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The Effect of Changes of Learning Systems on Learning Outcomes in COVID-19 Pandemic Conditions

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Abstract

This study aims to determine the effect of changes in learning systems and its effects on students' learning outcomes amid the Covid-19 pandemic. The sample of this study are the students who are in Jakarta, Indonesia. "Non-probability random sampling" technique has been used to select the samples while the sampling method used is "purposive sampling", where criteria are used to select samples. The samples in this study are 200 people taken randomly using Google Form. Concentration ability and learning interest can affect learning outcomes with the mediation of learning comfort and a good learning environment. As well as physical distancing can moderate the effect of concentration ability and learning interest on learning outcomes. The ability to concentrate on improving learning outcomes requires psychomotor improvement. Whereas interest in learning with indicators of learning awareness can improve learning outcomes. A clean environment is a strength in the learning comfort and the community environment can be recommended in the learning environment. The implementation of the restriction of gathering becomes an important point of physical distancing. The other novelties are the learning comfort and the learning environment as mediating variables and physical distancing as moderating variables in one study at a time.

Keywords: Concentration Ability, Learning Interest, Learning Comfort, Learning Environment, Physical Distancing

JEL Classification Code: H20, O30, Y10

1. Introduction

Recently, the world has seen a great upheaval with the outbreak of the coronavirus. The existence of the coronavirus, called Covid-19, is worrying because it is a new type of coronavirus that has never been identified in humans. This virus originated in Wuhan, China and was discovered at the end of December 2019. Since it was reported by the WHO (World Health Organization) on December 31, 2019, the number of coronavirus cases in the world has continued to increase rapidly. Nowadays, more than 200 countries, or 201 countries, to be exact, have confirmed contracting the coronavirus or Covid-19. Reporting from *Worldometer*, the

number of coronavirus cases worldwide has reached 854,608 cases at the time of the writing of this paper. Of these, recovered patients were 176,908 people while those who died were 42,043 people. In Indonesia, the number of positive patients infected with the coronavirus (Covid-19) until 2 April 2020 reached 1,790 cases. Of these, the death patients reached 170 people, out of which 112 people recovered from the infection. A day earlier, the number of coronavirus positive patients reached 1,677 cases. Of that number, the patients who died reached 157 people, with the patients who recovered were 103 in number. DKI Jakarta and West Java are the two provinces that have the highest number of Covid-19 cases. For now, the treatment that can be given by the medical authorities to the patients are the medical treatment by applying the isolation system. Governments around the world are trying to respond by providing strict regulations to suppress the spread of the virus, such as suggesting activities from home (work, study, worship) as well as implement physical or social distancing policies (Patma et.al., 2020).

Besides the isolation system, the quarantine system and lock-down system are implemented in various cities or regions in Indonesia. To break the chain of spread of the

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virus, the government can only encourage and implement several systems. One of the systems is studying at home. Studying at home greatly impacts students, especially university students. Data from the Singapore University of Technology and Design (SUTD) reveals the final prediction of the Corona outbreak in several countries. Indonesia was previously predicted to finish on June 6 according to SUTD data published on Saturday (4/25/2020). However, now there is a change in the updated predictions on SUTD on Sunday (05/03/2020). The Corona outbreak in Indonesia, which was previously predicted to finish on June 6, has now shifted to 23 September 2020. Based on the final setback of the corona outbreak prediction, it is expected that all Indonesian citizens will assist and implement government policies. The policies are expected to be applied in sectors such as economic and industry especially in education. Sector of education has run or changed the learning system by not giving a lot of tasks to students and does not make a burden. Unlike universities that implement online lecture systems.

Online lectures are a lecture system that is carried out online or held off-campus using several educational applications. The application still has some drawbacks, but online lectures can run smoothly and the teaching and learning process between lecturers and students becomes more effective. The online learning system has positive and negative impacts for both lecturers and students. The positive impact of the online system are: 1. Lecturers and Students become more proficient in using online applications, 2. Lecturers and Students won't be bored when teaching and learning activities run, 3. Teaching and learning activities seem more exciting and relaxed because it can be held wherever we are. The negative impacts are: 1. Direct communication between lecturers and students or students and students becomes impeded, 2. It requires a strong internet network, 3. A laptop or cellphone can run into technical issues at times.

Based on the research of Phaherdiono et al. (2020), researchers only discuss the implementation of learning in the era and post Covid-19. Besides, research by Darmalaksana (2020) only focused on monitoring the use of WhatsApp in mobile lectures. Besides, previous research on the effect of concentration ability and learning interest on learning outcomes with the comfort of learning and the learning environment as mediation variables and physical distancing as a moderating effect has also not been found, so this is the research gap of this study.

The value of this research is to analyze the effect of the relationship between concentration ability and interest in learning with the mediation of learning comfort and the learning environment and moderation of physical distancing which can affect learning outcomes among students. Other novelties of this study are the comfort of learning and the

learning environment as mediation and physical distancing as moderation variables in one study at a time. Furthermore, the effect of online learning on student achievement during this pandemic has not yet been studied. This is a consideration for teachers to improve a number of things in the online teaching and learning process. Great teachers help create great students. In fact, research shows that inspiring teachers are those who can provide a suitable environment for students to learn. If students becomes efficient by learning, they can ensure that they are able to have success in every walk of their life (Parveen et al., 2014).

2. Literature Review

Concentration Ability

Concentration is the ability to focus mind on one thing by putting aside other things that are not related. Students who concentrate on learning can be observed from their behaviors during the teaching and learning process (Slameto, 2010). In another opinion, concentration is the ability to focus fully on the problem at hand. Concentration allows individuals to avoid distracting thoughts when trying to solve the problem at hand. In fact, there are many individuals who are unable to concentrate when faced with pressure. Their attention is even fragmented in various streams of thought which actually makes the problem become increasingly blurred and un-directed (Siswanto, 2007). According to Elfiky (2013), concentration is focusing on an object where we can align the power of the heart and mind. In learning, concentration is needed. Without concentration, the act of learning can be futile and outcomes are disappointing. The inability of a person to concentrate on learning is caused by the dispersion of attention to an object. This is what is not desired by anyone who is studying. Learning concentration is the ability to focus attention on the lesson, concentration is focused on the content of learning materials and it's the process of absorbing it in order to learn it. Engkoswara explains the classification of learning behavior that can be used to determine the characteristics of students who can concentrate are: Cognitive behavior, Effective Behavior, and Psycho-motor Behavior.

Learning Interest

The role of learning is to transfer organized patterns of thought or behavior (schema) developed in working memory (short term) for long-term memory so that learners become accustomed to finding solutions to similar problems (Abeysekera & Jebeile, 2019). In language, interest means a high tendency towards something (Depdikbud, 1990). Interest is a characteristic that is relatively fixed in a person. Interest has an enormous influence on one's activities, because a person indulges in an activity which interests him

or her. Conversely, without interest, a person may not do something. While the notion of interest in terms has been widely expressed by experts, including Hilgard (1991) quoted by Slameto stated that “Interest is persisting tendency to pay attention to end enjoying some activity and content”. Based on these definitions, it can be concluded that interest in learning will arise if what is being learnt is interesting and the learner feels involved in it, also the learning activity also arise a feeling of happiness while actively pursuing it. This feeling of happiness arises from the environment or comes from interesting objects. From some of the definitions of learning that have been advanced by these experts, it can be concluded that learning is a change in individual behavior from the results of experience and practice. Changes in behavior, both in aspects of knowledge (cognitive), skills (psychomotor), and attitude (effective). Meanwhile, from the definition of interest and learning as described above, it can be concluded that the interest in learning something is the desire or the will to learn it and that is accompanied by attention and activity towards pursuing it, which in turn leads to happiness and a changed behavior, both in the form of knowledge, attitudes, and skills.

Learning Comfort

Comfort comes from the word “safe” which means no danger. While comfort is where a person has a good feeling, relaxed, and calm. According to Gandur, et. al. (2014), the comfort of learning is the expression of a calm atmosphere or feeling that can awaken the existing potential in the self while doing. Comfort means a person has a good feeling, relaxed, and calm. According to Gandur et al. (2014), the comfort of learning is the expression of a calm atmosphere or feeling that can awaken the existing self-potential while learning activities. If the comfort of learning can be created then the transferring knowledge will run optimally, the students will easily absorb and receive the knowledge, and it will be carried out in daily activities. According to Widodo (2016), there are 3 measures that can describe the comfort of learning: Cleanness of Environment, Learning facilities, and Lighting.

Learning Environment

Learning environment according to Dewantoro (2008), learning environment consists of family environment, school environment, and community environment. These three environments are three-centers that affect humans in various ways. Slameto (2012) said that in the learning process, the learning environment is a learning resource that influences students’ motivation in the learning process. As with learning facilities, the learning environment is also a factor that cannot be ignored even if it seems trivial because it is part of humans, especially for students to live and interact with each other. A conducive learning environment, home and school, will create the calmness and comfort for students in learning so that students will easily understand and master the learning

material to the fullest. A good environment needs to endeavor so that it can give a positive impact on children or students so they can learn as much as possible. According to Slameto (2010), “Student Learning Environment that influences learning achievement consists of Family Environment, School Environment, and Community Environment”.

Physical Distancing

According to Smith and Freedman (2020), Physical Distancing is a policy designed to reduce interactions between people in a wider community, where there is a possibility that someone infected can transmit the virus to others without him being aware of it. Viruses that attack the respiratory system such as Covid-19 are transmitted through droplets that require a close range to transmit them to others. The application of Physical Distancing is very useful to reduce this transmission. Physical Distancing is one way to break the chain of the spreading of Covid-19. This aims to minimize physical contact between humans thereby reducing the possibility of virus transmission. The application of Physical Distancing as per Public Health England (2020) can be done by putting restriction on direct physical contact, and restrictions in using public transportation, Work from home, Restriction on gathering, and Use of media for meetings.

Learning Outcomes

Learning outcomes are changes in behavior in a person that can be observed and measured in the form of knowledge, attitudes, and skills. These changes can be interpreted as an increase and development that is comparatively better than before (Hamalik, 2007). Learning outcomes can be interpreted as the maximum results achieved by a student after experiencing the learning process in learning a certain subject. Learning outcomes are not absolutely in grades, but it can be changes, reasoning, discipline, skills, and so on that leads to a positive change. According to Hamalik (2007), learning outcomes cover three domains, there are Cognitive Domain, Effective Domain, and Psychomotor Domain.

3. Methodology

Research is a planned and systematic process to solve a particular problem or answer a series of research questions. Based on the purposes of this study, there are two types of research, namely explanatory research and causality research. Explanatory research aims to explain the position of the variables and the relationship and influence between one variable with another variable (Sugiyono, 2002). Causality research analyzes the presence or absence of relationships, forms of relationships, and provides causal explanations of the variables. Quantitative data analysis was performed using Structural Equation Modeling (SEM) to answer the research hypotheses (see Figure 1).

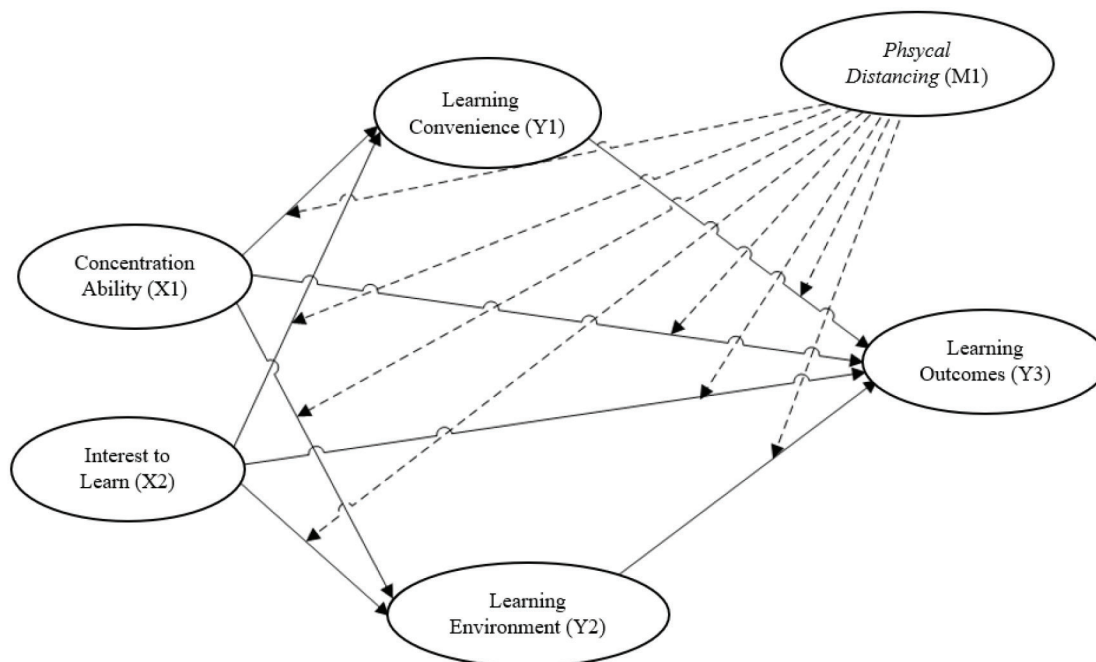


Figure 1: Conceptual Model

The population of this research is Jakarta students. “Non-probability random sampling” is the approach used to select samples while the sampling method is “purposive sampling”, where criteria are used to select samples (Solimun et al., 2017). The sample is 200 people taken randomly using Google Form. This sample was taken in May 2020. The criteria for this sample are students in Jakarta and those who have applied for online learning courses.

In this study, the concentration ability was measured based on three indicators namely cognitive behavior, effective behavior, psychomotor behavior; indicators of learning interest were feelings of happiness, attention, learning activities, and learning awareness; indicators of learning comfort were cleanliness, learning facilities, and lighting; indicators of learning environment were family environment, school environment, and community environment; indicators of learning outcomes were cognitive, effective, and psychomotor; indicators of physical distancing were restriction of direct contact, restriction in using public transportation, work from home, restriction of gathering, and the use of media for meetings. The analysis instrument is WarpPLS which involves structural models and moderation variables (Solimun et al., 2017).

Research hypothesis:

H1: Concentration Ability has a significant effect on Learning Comfort.

H2: Learning Interest has a significant effect on Learning Comfort.

H3: Concentration Ability has a significant effect on the Learning Environment.

H4: Learning Interest has a significant effect on the Learning Environment.

H5: Concentration Ability has a significant effect on Learning Outcomes.

H6: Learning Interest has a significant effect on Learning Outcomes.

H7: Learning Comfort has a significant effect on Learning Outcomes.

H8: Learning Environment has a significant effect on Learning Outcomes.

H9: Physical Distancing as a moderation between Concentration Ability to Learning Comfort

H10: Physical Distancing as a moderation between Learning Interest to Learning Comfort.

H11: Physical Distancing as moderation between Concentration Ability to Learning Environment.

H12: Physical Distancing as moderation between Learning Interest to Learning Environment.

H13: Physical Distancing as moderation between Concentration Ability to Learning Outcomes.

H14: Physical Distancing as a moderation between Learning Interest to Learning Outcomes.

H15: Physical Distancing as a moderation between Learning Comfort to Learning Outcomes.

H16: Physical Distancing as moderation between Learning Environment and Learning Outcomes.

4. Result and Discussion

4.1. Measurement Model (Outer Model)

The measurement model, weight of measurement, and *p*-value of each indicator in each variable can be seen in Table 1 as follows.

Based on Table 1, it can be concluded that all latent variables have good and adequate indicators. To complete the research, study was done to find out the most dominant indicators in contributing to latent constructs. In the Concentration Ability (X1), the measurement model is reflective. The best indicator in forming the Concentration Ability (X1) is Psychomotor Behavior (X1.3), which has the biggest loading factor with a weight value of 0.662 and *p*-value < 0.001. Thus, Psychomotor Behavior (X1.3) is the most powerful and dominant indicator in determining the level of Concentration Ability (X1).

The Learning Interest (X2) measurement model is reflective. In this variable, Learning Awareness (X2.4) is the most powerful and dominant indicator in forming Learning Interest (X2) with a weight value of 0.762 and *p*-value

< 0.001. Thus, the indicator of Learning Awareness (X2.4) is the most powerful and dominant in determining the level of Learning Interest (X2). Furthermore, the measurement model of Physical Distancing (M1) is reflective. The Restriction of Gathering (M1.4) is the most powerful and dominant indicator of Physical Distancing (M1) with a weight value of 0.713 and *p*-value < 0.001, which means significant. Thus, Restriction of Gathering (M1.4) is the most powerful and dominant indicator in determining the level of Physical Distancing (M1).

In addition, the most powerful indicator of Learning Comfort (Y1) is Cleanness (Y1.1) with a weight value of 0.665 and *p*-value < 0.001, which indicates that Cleanness (Y1.1) is the most dominant indicator to determine the level of Learning Comfort (Y1). Whereas Learning Environment (Y2) also uses the reflective measurement model. The most dominant indicator in determining the level of Learning Environment (Y2) is the Community Environment (Y2.3) because it has the highest loading factor value of 0.584 with a *p*-value of 0.003. Learning Outcomes (Y3) has the most powerful and dominant indicator namely Psychomotor Behavior (Y3.3), which has a weight value of 0.703 and *p*-value < 0.001.

Table 1: Evaluation of Measurement Models

Variable	Indicators	Measurement Model	Weight	P-value
Concentration Ability (X1)	Cognitive Behavior (X1.1)	Reflective	0,521	0,003
	Effective Behavior (X1.2)	Reflective	0,420	0,025
	Psychomotor Behavior (X1.3)	Reflective	0,662	<0,001
Learning Interest (X2)	Feeling of Happiness (X2.1)	Reflective	0,645	0,001
	Attention (X2.2)	Reflective	0,557	0,002
	Learning Activities (X2.3)	Reflective	0,526	0,001
	Learning Awareness (X2.4)	Reflective	0,762	<0,001
Physical Distancing (M1)	Restriction of Direct Contact (M1.1)	Reflective	0,457	0,019
	Restriction in Using Public Transportation (M1.2)	Reflective	0,547	0,001
	Work from Home (M1.3)	Reflective	0,654	0,001
	Restriction of Gathering (M1.4)	Reflective	0,713	<0,001
	Use of Media for Meetings (M1.5)	Reflective	0,553	0,004
Learning Comfort (Y1)	Cleanness (Y1.1)	Reflective	0,665	<0,001
	Learning Facilities (Y1.2)	Reflective	0,643	0,001
	Lighting (Y1.3)	Reflective	0,408	0,010
Learning Environment (Y2)	Family Environment (Y2.1)	Reflective	0,430	0,005
	School Environment (Y2.2)	Reflective	0,503	0,006
	Community Environment (Y2.3)	Reflective	0,584	0,003
Learning Outcomes (Y3)	Cognitive (Y3.1)	Reflective	0,475	0,004
	Effective (Y3.2)	Reflective	0,627	0,001
	Psychomotor Behavior (Y3.3)	Reflective	0,703	<0,001

4.2. SEM Analysis

The structural model is divided into three results, namely (1) Estimated results and direct testing, (2) Estimated indirect results and effects, (3) Estimated results and moderating effects.

Based on Table 2, the results of the hypothesis testing with direct effects are Accept H1, H2, H3, H4, H7, and H8. Then Reject H5 and H6.

Based on Table 3, Concentration Ability (X1) has a significant positive effect on Learning Outcomes (Y3) with the mediation of Learning Comfort (Y1). It means that the Student's Learning Environment (Y2) is able to mediate the Concentration Ability (X1) and Learning Outcomes (Y3) of 0.138 with a p -value < 0.001 . In addition, Learning Comfort (Y1) becomes a positive significant mediation in the relationship of Learning Interest (X2) and Learning Outcomes (Y3) with a coefficient of 0.149 and p -value < 0.001 . Thus, by increasing the Concentration Ability (X1) and Learning Interest (X2) followed by the improvement in Learning Comfort (Y1), it will further improve Learning Outcomes (Y3). Based on these results, it can be concluded that the students' concentration ability and learning interest cannot directly affect learning outcomes but the significant effect can be seen when there is a mediation of learning comfort to affect learning outcomes.

There are other mediation variables in this study, namely Learning Environment (Y2). This variable has the

potential to be a significant positive mediation variable in the relationship of Concentration Ability (X1) to Learning Outcomes (Y3) and Learning Interest (X2) to Learning Outcomes (Y3), where each gives a coefficient value of 0.195 and 0.050 with p -values of < 0.001 . Thus, increasing the Concentration Ability (X1) and Learning Interest (X2) followed by an improvement in the Learning Environment (Y2) will further improve Learning Outcomes (Y3). Based on this explanation, learning environment is a mediation for students' learning concentration and learning interest during the Covid-19 pandemic to affect students' learning outcomes in Jakarta.

From the results of SEM analysis indicated that H9, H10, H11, are H12 are rejected. It means that the moderation effect on every model can affect significantly. Then H13, H14, H15, and H16 are accepted since p -value are < 0.05 . It means that the moderation variable in every model can affect significantly.

4.3. The Result of Importance Performance Analysis (IPA)

IPA shows the position of each item of the research variables in the concept of priority. IPA is measured using factor loadings as the importance level and the average empirical score as the perceived level of performance. The results of the IPA are presented in a Cartesians diagram with the following explanation.

Table 2: Structural Model of SEM Result: Direct Effects

Relationship Between Variables	Coeff.	P-value	Conclusion
H1: Concentration Ability (X1) → Learning Comfort (Y1)	0,277	<0,001	Significant
H2: Learning Interest (X2) → Learning Comfort (Y1)	0,300	<0,001	Significant
H3: Concentration Ability (X1) → Learning Environment (Y2)	0,393	<0,001	Significant
H4: Learning Interest (X2) → Learning Environment (Y2)	0,254	0,001	Significant
H5: Concentration Ability (X1) → Learning Outcomes (Y3)	0,117	0,143	Not Significant
H6: Learning Interest (X2) → Learning Outcomes (Y3)	0,085	0,261	Not Significant
H7: Learning Comfort (Y1) → Learning Outcomes (Y3)	0,497	<0,001	Significant
H8: Learning Comfort (Y2) → Learning Outcomes (Y3)	0,496	<0,001	Significant

Table 3: Structural Model of SEM Result: Indirect Effects

Relationship Between Variables			Coefficient	P-value	Conclusion
Independent Variable	Mediation Variable	Dependent Variable			
Concentration Ability (X1)	Learning Comfort (Y1)	Learning Outcomes (Y3)	0,138	<0.001	Significant
Learning Interest (X2)	Learning Comfort (Y1)	Learning Outcomes (Y3)	0,149	<0.001	Significant
Concentration Ability (X1)	Learning Environment (Y2)	Learning Outcomes (Y3)	0,195	<0.001	Significant
Learning Interest (X2)	Learning Environment (Y2)	Learning Outcomes (Y3)	0,050	<0.001	Significant

Table 4: Structural Model of SEM Result: Effect of Moderation

Relationship Between Variables	Coefficient	P-value	Conclusion
H9: X1*M→ Learning Comfort (Y1)	0,126	0,105	Not Significant
H10: X2*M→ Learning Comfort (Y1)	0,072	0,333	Not Significant
H11: X1*M→ Learning Environment (Y2)	0,104	0,184	Not Significant
H12: X2*M→ Learning Environment (Y2)	0,052	0,474	Not Significant
H13: X1*M→ Learning Outcomes (Y3)	0,160	0,038	Significant
H14: X2*M→ Learning Outcomes (Y3)	0,198	0,006	Significant
H15: Y1*M→ Learning Outcomes (Y3)	0,188	0,013	Significant
H16: Y2*M→ Learning Outcomes (Y3)	0,255	<0.001	Significant

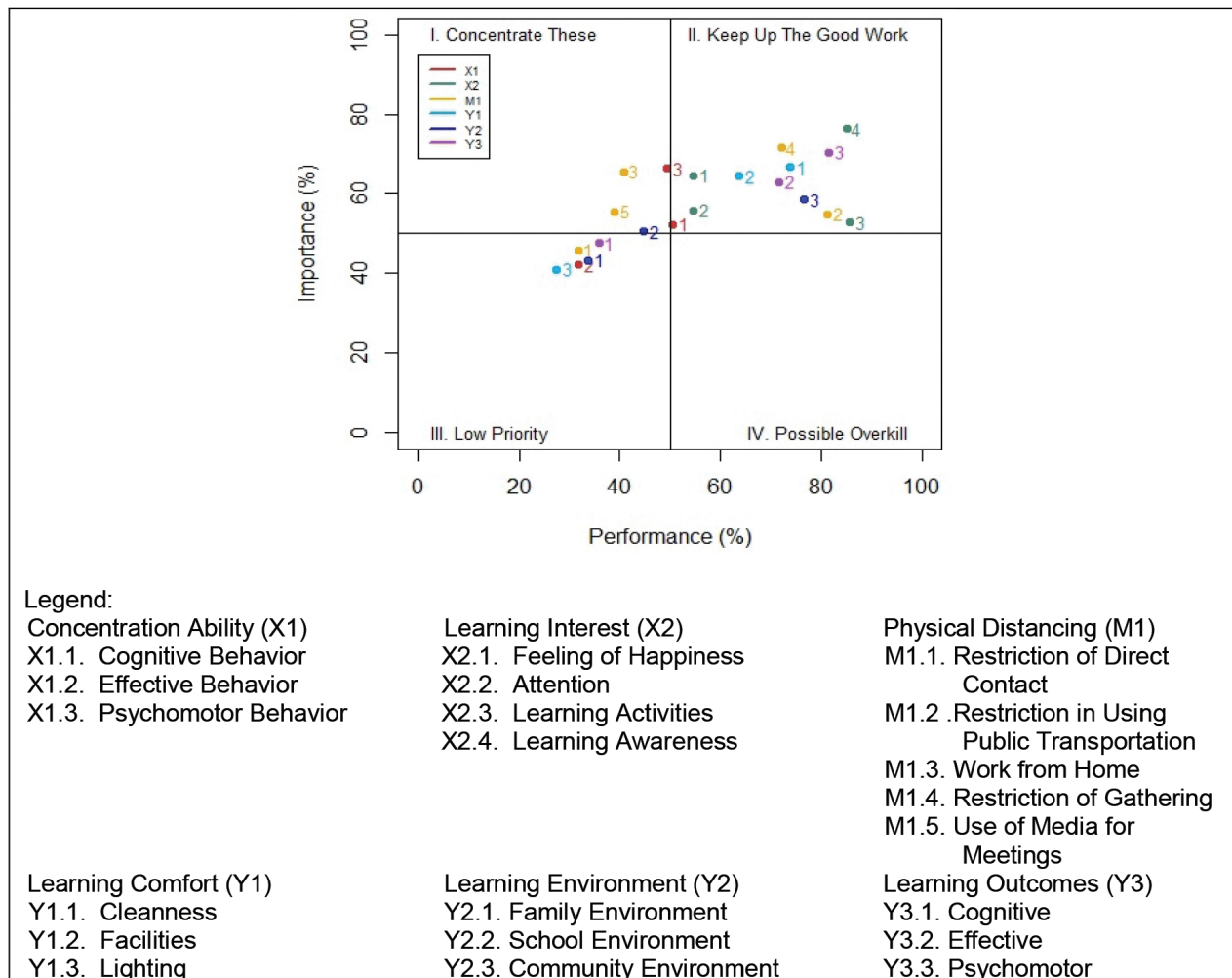


Figure 2: IPA of All Variables

Based on Figure 2, Cognitive Behavior (X1.1) and Psychomotor Behavior (X1.3), which are in Quadrant I and Quadrant II, show that these indicators are important indicators for concentration ability. Psychomotor Behavior (X1.3) is more recommended than Cognitive Behavior (X1.1), while Effective Behavior (X1.2), which is in quadrant III, is an indicator that is not recommended for use.

Based on Figure 2, all indicators are in quadrant II, including the feeling of happiness (X2.1), attention (X2.2), learning activities (X2.3), and learning awareness (X2.4). The indicator of learning awareness (X2.4) is an indicator that is superior to other indicators so the indicator (X2.4) is more highly recommended for use.

Referring to Figure 2, it is seen that the restriction in using public transportation (M1.2) and the restriction of gathering (M1.4) are in quadrant II. It shows that these indicators are very important but the restriction of gathering is strongly recommended for use in Physical Distancing. Work from home (M1.3) and the use of media for meetings (M1.5) in quadrant I are important indicators for use while the restriction of direct contact (M1.1) is an indicator that is not used because it is in quadrant III.

Based on Figure 2, cleanness (Y1.1) and facilities (Y1.2) are very important indicators because they are in quadrant II. Of the two indicators, cleanness is more recommended for environmental comfort while lighting (Y1.3) is an indicator that is not highly recommended because it is in quadrant III.

Based on Figure 2, the family environment (Y2.1) is an indicator that is not highly recommended because it is in quadrant III. Quadrant I is the location of an important indicator namely the school environment (Y2.2) while quadrant II is the location of the recommended indicators for the learning environment namely the community environment (Y2.3).

Based on Figure 2, Cognitive (Y3.1) is not recommended indicator for learning outcomes because it is in quadrant III while Effective (Y3.2) and Psychomotor (Y3.3) are important indicators for learning outcomes. From the two indicators, there are indicators that are highly recommended, namely psychomotor.

4.4. Discussion

Students who are in DKI Jakarta are getting uneasy in their activities considering the increasing number of positive Covid-19 patients in Indonesia. Besides, DKI Jakarta has been stated as the epicenter city of the spread of Covid-19 in Indonesia. Given these conditions, the concentration ability of students in learning needs to be studied. The existence of Concentration Ability allows individuals to solve problems without interference of anxiety due to Covid-19. Based on Table 2, it is known that the increasing Concentration Ability will affect the improvement of Learning Comfort and

Learning Environment for DKI Jakarta students during the Covid-19 pandemic. In learning, concentration is needed in order to get comfortable learning. The inability of a person to concentrate on learning is caused by the loss of attention on the contents of the learning material and the process of obtaining it. Thus, if the learning comfort can already be created then the transfer of knowledge will be able to run optimally, the knowledge will be easily absorbed and will be implemented in daily activities during the Covid-19 pandemic. Psychomotor and Cognitive Behavior are important dominant aspects in strengthening DKI Jakarta Student Concentration Ability. Also, Cleanness and Facilities are important aspects in strengthening Learning Comfort. Meanwhile, the community environment is an important aspect of the learning environment.

The change in the learning system for students in DKI Jakarta is something that must be done due to the Covid-19 pandemic outbreak. Changes in the learning system will affect every individual, who has different learning interests. Based on Table 2, the increase in students' Learning Interest will affect both the Learning Comfort and the Learning Environment. In learning, a high learning interest is necessary to obtain a Learning Concentration to comprehend and better understand the learning material. If they do not have high learning interests, then the students will find it difficult to understand the contents of the material. During the Covid-19 pandemic, it is hoped that DKI Jakarta students have a high interest in learning so as not to impede the learning processes. Learning awareness is a dominant indicator of learning interest.

After Learning Comfort is fulfilled and Learning Environment supports the learning during the Covid-19, there is no concern for DKI Jakarta students. Based on Table 2, increase in the learning comfort of the students which is supported by a comfortable Learning Environment, will lead to improvement in the outcomes of the Learning Outcomes of DKI Jakarta students. In a learning process, Learning Comfort and Learning Environment are very necessary to help the learning process. The learning discomfort and a less conducive learning environment will result in decreased learning outcomes for DKI Jakarta students during the Covid-19 pandemic. Thus, it is highly expected that students will obtain Learning Comfort which is supported by the Learning Environment during the learning process to improve Good Learning Outcomes. Learning Outcomes is supported by the psychomotor factor, which is the most dominant indicator.

During the Covid-19 outbreak, which is an obstacle for DKI Jakarta students in conducting the learning system, a mediator is necessary to increase students' Concentration Ability and Learning Interest. Concentration Ability and Learning Interest aim to improve students' learning

outcomes during the Covid-19 pandemic. Based on Table 3, Learning Comfort and Learning Environment can be a mediator to improve Learning Outcomes. A higher Learning Comfort and Learning Environment will improve Learning Outcomes. These effects also apply to the Learning Interest and Learning Environment, which can affect Learning Outcomes. The inconvenience of Learning Comfort which is not supported by a good Learning Environment will lead to decline in students' learning outcomes of DKI Jakarta. From the explanation above, it can be concluded that it is expected that for students to improve learning outcomes, which are influenced by the concentration ability and learning interest, it is a must to improve the learning comfort of students with a proper learning environment amid the Covid-19 outbreak.

The implementation of physical distancing is the right decision to break the chain of the Covid-19 outbreak. However, it is an obstacle for DKI Jakarta students to do the learning process. The Restriction of Gathering is the dominant indicator of physical distancing. Based on Table 4, physical distancing can be a moderating variable to improve Learning Outcomes amid the Covid-19 pandemic. By restricting gathering with the implementation of Physical Distancing, it will increase the Concentration Ability, Learning Interest, Learning Comfort, and Learning Environment, which will increase the Learning Outcomes of DKI Jakarta students during the Covid-19 pandemic. The selfishness of someone who violates the policy of Physical Distancing causes discomfort in the learning process, and the bad thing that can happen is that they can transmit the Covid-19. It is expected that all students adhere to Physical Distancing in the learning process.

5. Conclusion and Suggestion

Based on the results of the analysis, the following conclusions can be drawn:

1. The concentration ability (X1) can form a relative model consisting of cognitive behavior (X1.1), effective behavior (X1.2), and psychomotor behavior (X1.3). Psychomotor behavior is the most powerful and dominant indicators. The concentration ability (X1) directly affects the learning comfort (Y1) and learning environment (Y2). However, it does not directly affect learning outcomes (Y3). The concentration ability can affect learning outcomes through mediating variables of learning comfort and learning environment and can affect through the moderating effect of physical distancing (M1). Concentration ability does not affect the learning comfort and learning environment through the moderating effect.
2. Learning interest (X2) consists of indicators of feeling of happiness (X2.1), attention (X2.2), learning activities

(X2.3), and learning awareness (X2.4). Learning awareness is the strongest and more dominant indicator. Learning interest (X2) can directly affect learning comfort (Y1) and learning environment (Y2) as well as affect the learning outcomes (Y3) through the mediation of learning comfort and learning environments. But it cannot directly affect the learning interest on learning outcomes. The moderation effect of physical distancing (M1) can affect learning interest on learning outcomes. The moderation effect cannot affect learning interest on the comfort of learning and the learning environment.

3. Cleanliness (Y1.1) is the best indicator and is more dominant than facilities (Y1.2) and lighting (Y1.3). These indicators are indicators of learning comfort (Y1).
4. Learning environment (Y2) can be reflected by indicators of family environment (Y2.1), community environment (Y2.2), and community environment (Y2.3). The strongest and most dominant indicator is the community environment (Y2.3).
5. Learning outcomes (Y3) is directly affected by learning comfort (Y1) and learning environment (Y2).

Meanwhile, they can also affect learning outcomes that have the moderation effect of physical distancing (M1).

Suggestions for this research are as follows:

1. To improve learning outcomes, we must improve the concentration ability with psychomotor behavior.
2. The increase in the learning interest through high learning awareness will increase learning outcomes.
3. Learning outcomes can be influenced by learning comfort by improving cleanliness.
4. The community environment is an indicator that can improve learning outcomes that are influenced by the learning environment.
5. The moderation effect of physical distancing can moderate the effect of concentration ability, learning interest, learning comfort, and learning environment on learning outcomes.

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