# **ORIGINAL ARTICLE**

# ONLINE LEARNING READINESS DOES NOT CORRELATE WITH LEARNING MOTIVATION DURING THE COVID-19 **PANDEMIC**

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### **ABSTRACT**

### INTRODUCTION

In the midst of the chaos caused by the COVID-19 pandemic, Indonesia can continue its formal education system with an online learning system. However, the online learning system as an alternative to the classroom teaching system was dismissed, considering the risk of contracting COVID-19 to students and teachers. This research aims to determine the correlation between online learning readiness and high school students learning motivation.

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#### **METHODS**

This study was a cross-sectional study with analytical observations on high school students who were studying online with the same subject and the same teacher. 62 male and female respondents aged 15-17 were collected by consecutive random sampling. The research tools were the Online Learning Readiness Assessment (OLRA), and Situational Motivational Scale (SIMS) questionnaires filled out by the respondents. SIMS was measured using the Self-Determined Index (SDI) to determine intrinsic and extrinsic motivation categories. The results were then tested using the Pearson correlation test.

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#### **RESULTS**

54.8% of students were "not ready" for online learning, 30.6% were "almost prepared", 12.9% were "not suited" for online learning, and 1.6% were "ready" for online learning. There was no statistically significant difference between extrinsically motivated students (53.2%) and intrinsically motivated (46.8%). There was no correlation between online learning readiness and motivation of the students (r=-0.051, p=0.692).

CONCLUSION

More students are not ready for online learning. However, it is not correlated between online readiness and students' learning motivation.

**KEYWORDS:** Online learning, Learning Motivation, High School, COVID-19 Pandemic

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# **ABSTRAK**

# Kesiapan Pembelajaran Daring tidak Berkorelasi dengan Motivasi Belajar di Masa Pandemi Covid-19

#### **PENDAHULUAN**

Di tengah kekacauan yang diakibatkan oleh pandemik COVID-19, Indonesia masih dapat melanjutkan sistem pendidikan formalnya dengan suatu sistem pembelajaran dalam jaringan (daring). Sistem pembelajaran daring sebagai alternatif sistem ajar-mengajar di kelas yang diberhentikan mengingat risiko tertular COVID-19 terhadap pelajar dan pengajar. Tujuan penelitan ini adalah untuk mengetahui korelasi antara kesiapan pembelajaran secara daring dengan motivasi belajar siswa-siswai SMA.

#### METODE

Penelitian ini memakai studi potong lintang dengan observasi analitik pada siswa-siswi sebuah SMA yang sedang belajar secara daring dengan mata pelajaran yang sama dan guru yang sama. Sebanyak 62 responden laki dan perempuan berusia 15-17 tahun dikumpulkan secara consecutive random sampling. Alat penelitian adalah kuesioner Online Learning Readiness Assessment (OLRA) dan Situational Motivational Scale (SIMS) yang diisi oleh responden. SIMS diukur dengan menggunakan Self-Determined Index (SDI) untuk menentukan kategori motivasi intrinsik dan ekstrinsik. Hasil kemudian diuji dengan memakai uji korelasi Pearson.

#### HASIL

Sebanyak 54.8% siswa "kurang siap" mengikuti pembelajaran secara daring, "hampir siap" 30.6%, "kurang cocok" 12.9%, dan 1.6% yang "siap" untuk belajar secara daring. Tidak tampak perbedaan bermakna antara persentase siswa yang memiliki motivasi external (53.2%) dan motivasi internal (46.8%). Tidak terdapat korelasi antara kesiapan pembelajaran daring dan motivasi siswa. (r=0.051, p=0.692)

#### **KESIMPULAN**

Terdapat lebih banyak siswa yang tidak siap akan pembelajaran secara daring, namun tidak terdapat korelasi antara kesiapan pembelajaran dengan motivasi belajar siswa.

KATA KUNCI: Pembelajaran Daring, Motivasi Belajar, SMA, Pandemi COVID-19

# **INTRODUCTION**

One of the policies issued by the government to continue teaching and learning activities during the COVID-19 pandemic is to implement an online learning system to avoid the spread of the COVID-19 outbreak. Online learning is neither new nor revolutionary because it was proposed in 1999 by a scholar named Jay Cross. Online learning uses technology in the education system so that students and teachers can interact without having to meet face to face.<sup>(1)</sup>

There are two types of online learning: synchronous and asynchronous.<sup>(2)</sup> Synchronous environment refers to a structure similar to face-to-face lectures, where students and educators are present in real-time, allowing instant feedback for the learner and is thus a guided experience teacher (teacher-directed experience). In contrast, asynchronous environments are less structured and rely on different platforms, such as virtual network education (VME). VME is a self-contained experience that connects students with resources and networks for education or cloned content education. VME is directed by schools that can connect students to pre-developed content but can contact instructors if needed.<sup>(3)</sup>

An online component in learning has its unique strengths and limitations compared to offline learning and has its own set of challenges. The advantage of online learning from either a self-directed asynchronous experience or a teacher-directed synchronous experience is that the learning is student-centred due to changing the environment into a 'social, flexible, and personal space'. (4) This arises because of feelings of lack of instructor attendance in class, which then results in students having to study alone during the online curriculum. Still, in terms of learning outcomes functionally, there is no difference between traditional or online lessons. (5) Baxter and Haycock add that the addition of a 'virtual community, designed by network technology specifically for academic purposes, becomes a community of practice.(6)

However, the consistent presence of technology so far can also be detrimental to the development of knowledge and the learning process. According to Keegan, because students have acquired new skills such as visual skills, multitasking, and divided attention skills, this situation can reduce great processing cognitive skills. Deep processing cognitive in question

is critical thinking, self-reflection, and mindful knowledge acquisition.<sup>(7)</sup>

Another component of online learning is the social component which is very important for learning. The isolation created by online learning can lead to personal anxiety about using technology, being outside of your comfort zone, and a perceived inability or difficulty to interact with friends. As a result of this isolation, it is necessary to make adjustments for students and educators to overcome them.<sup>(8)</sup>

However, there are many questions regarding the system's effectiveness, such as about student motivation. In their study, Gopalan et al. revealed that motivation is a factor that significantly affects students' academic achievement. (9) According to Ryan and Deci's Self Determination Theory (SDT) theory, motivation is an internal condition that triggers, directs, and shapes a person's behavior. There are two types of motivation; intrinsic motivation, which arises from oneself and is only done to meet personal needs, and extrinsic motivation, which occurs when there is a reward, coercion, or punishment. (9,10) In this theory, every human wants to be, wants to feel competent, and wants to feel attached to their environment. From this, it can be concluded that the environment is a supporting factor in helping a person to feel autonomous, then intrinsic motivation will be promoted more than other sources of motivation.(11)

While Bryan et al., in their study, found that students on the Advanced Placement pathway in America have an intrinsic motivation that exceeds that of students outside the path. (12) The link between intrinsic motivation and high academic achievement is noteworthy in the online education system because the system can have the effect of increasing intrinsic motivation. Such as the results of research conducted by Malinauskas et al. (11) or extrinsic motivation, such as the results of research conducted by Lin et al. (13)

Few studies link students' motivation with online learning methods and readiness for online learning, especially during the COVID-19 pandemic. Therefore, this study aimed to see the correlation between online learning readiness and students' learning motivation. The results obtained are expected to provide input for educators to find appropriate online learning methods to improve

student learning quality.

### **METHODS**

The study design was cross-sectional on 62 high school students (SMA). Consecutive non-random sampling was taken by meeting the inclusion criteria: students taking online lessons aged 15-17 years. Students who, although taking online classes, were not taught by the same teacher or the same subjects were not included in this study. To get respondents, first, get permission from the principal and a meeting with school students is held online via Zoom. In the meeting, the objectives of the research and the questionnaire were explained. Then, students willing to participate in the study are asked to fill out informed consent and a questionnaire until the number of samples is met.

Data were collected using the Online Learning Readiness Assessment (OLRA) and Situational Motivational Scale (SIMS) questionnaires. SIMS was measured using the Self-Determined Index (SDI) to determine intrinsic and extrinsic motivation categories. The results of ORA and SDI were then tested using Pearson correlation using the SPSS program. Finally, the normal distribution of data was determined using the Kolmogorov-Smirnov test. The value of p<0.05 was chosen to determine a significant result. The research permit was issued by the Ethics Commission of the Faculty of Medicine, Universitas Trisakti, Number: 49// KER-FK/2/2021.

#### RESULTS

Table 1 shows the characteristics of most respondents aged 15 years (54.8%) and females (63%).

Table 1. Characteristics of Respondents

	Frequency (n)	Percentage (%)		
<b>Characteristics of Respondents</b>				
Age				
15 years old	34	54.8		
16 years old	27	43.5		
17 years old	1	1.6		
Gender				
Male	23	37		
Female	39	63		

Table 2 shows the mean SDI score of high school students is -0.87 (SD=10.37), and the mean OLRA score is 35.81 (SD=8.25).

Table 2. Value of Self-Determined Index and Online Learning Readiness Assessment

	$\mathbf{N}$	Minimum	Maximum	Mean	SD
SDI	62	-21.00	19.00	-0.8710	10.37412
OLRA	62	17.00	53.00	35.8065	8.24589

SD = Standard Deviation

Table 3 shows that students' online readiness is generally at "Less Ready" (54.8%), while students who are "Ready" for online learning are only 1.6%.

Table 3. Distribution of respondents to online learning readiness and learning motivation

Category	Frequency	Persentage (%)
- Not suitable, it takes time and effort to adapt to online learning	8	12.9
- Not ready but with improvement can succeed in online learning	34	54.8
- Almost ready, missing a thing or two	19	30.6
- Ready to learn online	1	1.6
Total	62	100.0

Table 4 shows that students who are extrinsically motivated are 53.2%, and those who are intrinsically motivated are 46.8%.

Table 4. Distribution of respondents on learning motivation variables

Type of Motivation	Frequency	Persentage (%)
External Motivation	33	53.2
Internal Motivation	29	46.8
Total	62	100

Table 5 shows no correlation between SDI and OLRA

Table 5. Pearson Correlation Test between SDI and OLRA

Pearson r	-0.051
Sig (p<0.05)	0.692

#### **DISCUSSION**

Although in this study, it appears that in the distribution of online learning readiness, more students are "less ready", there is no correlation between online learning readiness and students' motivation to learn (p=0.692). This study's results align with the research conducted by Sofianidis et al., who surveyed the experience of online learning during the COVID-19 pandemic on 322 students. 
(14) Sofianidis et al. revealed various learning difficulties during the pandemic, such as school closures, student welfare, teacher teaching abilities and fairness in accessing online curriculum among students. In addition, another challenge faced by students is that the implementation of

online learning relies heavily on technology and the internet. Therefore, students with low digital competence will have difficulty in online learning. These two problems related to technology create difficulties for students in online learning. (15,16)

However, this study's results are different from those obtained by Yilmaz et al. on students in a Turkish computer class. Yilmaz et al. using the Readiness Scale E-learning survey and Motivated Strategies for Learning Questionnaire. They found that online learning readiness was positively correlated with students' learning motivation with a value of r=0.501 (p<0.01). Likewise, the results found by Horzum et al. by using the Online Learning Readiness Scale survey and the Academic Motivation Scale survey on students

studying online at Sakarya University.<sup>(17)</sup> The result is that there is a correlation between online learning readiness and academic motivation (r=0.41 and p<0.01).

Pandemics significantly affect students undergoing education, often resulting in emotional and mental health conditions that interfere with their learning process. Zuniga et al. (18) conducted a weekly survey of students of all levels, from high school to graduate school, from the start of the 8-week lockdown on emotions experienced. During that time, the anxiety, fatigue, stress, and feeling of overwhelmed students increased weekly. This is exacerbated by the lack of support structures that are supposed to help students, but because of the ongoing situation, such support structures are usually more difficult for students to access.

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Hodges, a researcher who reviewed distance teaching during the pandemic, suggested that the current teaching method should not be called online learning. (20) Hodges proposed a neologism: emergency remote teaching. Emergency Distance Teaching is an alternative way of delivering education online due to a crisis. Still, it will continue in the form of integrated or face-to-face learning after the crisis ends. Therefore, emergency distance teaching carries a different connotation from online learning because it does not aim to create a quality online learning pedagogy. Compared to the situation of this study, the research of Yilmaz et al.(16) and Horzum et al.(17) run in relatively more peaceful and normal times, with well-thought-out curricula and teaching methods. On the other hand, this research was conducted in a time of crisis where the only way to continue the teaching-learning process was by hastily arranged online methods, so it appears that most students are not ready to take online learning. Still, this result does not correlate with students' motivation to study.

According to Nguyen, something intrinsically related to learning motivation in online learning is a major cause of student academic outcomes. One of the studies cited by Nguyen found that there are worse academic outcomes at the undergraduate level when studying online than postgraduate students. Those who are relatively more mature and have better self-study skills will be more successful when learning online.<sup>(21)</sup>

Horzum et al.<sup>(17)</sup>, Yilmaz et al.<sup>(16)</sup>, and this study use a similar approach to determine online learning readiness and academic motivation, consisting of a survey for each variable answered by respondents using a Likert scale. However, one of the differences from this study is in the scope of the study. In contrast, Yilmaz et al.'s research has occurred that explicitly involves the flipped classroom model.

The flipped classroom is a student-centred teaching model. This pedagogy involves learning that takes place online outside the classroom with online media and transforms the role of the classroom into a space for practical rather than theoretical learning. According to Jdaiwati et al. (22) the flipped classroom model promotes more positive emotions, which will then positively affect their experience and motivation in class.

Horzum et al.<sup>(17)</sup> and Yilmaz et al.<sup>(16)</sup> stated that the online curriculum and online learning readiness should increase student learning motivation. However, these results differ from this study, where there is no relationship between online learning and learning motivation.

In addition to students experiencing the impact of online learning, Jelinska et al., (23) who conducted a multinational survey of teachers from primary education institutions to universities, also found that educators were not prepared to teach online during a crisis. This study found that teacher engagement in teaching was lower than teachers who could not handle situations and conditions well. This effect is more pronounced in teachers at lower education levels, such as primary or secondary schools. This group has difficulty teaching the age group below SMA, which is more

dependent on the help and support of the teacher during their learning process. Trust et al. (24) confirm the findings of Jelinska et al., namely that over the past few decades, educators were not prepared to teach with technology and lacked the training to create quality online instruction.

The limitation of this research is that the sample size is not large, so it cannot represent the general condition and motivation of students toward online learning.

# **CONCLUSION**

There are more students who are not ready for online learning, but there is no correlation with student learning motivation. Further research is needed on the academic success of students with the motivation to learn online.

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# **AUTHORS' CONTRIBUTION**

RM plays a role in preparing research designs, data collection, data analysis, and data interpretation, and the person in charge of data collection in the field, preparing papers. TDS plays a role in drafting concepts, analyzing data, interpreting data, preparing papers, and revising final papers for publication.

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Research costs come from researchers.

# **CONFLICT OF INTEREST**

All researchers have no conflict of interest for the results of this study.

# REFERENCES

- 1. Singh V, Thurman A. How Many Ways Can We Define Online Learning? A Systematic Literature Review of Definitions of Online Learning (1988-2018). American Journal of Distance Education. 2019;33(4):289-306.
- 2. Dhawan S. Online Learning: A Panacea in the Time of COVID-19 Crisis. Journal of Educational Technology Systems. 2020;49(1):5-22.
- 3. Johnston J. Creating Better Definitions of Distance Education. Online Journal of Distance Learning Administration (Internet). 2020 (cited 20 December 2020);23(2). Available from: https://www.westga.edu/~distance/ojdla/summer232/johnston232.html
- 4. Nortvig A, Petersen A, Balle S. A Literature Review of the Factors Influencing E-Learning and Blended Learning in Relation to Learning

- Outcome, Student Satisfaction and Engagement. The Electronic Journal of e-Learning (Internet). 2018 (cited 20 December 2020);16(1):46-55.
- Faulconer E, Griffith J, Wood B, Acharyya S, Roberts D. A Comparison of Online, Video Synchronous, and Traditional Learning Modes for an Introductory Undergraduate Physics Course. Journal of Science Education and Technology. 2018;27(5):404-11.
- Baxter J, Haycock J. Roles and student identities in online large course forums: Implications for practice. The International Review of Research in Open and Distributed Learning. 2014;15(1):20-40 DOI: https://doi.org/10.19173/irrodl.v15i1.1593
- 7. Cavanaugh J, Giapponi C, Golden T. Digital Technology and Student Cognitive Development. Journal of Management Education. 2015;40(4):374-97.
- 8. Gillett-Swan J. The Challenges of Online Learning: Supporting and Engaging the Isolated Learner. Journal of Learning Design. 2017;10(1):20.
- 9. Gopalan V, Bakar J, Zulkifli A, Alwi A, Mat R. A review of the motivation theories in learning. AIP Conference Proceedings. 2017;1891(1).
- Conference Proceedings. 2017;1891(1).

  10. Riswanto A, Aryani S. Learning motivation and student achievement: description analysis and relationships both. COUNS-EDU: The International Journal of Counseling and Education. 2017;2(1):42.
- 11. Malinauskas R, Požėrienė J. Academic Motivation Among Traditional and Online University Students. European Journal of Contemporary Education. 2020;9(3):584-91 DOI: 10.13187/ ejced.2020.3.584
- 12. Bryan R, Glynn S, Kittleson J. Motivation, achievement, and advanced placement intent of high school students learning science. Science Education. 2011;95(6):1049-65.
  13. Lin M, Chen H, Liu k. A Study of the Effects
- 13. Lin M, Chen H, Liu k. A Study of the Effects of Digital Learning on Learning Motivation and Learning Outcome. EURASIA Journal of Mathematics, Science and Technology Education. 2017;13(7):3553-64.
- 14. Sofianidis A, Meletiou-Mavrotheris M, Konstantinou P, Stylianidou N, Katzis K. Let Students Talk about Emergency Remote Teaching Experience: Secondary Students' Perceptions on Their Experience during the COVID-19 Pandemic. Education Sciences. 2021;11(6):268.
- 15. Adedoyin O, Soykan E. Covid-19 pandemic and online learning: the challenges and opportunities. Interactive Learning Environments. 2020;1-13.
- 16. Yilmaz R. Exploring the role of e-learning readiness on student satisfaction and motivation in flipped classroom. Computers in Human Behavior. 2017;70:251-60.
- 17. Horzum M, Kaymak Z, Gungoren O. Structural Equation Modeling Towards Online Learning Readiness, Academic Motivations, and Perceived Learning. Educational Sciences: Theory & Practice. 2015;15(3):759-70.
- 18. Camacho-Zuñiga C, Pego L, Escamilla J, Hosseini S. The impact of the COVID-19 pandemic on students' feelings at high school, undergraduate, and postgraduate levels. Helivon, 2021:7(3):e06465
- postgraduate levels. Heliyon. 2021;7(3):e06465.

  19. Tobin T. Now Is Not the Time to Assess Online Learning [Internet]. The Chronicle. 2020 [cited 1 July 2021]. Available from: https://www.chronicle.com/article/now-is-not-the-time-to-assess-online-learning/

- 20. Hodges C, Moore S, Lockee B, Trust T, Bond A. The difference between emergency remote teaching and online learning. Educause review. 2020 Mar 27;27(1):1-9.
- 21. Nguyen T. The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons. MERLOT Journal of Online Learning and Teaching [Internet]. 2015 [cited 1 July 2021];11(2):309-19.
- Jdaitawi M. Does Flipped Learning Promote Positive Emotions in Science Education? A Comparison between Traditional and Flipped Classroom Approaches. Electronic Journal of e-Learning. 2021;18(6).
- 23. Jelinska M, Paradowski M. Teachers' Engagement in and Coping with Emergency Remote Instruction During COVID-19-Induced School Closures: A Multinational Contextual Perspective. Online Learning, 2021:25(1).
- Learning. 2021;25(1).

  24. Trust T, Whalen J. Should teachers be trained in emergency remote teaching? Lessons learned from the COVID-19 pandemic. Journal of Technology and Teacher Education. 2020;28(2):189-99.