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Scrutinizing University Students' Online Learning Readiness and Learning Achievement

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Abstract

This study aims to determine the level of student online learning readiness (OLR) and scrutinize its correlation with students' learning achievement (LA). To achieve this goal, a quantitative correlational design study was conducted. The participants of this study were fifty-six students joining Islamic Philosophy course (IPC) in a first semester of academic year 2021/2022 at an English Education Department in a public university in West Nusa Tenggara, Indonesia. To collect the data, the researchers administered OLR questionnaire and documented students' final test score in IPC. In the present study, this score was considered as LA. Moreover, a semi structured interview was conducted to confirm findings obtained from OLR questionnaire administration. The data were analyzed quantitatively using SPSS 23 for getting the descriptive statistic of OLR level and the variables' correlation score. Then, descriptive thematic analysis was done for the interview data. The results showed that students' OLR level was in ready with improvement level as indicated by the average OLR score of 3.65. However, students mentioned some challenges during OL such as unstable internet connection, inconducive learning environment, and inability to be multitasker. This study revealed that students' OLR had very strong correlation to LA as shown by r=0.085, sig=0.000. Henceforth, this study implied the need for teachers and educational institutions to help students to be ready for joining the new learning system. However, this study promotes improvement for future investigation due to its limited variables and samples.

Keywords: Online learning readiness, Learning achievement, university students.

Introduction

The Covid-19 pandemic or Coronavirus Disease 2019 has shocked countries in various parts of the world in 2020, one of these countries is Indonesia. According to the WHO (World Health Organization) Covid-19 is an infectious disease that was first discovered in Wuhan, China in December 2019. The spread of this virus can be through splashes of saliva that come out caused by sneezing or coughing from the Covid-19 outbreak. The easy spread of the virus causes millions of people in the world to quickly become infected. The rapid spread of the Coronavirus is a challenge for the country and the world to suppress the increase in COVID-19 patients. For this reason, the government has implemented regulations for not crowding, social distancing, physical distancing, using masks and washing hands after or before carrying out activities.

The government has issued Circular Letter Number 4 of 2020 concerning the Implementation of Educational Policies in the Period of Emergency Spread (Coronavirus Disease) or Covid-19 point 2, namely the learning process is carried out at home, through the Ministry of Education and Culture of the Republic of Indonesia, with the provisions are: Learning from home via online/distance learning is implemented to provide students with a meaningful learning experience without the burden of completing all curriculum achievements for grade promotion or graduation; learning at home can focus on life skills education, including information about the Covid-19 pandemic; learning from home activities and assignments may differ between students depending on their individual interests and circumstances, including the gap in access/facilities for learning at home; and evidence or product of home learning activities to provide qualitative and useful feedback from the teacher without being required to provide numerical scores/values.

According to the circular, all educators and students in the Covid-19 pandemic are at risk. This situation forced all academician to do online learning (OL). Online learning according to Sadikin & Hamidah (2020) is all distance learning interactions carried out using the internet network with the support of mobile devices (smartphones, laptops, computers) and various media that can support online learning such as virtual classes (Google Classroom services, Zoom meeting, Edmodo or Schoology). In line with that, Kumar & Nanda (2018), suggest that online learning can also be done using social media such as WhatsApp, YouTube, or Instagram. In essence, online learning must connect students with learning resources.

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Research conducted by Zhang et al. (2004) shows that the use of the internet and technology can be an alternative to transfer knowledge between students and teachers. Meanwhile, according to Setyoningsih (2015) who said that online learning is flexible in teaching and learning activities. This is because students can access material anywhere and anytime if there are internet and technology supporters. However, the success or failure of online learning depends on the learning process felt by students. According to Rohmah (2016), this is influenced by the geographical location of internet users and one of the psychological factors, namely the readiness of online learning by students.

Vosloo & Belle (2009) define online learning readiness (OLR) or e-readiness as a condition of a person's mental, physical and material readiness to participate in accessing technology and internet networks in the learning process. In line with that, Setiaji & Dinata (2020) stated that online learning readiness or e-readiness is determined by a person's ability to adapt using technology and the internet in learning activities.

Winarso (2016) said that an important aspect in learning is the readiness of students, because students as subjects in learning must be considered and guided in achieving learning objectives. In line with that, Jamal (2020) suggested several factors of readiness for the application of online learning seen from two levels, namely elementary school and high school, one of these factors is the readiness of students. To see the readiness of online learning of students, there are several indicators, namely, 1) students know online learning, 2) parents of students provide support for online learning, 3) students can manage their time with both in online learning, 4) students are able to use technology in online learning, 5) students are ready to carry out online learning, 6) accessing the internet is not a problem for students.

Students' online learning readiness (OLR) has been investigated by some researchers to have correlation with students' learning achievement (LA). Dangol and Shresta (2019) examined the relationship between learning readiness and educational achievements of school students. The findings of this study divulged that there was significant relationship between learning readiness and students' educational achievement. Another study was conducted by Torun (2020) which the results indicated that self-directed learning as one of scale for OLR was the strongest predictor of academic achievement, while motivation toward online learning was found to be another predictor of academic achievement. In addition, Triastuti (2016) strengthens the idea that there was relationship between OLR and LA. Her study showed that There was a significant correlation between online learning readiness (OLR) and learning achievement with the strength of the correlation was 0.874 (p: 0,000). Considering these previous studies and backgrounds, the present study was intended to investigate students' online learning readiness (OLR) level during online learning in the Covid-19 pandemic period and to scrutinize the correlation of students' OLR and LA that may imply future theoretical and practical application of online learning.

Methodology

The present study employed quantitative approach with correlational design study. This design was operated matching with the objectives of this study were to determine the level of student online learning readiness (OLR) and scrutinize its correlation with students' learning achievement (LA). The participants of this study were the fifty-six bachelor students attended Islamic Philosophy course (IPC) in the first semester, academic year 2021-2022, at an English Education Departments of Faculty of Education and Teachers Training in a public university in West Nusa Tenggara, Indonesia. The reasons to choose the participants were according to feasibility to reach the students since the researcher was assigned as their lecturer.

The data of this study were obtained from students' final test scores in Islamic Philosophy course (IPC), students' quantitative responses on OLR questionnaire administration, and students' descriptive explanation to support their quantitative responses in OLR questionnaire. Therefore, the data collection technique used in this study were administering the OLR questionnaire, documenting students' final test scores in Islamic Philosophy course (IPC), and conducting semi-structured interview to the participants.

In more detail description, to collect the data, the researchers gathered students' final test scores perceived from Islamic Philosophy course (IPC) in the first semester in academic year of 2021-2022. This score was considered as students' learning achievement (LA). These scores were later analyzed to scrutinize its correlation with students' OLR. Then, to get students' OLR data, the OLR questionnaire was distributed to the respondents. The OLR questionnaire was adopted from Watkins et. al (2003) which the items contained four aspects: technology access, technology skills, learning skills, and motivation. These four aspects with a total number of 20 items were measured on a five-point Likert scale (Table 1).

Finally, to confirm the OLR questionnaire result, the researcher conducted semi structured interview to five participants randomly.

The data analyses were conducted by addressing two objectives of this study, to seek for students' OLR level and

Table 1: Scale statement of students' readiness for online learning

	Strongly Not Ready	*Not Ready*	*Moderate*	*Ready*	*Strongly Not Ready*
Scale	1	2	3	4	5

to know the correlation of students' OLR with students' LA. Therefore, to get the students' OLR level, the researcher analyzed the perceived quantitative data from OLR questionnaire and matched it with the online learning readiness assessment model introduced by Aydin and Tasci (2005). The model of OLR assessment is seen in figure 1.

Furthermore, the quantitative data perceived from the questionnaire were crosschecked with the result of students' interview results. The students who joined the interview were noted as pseudonym. After that, to know the correlation of students' OLR and LA, the researcher analyzed quantitative data perceived from OLR questionnaire and students final grade scores from Islamic philosophy course SPSS version 23 to seek for Pearson correlation score. This correlation scores then further categorized to know the level of the correlation. The category of the correlation scores were based on Meghanathan (2016) model as shown in table 2.

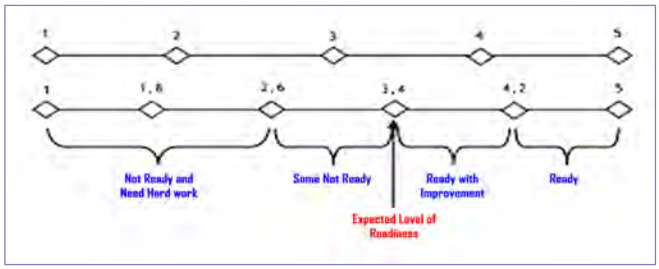

Fig. 1: Online learning assessment model (Aydin & Tasci, 2005, p. 250)

Table 2: Pearson correlation scores categories

0.00 – 0.119	Very low
0.20 – 0.399	Low
0.40 – 0.599	Moderate
0.60 – 0.799	Strong
0.80 – 1.00	Very Strong

Findings and Discussion

The present study had two study objectives, they were about scrutinizing students' OLR and investigating the correlation between students' OLR and LA. Therefore, this chapter would thematically describe the findings and discuss according to the mentioned objectives.

a. The students OLR level

The readiness for online learning data in the present research were gathered from 56 students as the subject of the research. Online learning readiness questionnaire was adapted from Witkins et. al (2004) which comprises five aspects: technology access, technology skills, learning skills, and motivation. The students were instructed to rate 20 statements on the 5-point Likert scale. The detailed findings are described as follows:

1. Readiness in the aspect of technology access

Technology access plays pivotal role for the students to enable them to join online learning. The need to know their technology capital is requirable. The students responded the questionnaire regarding the item and the result is presented table 3 as follows:

Table 3 depicts the results of the quantitative analysis from the OLR questionnaire, which showed that all the items passed the expected level of readiness (Mo = 3.40) with the overall items mean score of 3.82. It meant that the availability of hardware and software, as well as the internet stability met the expected level. This data had been supported by some responses from the students:

> *Usually, I joined zoom meeting using my own laptop.* (Bella)

The similar sound was proclaimed by Sulis, he said:

> *Sometimes I use handphone to keep connected with my class if my teacher asked to join class by WA. In another occasion, I used netbook to connect with google meet.* (Sulis)

Table 3: Readiness in the aspect of technology access

		Responses												
		SR		*R*		*M*		*NR*		*SNR*				
No	*Description of Autonomy*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*Total Score*	*Total Mean*	*Category*
1	I have access to Internet	17	85	23	92	16	48	0	0	0	0	225	4.02	Ready with Improvement
2	I have access to a fairly new computer /mobile phone	10	50	32	128	11	33	3	6	0	0	217	3.88	Ready with Improvement
3	I have access to a computer/ mobile phone with mobile apps/ software	5	25	29	116	15	45	7	14	0	0	200	3.57	Ready with Improvement
Average													3.82	Ready with Improvement

However, the interview result showed differently regarding the Internet connection. Andi added:

> *I have my handphone. But sometimes the internet connection is not stable and I lost to connect to my lecture. Though it happens rarely but it influences my focus to learn.* (Andi)

It was easily deduced that the availability of hardware and software was satisfactory. However, the Internet's stability needed to be improved. According to Nugroho et al. (2014), Telkom University was ready to implement iCaring but needed a few tweaks. These enhancements concerned the plan, technology, content, training and education, and students' abilities. In their research, Nugroho et al. (2014) also stated that technology, particularly the Internet connection, should be improved.

2. Readiness in the Aspect of Technology Skills

The second aspect that influence the students' readiness to join online learning is about their skill to use the technology. There will be no use of the existence of technology in students' hands, if they can not use it. The familiarity to use the technology may also improve their preferences to learn using online learning. Then, the result of questionnaire regarding the students' readiness for online learning in the aspect of technology skills are presented in table 4.

Table 4 showed the mean score Sof all the items related to the readiness of the students' technology skill or the students' factor. The result showed that the mean scores of all items were higher than the expected level of readiness (Mo =3.40) with the overall technology skill readiness mean 3.88 with the category of "ready with improvement". This result was

Table 4: Readiness in the aspect of technology skills

		Responses												
		SR		*R*		*M*		*NR*		*SNR*		*Total*	*Total*	
No	*Description of Autonomy*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*Score*	*Mean*	*Category*
4	**I have the basic skills to operate a computer /mobile phone**	**12**	**60**	**40**	**160**	**4**	**12**	**0**	**0**	**0**	**0**	**232**	**4.14**	**Ready with Improvement**
5	**I have the basic skills for finding my way around the Internet (e.g., using search engines, entering passwords).**	**23**	**115**	**30**	**120**	**3**	**9**	**0**	**0**	**0**	**0**	**244**	**4.36**	**Ready**
6	**I can send an email**	**40**	**200**	**16**	**64**	**0**	**0**	**0**	**0**	**0**	**0**	**264**	**4.71**	**Ready**
7	**I think that I would be comfortable using a computer/ mobile phone several times a week to participate in a course**	**4**	**20**	**27**	**108**	**20**	**60**	**4**	**8**	**1**	**1**	**197**	**3.52**	**Ready with Improvement**
8	**I think that I would be able to communicate effectively with others using online technologies (e.g., email, chat).**	**10**	**50**	**20**	**80**	**19**	**57**	**3**	**6**	**4**	**4**	**197**	**3.52**	**Ready with Improvement**
9	**I think that I would be able to express myself clearly through my writing (e.g., mood, emotions, and humor).**	**8**	**40**	**23**	**92**	**21**	**63**	**4**	**8**	**0**	**0**	**203**	**3.63**	**Ready with Improvement**
10	**I think that I would be able to use online tools (e.g., email, chat) to work on assignments with students who are in different time zones**	**18**	**90**	**26**	**104**	**12**	**36**	**0**	**0**	**0**	**0**	**230**	**4.11**	**Ready with Improvement**
11	**I think that I would be able to schedule time to provide timely responses to other students and/or the instructor.**	**13**	**65**	**20**	**80**	**17**	**51**	**2**	**4**	**4**	**4**	**204**	**3.64**	**Ready with Improvement**
12	**I think that I would be able to ask questions and make comments in clear writing.**	**4**	**20**	**21**	**84**	**20**	**60**	**11**	**22**	**0**	**0**	**186**	**3.32**	**Ready with Improvement**
Average													**3.88**	**Ready with Improvement**

supported by the interview. Regarding the respondents' experiences, Bella said:

Yes, I am used to use technology for my activities. For its utilization, I am used to utilize technology for chatting, browsing information, selling my product online, and sometimes posting status. (Bella)

Regarding the respondents' confidences, Vina said:
I connect with my social media every day without any obstacles. (Vina)

Hanif also said:
Learning online is OK for me. (Hanif)

Regarding respondent's belief on benefits to join online learning, Sulis said:
Online learning helps me to learn at anytime and anyplace. I can keep contact with my classmates using any apps in my mobile phone during learning. yea, it is easy and I think it's good during pandemic. (Sulis)

The data above explained the students' experiences toward using technology for their daily communication and learning. The response in interview also depicts their confidence to use technology as it shares benefits in term of time and space. Octaberlina and Muslimin (2021) states that technology enables students to decide their preferable time and place to study. Moreover, students' show positive attitude toward the implementation of online learning during pandemic era. Lemoine et. al (2020) support the importance of technology skill for students as it is essential to deploy 21st century learning model in classroom as well as improving the effectivity for learning as the environment change.

3. Readiness in the Aspect of Motivation

Motivating students to learn is important for curriculum implementation. This is due to the fact that motivation is a powerful factor in teaching-learning situations. Learning success is determined by whether or not the learners are motivated. Learners are motivated to achieve their learning objectives because they are motivated. It is critical to recognize that motivating learning is a critical component of effective teaching. This implies that learner motivation is most likely the most important aspect of learning. Learning is inherently difficult; it pushes the brain to its limits and, as a result, can only occur with motivation. Students' motivation to learn is especially important because students' mere presence in class is not a guarantee that they want to learn. It is simply a sign that students live in a society where children are required to attend school. Highly motivated learners are more likely to learn quickly and make any class enjoyable to teach, whereas unmotivated learners are more likely to learn little and make teaching painful and frustrating. (Filgona et al., 2020)

Motivation is one of factor that influence students' persistence in learning. According to Witkins et. al (2004), students' focus in learning may be distracted by factors in environment or somethings pop up in the students' gadgets. Sometimes, students are also demotivated as the teacher does not appear on screen. Hence, the students' motivation would be the only key to keep them on track for learning. Then, the result of questionnaire in the aspect of motivation is presented in table 5.

Table 5 showed the mean score of all the items related to students' motivation to learn. The result showed that the mean scores of all items were higher than the expected level of readiness (Mo =3.40) with the overall motivation readiness

Table 5: Readiness in the aspect of motivation

		Responses												
		SR		*R*		*M*		*NR*		*SNR*				
No	*Description of Autonomy*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*Total Score*	*Total Mean*	*Category*
13	I think that I would be able to remain motivated even though the instructor is not online at all times.	7	35	21	84	19	57	6	12	3	3	191	3.41	Ready with Improvement
14	I think that I would be able to complete my work even when there are online distractions (e.g., friends sending emails or Websites to surf).	6	30	23	92	24	72	3	6		0	200	3.57	Ready with Improvement
15	I think that I would be able to complete my work even when there are distractions in my home (e.g., television, children, and such).	6	30	19	76	20	60	8	16	3	3	185	3.30	Some Not Ready
Average													3.43	Ready with Improvement

mean 3.43 with the category of "ready with improvement". This result was supported by the interview. Regarding the respondents' experiences, Sulis said:

> *During asynchronous meeting, I keep studying by opening materials posted by lecturer and do the task according to the schedule although my lecturer was not there or online. I think I have to be discipline to get good score.* (Sulis).

Although, Budi stated differently as follows:
*I think I will be more motivated if my lecturer is online with me. I feel like being supervised and I know to whom I will ask if I have question (*Budi).

The same statement regarding inability to keep focus during learning at home was stated by Bella. She said:

> *I could not manage my motivation to learn and focus only to learning if I was at home. The emergence of my sister always distracted my focus since she asks me to play together.* (Bella).

The above statements describe that most of students have been ready to join online learning though some of them still found it difficult to keep their motivation to learn if the lecturer is not with them and they are at home with non-supportive family members. Coman et. al (2020) states that students need intense interaction synchronously with the teacher to keep them enjoying online learning. It means that some students have not yet own autonomy to control their learning. Putri et. al (2020) mentions that some of students cannot conductively study at home online since their family sometimes distracted their focus. The same statement was also found in Agustina et. al (2020) research. It states that students reported the crowd, the noise, and the parents' requests to help the household disturbed the online learning at home.

4. Readiness in the Aspect of Discussion Skill

Online discussions helped students and teachers interact through a platform or single web-based, which increases students' work effectively. Online discussions aimed to help students to extend their face-to-face discussions in their online environment (Ellis, Goodyear & Prosser, 2007). Online discussions offered both teachers and students to connect in a single platform, which is achieving writing subjects together through electronic content-based (Andresen, 2009). It has offered real communication where teachers and students have real communication with a single web-based. Morgan 2006 stated that online discussions might be the only medium available for students to discuss the class materials and their thoughts in an online classroom. On the other words, online discussions allow students to interact with the other friends, which are offering students' contribution to engage in online discussions (Bain, 2006). Through online discussions, each student has interacted by a single system of online discussions at the different time.

Table 6: Readiness in the aspect of discussion skill

		Responses												
		SR		*R*		*M*		*NR*		*SNR*		*Total*	*Total*	
No	*Description of Autonomy*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*n*	*total*	*Score*	*Mean*	*Category*
16	I think that I would be able to carry on a conversation with others using the Internet (e.g., Internet chat, instant messenger).	12	60	29	116	10	30	4	8	1	1	215	3.84	Ready with Improvement
17	I think that I would be comfortable having several discussions taking place in the same online chat even though I may not be participating in all of them	6	30	21	84	20	60	5	10	4	4	188	3.36	Some Not Ready
18	I think that I would be able to follow along with an online conversation (e.g., Internet chat, instant messenger) while typing.	5	25	20	80	19	57	8	16	4	4	182	3.25	Some Not Ready
19	I enjoy online discussion in learning	7	35	21	84	20	60	6	12	2	2	193	3.45	Ready with Improvement
20	I think that I would be able to understand course material easily online	8	40	19	76	21	63	7	14	1	1	194	3.46	Ready with Improvement
Average													3.47	Ready with Improvement

Being ready to join online learning means that students should be ready also to have discussion online. Therefore, it is essential to check their discussion skill by employing Watkins et al. (2003) questionnaire and the result is presented in table 6.

Table 6 showed the mean score of all the items related to students' skill to conduct discussion online. The result showed that the mean scores of all items were higher than the expected level of readiness (Mo =3.40) with the overall motivation readiness mean 3.47 with the category of "ready with improvement". This result was supported by the interview. Regarding the respondents' experiences, Vina and Hanif said:

> *Discussing offline or online is not a problem for me, the point is I can show that I learn something to my lecturer. (*Vina).
> *As long as the lecturer explain in details the direction to learn for the day lesson, understanding the material will be easy* (Hanif)

However, there are two questionnaire items that show mean score below Mo. It means that some students are not ready for the online learning.

> *It's hard for me to keep involving in discussion while I am taking notes for important points. I am not multitasker.* (Bella)

The data show that most of the students were ready to join the online learning during pandemic as they can use internet to conduct conversation and they enjoyed it. Yuzulia (2021) support this idea as the students enjoy more online discussion than offline discussion which it reduces more anxiety. Then, Krasnova (2015) strengthens the students' motive to enjoy online discussion as it improves students' collaborative skills to generate ideas. On the other hand, due to some students were not ready to conduct online learning, the lecturer needs to train students to adapt with online learning situation (Zweig & Stafford, 2016).

b. The correlation of students' OLR and students LA

The second objective of this study was to find the correlation of students' OLR and students' LA. Henceforth, quantitative calculation using SPSS 23 version was conducted to search for Pearson correlation score. According to the calculation, the correlation score perceived is seen in table 6.

Table 6 depicted that students' online learning readiness (OLR) had correlation with students' learning achievement (LA) with Pearson correlation score of 0.850 and 0.000 significance value. This finding strengthens ideas proposed by Dangol and Shresta (2019), Torun (2020), and Triastuti (2016). Reflecting the OLR questionnaire item number 20 students' responses about understanding the learning material through online learning, the result "Ready with improvement"

Table 6: Correlation between students' OLR and LA

		OLR	*LA*
OLR	Pearson Correlation	1	.850**
	Sig. (2-tailed)		.000
	N	56	56
LA	Pearson Correlation	.850**	1
	Sig. (2-tailed)	.000	
	N	56	56

**. Correlation is significant at the 0.01 level (2-tailed).

or 3.46 (see table 5) indeed supported the correlation score. It means that in reality, students confirmed that their OLR would affect their success in learning since they stated to be able to understand materials easily in online learning. Similarly comparing with the overall average score from all four aspects in OLR questionnaire (3.65, meaning "ready with improvement), majority of students admitted that they were ready joining online learning and they could adjust themselves to master the materials during learning.

Furthermore, this study showed that OLR had very strong correlation to LA which was proven by r= 0.085 (see table 2 and table 6). Therefore, Triatuti's (2006) study finding was confirmed well by this study finding. The strength of the correlation between two variables indicated their each other's possible influence. Henceforth, teachers in any education levels should consider the importance of students' online learning readiness in order to help students for better learning achievement in online learning setting.

Conclusion

This study was aimed to investigate students' online learning readiness (OLR) by considering four aspects – technology access, technology skill, motivation, and discussion skill; and to know the correlation between students' OLR and learning achievement (LA). According to the OLR questionnaire administration to the students, the overall mean score of the students' readiness for the online learning was 3.65 meaning "Ready with improvement" as it was above Mo = 3.40. However, there were three important items were preferable for improvement, they were: the need of household distraction reduction, the need to increase students' comfort to involve themselves in multiple online discussion, and the need to improve students' ability to take notes during online discussion. Moreover, students stated that they met some factors that challenged their OLR such as experiencing unstable internet connection, teacher to be presence on screen, inconducive learning environment, and inability to be multitasker. In addition, this study revealed that students OLR had very strong correlation with students' LA which was proven by r=0.085 score with sig.=0.000. This study implies the

importance for academician to pay attention on students' OLR as it has possibility to affect students' LA. Furthermore, this study only focused only to limited variables and samples which opens possibility for future researcher to expand the study scope, samples, and setting as well as adding more variable to make the investigation more comprehensive.

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