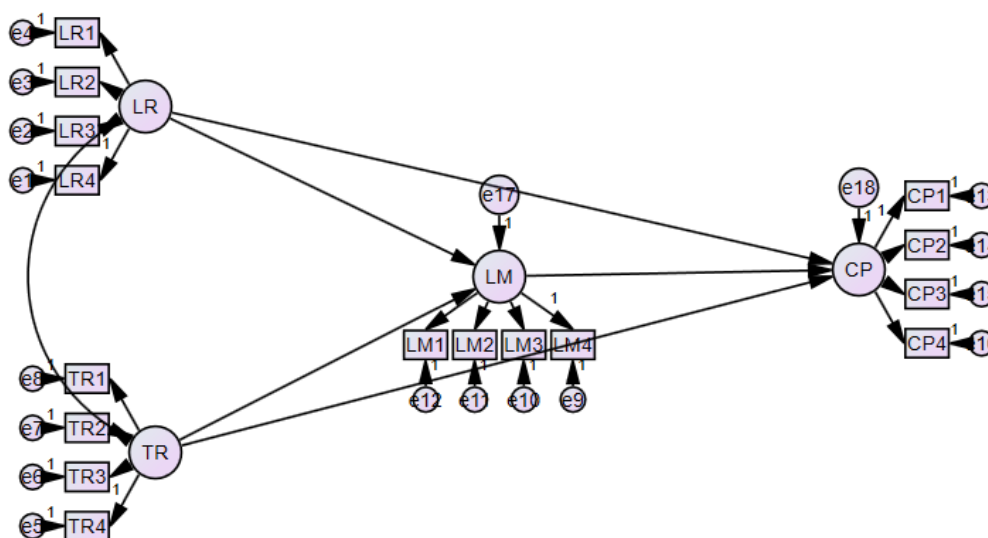


Figure 1. Research Model

The results showed that all the hypotheses in the study were supported. The results show an effect of self-directed learning readiness on students' learning motivation and prove that self-directed learning readiness has a direct effect on cognitive presence. This study also proves that there is an influence of technology readiness on learning motivation and learning ability is also influenced by the existence of technology readiness on cognitive presence. This study indicates that learning motivation partially mediates the influence of independent variables on the dependent, so that learning motivation is a part that is also taken into account to form cognitive presence.

Table 3. Hypothesis Test Result

Variable	Estimate	S.E.	C.R.	P
LR->LM	.198	.100	1.979	.048
TR->LM	.476	.110	4.338	***
LM->CP	.555	.135	4.115	***
LR->CP	.235	.098	2.397	.017
TR->CP	.344	.122	2.821	.005

Note: Self-Directed Learning Readiness (LR), Technology Readiness (TR), Learning Motivation (LM), Cognitive Presence (CP)

Discussion

This research has proven that technology in education has an effect on students' learning motivation. Learning motivation is an important part to improve understanding and the ability to understand the material comprehensively. Knowledge is an important aspect in determining learning success. This study proves that students' readiness to obtain material through technology

has major implications for their learning motivation. This study proves that educational technology infrastructure plays an important role in shaping students' learning motivation. The results of this study prove that learning motivation will affect self-academic abilities. Technology is an important part of encouraging better learning abilities with technology being able to provide a more comprehensive understanding through widely open educational channels. Knowledge in the previous era of education was only based on books that had limited learning experience (Feng et al., 2013; Margunayasa et al., 2019). Technology is currently growing with the existence of a learning management system that can manage learning effectively and efficiently. The learning management system is an important part of the learning technology process so as to provide opportunities for students to manage learning outcomes and learning materials that can be downloaded through a system. A learning management system provides comprehensive educational services in one place, so that both teachers and students who will access a system can be managed adequately. A learning management system is an important part of encouraging learning motivation, thus giving rise to increasing academic abilities (Missildine et al., 2013).

CONCLUSION

The results of this study have proven that there is an effect of self-directed learning readiness on learning motivation. The results of this study

prove that self-directed learning readiness directly affects cognitive presence, thus leading to the conclusion that learning motivation has a partial effect in mediating self-directed learning readiness on cognitive presence. This study proves that technology readiness has an effect on learning motivation. In addition, technology readiness has an effect on cognitive presence. This study can conclude that learning motivation partially mediates the effect of technology readiness on cognitive presence.

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