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THE PREFERENCES OF FIRST-YEAR STUDENTS ON THE LEARNING PROCESS DURING THE COVID-19 PANDEMIC

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ABSTRACT:

The COVID-19 pandemic had a serious impact on the socio-economic aspects of society, including the educational aspect. All face-to-face learning activities are changed into online learning including all learning activities in the Department of Biology Education, Siliwangi University. Although having a lack of preparation and experience, online learning must still be carried out as an alternative learning activity during this COVID-19 pandemic. Therefore, this study was conducted to find out the impact of the COVID-19 pandemic and students' learning preferences from the Department of Biology Education during the COVID-19 pandemic. The applied data collection technique was the Analytic Hierarchy Process (AHP) using the Google Form program. Furthermore, the time to fill in the form was conducted from March 21 to April 15, 2020. The population of this study was first-year students of the Department of Biology Education who were enrolling in the Biophysics Course in which the total population was 107 people. Samples were selected by using the purposive sampling technique because the selected samples were not homogeneous based on a gender perspective. The number of samples was 10 respondents. The applied data analysis was the AHP in the form of the geometric mean (geomean) by utilizing the Super Decision program. Moreover, the applied data analysis for analyzing the relationship between criteria was Kendall's concordance. The results of the analysis indicated that the level of agreement of respondents is strong towards the relationship

between criteria. In addition, personal health was the most preferred preference criteria for being applied in the learning process in the middle of the COVID-19 pandemic both for the online learning process and for the offline learning process. Therefore, in determining the learning process policy, the researcher suggests prioritizing the health of students.

INTRODUCTION

At the end of December 2019, the World Health Organization (WHO) stated that the outbreak of a new type of virus had occurred in which the virus attacked the respiratory tract in Wuhan City, Hubei Province, China (Lu et al., 2020). The virus was identified as the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) which causes Coronavirus Disease-19 (COVID-19) (World Health Organization, 2020b). The virus is then spreading widely to various countries so that it was declared as a global pandemic on March 11, 2020 (World Health Organization, 2020a). The rapid spread caused COVID-19 positive cases to continue to increase in many countries. As of June 2020, there were 213 affected countries with a total of cases reaching more than ten million (Worldometer, 2020). The widespread distribution also impacts Indonesia. On March 2, 2020, Indonesia's government reported the first 2 positive cases of the COVID-19 in Indonesia (the Ministry of Health of the Republic of Indonesia, 2020). As of May, there were more than 30,000 cases of the COVID-19 in Indonesia (the Task Force for the Acceleration of Handling COVID-19, 2020). The rapid spread caused many countries to implement various policies to cope with the COVID-19 spread including implementing lockdown. Indonesia also took a similar step after the positive cases in Indonesia continued to increase, namely by lockdown which is better known as the Regional Quarantine Program (Ind. *Program Karantina Wilayah*) and the Large-Scale Social Restriction (Ind. *Pembatasan Sosial Berskala Besar* (PSBB)) (the Task Force for the Acceleration of Handling COVID-19, 2020) to minimize the COVID -19 spread.

The lockdown policy has a positive impact on reducing and preventing the COVID-19 spread (Sohrabi et al., 2020). Some countries that have implemented lockdown policies such as China, Italy, the United Kingdom, and Iran have experienced a positive decrease in COVID-19 cases every day (Worldometer, 2020). However, some countries fail to implement lockdown policies including India, the United States, and Brazil (Worldometer, 2020). In addition to having a positive impact on reducing the COVID-19 spread, the lockdown policy also led to very significant changes in the socio-economic aspects of society (Nicola et al., 2020). This condition is marked by an increase in the number of termination of employment (layoffs) thereby increasing unemployment rates (Burrow & Hill, 2020), instability of food stock, and the temporary dismissal of almost all public services (Nicola et al., 2020) including activities in schools and higher education (Iyengar & Shin, 2020). Therefore, learning activities in schools have been temporarily suspended in almost all affected countries. This condition caused all affected countries including Indonesia to change the face-to-face learning process system into an online learning process system. This causes teachers, educational institutions, and related government institutions must do several things to be able to support the policy including (i) preparing the system, (ii) considering students' needs at different levels and stages, (iii) reassuring students and parents, and (iv) implementing simple approaches for the remote learning system (Daniel, 2020). Online learning policy is a step that must be

taken by the Indonesian education sector as a form of adaptation to the COVID-19 pandemic.

Basically, online learning has become a hot topic and received special attention from experts in the field of education and technology in Indonesia, especially for facing a disruptive era like at present (Javaid et al., 2020; Lee & Wie, 2015). However, its implementation is still considered difficult. It can be even said only in the form of a big draft for the world of education (Sung, Yao-Ting; Lee, Han-Yueh; Yang, Je-Ming; Chang, 2019) including in Indonesia. It is because various preparations (i.g. infrastructure, curriculum, assessment, and teachers' and students' readiness) still become a complicated problem and is difficult to be able to realize (Purwanto et al., 2020). Nevertheless, the Indonesian government keeps trying to develop an online learning system (Ramdani et al., 2018). The conditions of supporting aspects of online learning in Indonesia are still not evenly distributed in all areas such as electricity networks and internet connections. Especially, as an island nation with a large area, it makes Indonesia hampered in terms of electricity supply, internet connection, and the provision of computer or smartphone devices (Purwanto et al., 2020). In facing the COVID-19 pandemic, various shortcomings cannot postpone the implementation of online learning as an alternative learning process that must be carried out so that the learning process must keep continuing. Regardless of whether an educational institution is ready or not in implementing it, this will certainly have an impact on students' learning process (Kerres, 2020). The Indonesian government through the Ministry of Education and Culture has prepared alternative online learning as a solution to solve the problems that arise when the online learning system is implemented. The solutions provided by the Ministry of Education and Culture are utilizing national television broadcasts through government television stations namely TVRI (Senza Arsendy, George Adam Sukoco, 2020), encouraging teachers to make learning innovations such as using video conference applications to carry out the learning activities (Lipomi, 2020; Nguyen et al., 2020) and using online classroom management applications (Ng & Or, 2020). However, the provided solutions are getting a response that is not too positive from students and parents, such as complaints from students who do not fully understand the concepts taught and complaints from parents who must provide additional spending for internet access (Purwanto et al., 2020). Although various kinds of complaints and obstacles have been submitted to related parties, the online learning process still does not undergo much change and cannot be replaced, especially with the issuance of the government regulation regarding social distancing. The regulation makes activities in school not possible to be carried out (Djalante et al., 2020). As a result, the learning process is not optimal.

This condition also occurs at the tertiary level. Because of the COVID-19 pandemic, students are required to participate in the online learning process. It is no exception for students of the Department of Biology Education, Siliwangi University who were enrolling in the Biophysics Course. After social distancing rules were regulated, all learning and practicum processes are changed to an online system. By using a pre-research survey, the researcher collected and analyzed first-year students' points of view on the online learning process undertaken. Based on the results of the pre-research survey, it showed that students were dissatisfied with the learning process carried out. Their reason was that the learning process was less effective and they were difficult to access online learning. All of these caused the researcher to conduct a study on students' preferences in the learning process. As one way to see the learning criteria that are relevant for students, the results of this study are expected

to be taken into consideration for policyholders among university leaders to determine the learning method that is suitable and based on students' needs. Therefore, it can create an effective learning process and provide benefits to students.

METHOD

The data were collected in online using a questionnaire via Google form. This was carried out to see respondents' honesty and reduce their pressure. By using online questionnaires, it is expected that the obtained data can be based on actual respondents' preferences. It referred to the scientific argument that "people will admit more if they are alone than if others are in the same room with them" (Stephens-Davidowitz, 2017). The applied research method was mixed-method research (Gay, L. R., Mills, G. E., & Airasian, 2012). Data were collected online by distributing questionnaires to first-year students of the Department of Biology Education, Siliwangi University who were enrolling in the Biophysics Course from March 21 to April 15 (March 2020 is the first time that a social distancing program is being implemented in Indonesia). The population of this study was 107 people. Samples were selected by using the purposive sampling technique (Fraenkel, 2009) because the selected samples were not homogeneous based on a gender perspective and viewed from the range of responses provided by respondents. Therefore, in this study, 10 people were selected to be respondents who were considered to represent the research objectives which were expected to be analyzed further.

Furthermore, for the selection of criteria, it was determined based on the results of pre-research surveys concerning the learning process in the middle of the COVID-19 pandemic for students of Biology Education so that, in this study, the criteria came from prospective respondents. After determining and analyzing respondents' answers in the pre-research survey, then it was converted into the Analytic Hierarchy Process (AHP) questionnaire. To make the interpretation process easier and to see the relationship between the criteria, this can be seen in Figure 1 (hierarchical model on AHP). The reason for choosing the AHP method as one of the employed analysis in the Multi-Criteria Decision Making (MCDM) is because it has been familiar and is often used in assessing and determining policy for almost 30 years, especially in the field of public services (Barić et al., 2016; Bhushan & Rai, 2004; S.-L. Chen et al., 2016; Honert, 2001; Mardani, Jusoh, Zavadskas, et al., 2015). Apart from that, the AHP method also has the disadvantage, namely, it only focuses on the relationship between the assessed aspects and ignores aspects outside of it (Duleba, 2018) and have some improvement suggestions from several previous studies (Dyer, 1990; Pan et al., 2011; Pérez, 1995; Saaty, 2013).

The AHP questionnaire was compiled according to the form that was formulated by Saaty (1977) and used the scale of Saaty's Judgment (Table 1). To make it easier for respondents to fill in the AHP questionnaire, they were given instructions and tutorials on how to fill in the questionnaire because the employed questionnaire model was less familiar among students of Siliwangi University. It was carried out to prevent errors in filling out the questionnaire.

Table 1. Judgment Scale of Relative Importance (Saaty's 1–9 scale)

Numerical Values	Verbal Scale
1	Equal importance of both elements

3	Moderate importance of one element over another
5	Strong importance of one element over another
7	Very strong importance of one element over another
9	Extreme importance of one element over another
2,4,6,8	Intermediate values

Source: (Saaty, 1977)

The AHP analysis was conducted by utilizing the Super Decision program to get priority values on each criterion. After finding out the priority values, the next step was calculating the geometric mean value (geomean) (Xu, 2000) by using the Microsoft Excel program. The priority geometric mean value will be the final value analyzed by the Super Decision program to get the final decision. Furthermore, to see the relationship between the criteria, it used Kendall's Concordance test (Kendall's W) by utilizing the IBM SPSS v.23 program. The interpretation of Kendall's W coefficient value can be seen in Table 2.

Table 2. Kendall's W Agreement Degree Scale.

W	Interpretation
0	No agreement
0.10	Weak agreement
0.30	Moderate agreement
0.60	Strong agreement
1.00	Perfect agreement

Source: (Duleba & Moslem, 2018)

Results

The aspects that were observed in this study are described in Figure 1. By utilizing the Analytic Hierarchy Process diagram, it shows Level 1 is students of the Department of Biology Education in which the total population is 107 students. Furthermore, Level 2 indicates the learning methods preferred by those students. It is followed then by Level 3 that is characteristic preferences for those learning methods.

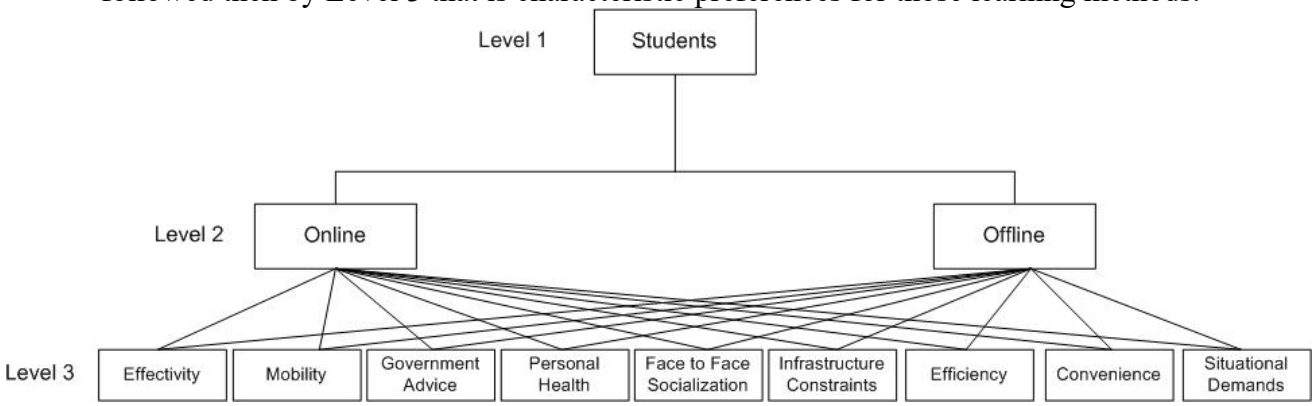

Figure 1. The Hierarchical Structure of Learning Preferences Criteria

The results of the AHP questionnaire were processed using the Super Decision program. The data recapitulation of the results of the questionnaire for the priority value on Level 2, i.e. learning methods, is presented in Table 1 (learning method preferences). The geometric mean value indicates that respondents are more likely to choose the offline learning process than the online learning process.

Table 1. Priority Table on Learning Method Preferences

	Resp 1	Resp 2	Resp 3	Resp 4	Resp 5	Resp 6	Resp 7	Resp 8	Resp 9	Resp 10	Geomean
Online	0.1000	0.1000	0.1000	0.1000	0.1667	0.2000	0.1429	0.8750	0.1667	0.1250	0.1560
Offlline	0.9000	0.9000	0.9000	0.9000	0.8333	0.8000	0.8571	0.1250	0.8333	0.8750	0.7130

The data recapitulation of the results of the questionnaire for the priority value on Level 3, i.e. learning preference criteria, is presented in Table 2 (online learning preferences) and Table 3 (offline learning preferences). In those two tables, it can be seen variations in respondents' preferences from the criteria observed to the type of the employed learning method.

Table 2. Criterion Priority Table for the Online Learning Preference

	Resp 1	Resp 2	Resp 3	Resp 4	Resp 5	Resp 6	Resp o7	Resp 8	Resp 9	Resp 10
Personal Health	0.2299	0.2784	0.1871	0.2293	0.1041	0.2094	0.3185	0.1963	0.3597	0.3720
Mobility	0.2102	0.1067	0.2143	0.1742	0.0792	0.1793	0.1081	0.1233	0.1419	0.1474
Government Advice	0.0359	0.2784	0.0700	0.1076	0.0748	0.1765	0.0758	0.1488	0.2129	0.1441
Effectiveness	0.1964	0.1662	0.1182	0.0941	0.0579	0.1696	0.1353	0.1377	0.0599	0.0846
Convenience	0.0874	0.0685	0.1485	0.0591	0.1782	0.0858	0.1032	0.0588	0.0582	0.0408
Efficiency	0.1551	0.0116	0.0700	0.1025	0.1095	0.0776	0.0312	0.1352	0.0299	0.0350
Face-to-Face Socialization	0.0529	0.0181	0.1074	0.0898	0.2409	0.0191	0.0946	0.0742	0.0124	0.0275
Infrastructure Constraints	0.0210	0.0282	0.0597	0.0738	0.0642	0.0157	0.0917	0.0951	0.0689	0.0307
Situational Demands	0.0113	0.0440	0.0248	0.0698	0.0912	0.0671	0.0415	0.0306	0.0562	0.1224

Table 3. Criterion Priority Table for the Offline Learning Preference

	Resp 1	Resp 2	Resp 3	Resp 4	Resp 5	Resp 6	Resp o7	Resp 8	Resp 9	Resp 10
Personal Health	0.3837	0.2302	0.1992	0.2610	0.1554	0.1315	0.3098	0.1403	0.1632	0.1667
Mobility	0.2314	0.1558	0.0822	0.0878	0.1543	0.1566	0.1386	0.2185	0.0636	0.1965
Government Advice	0.0814	0.0418	0.1075	0.0967	0.1256	0.1468	0.1022	0.0472	0.2227	0.0756
Effectiveness	0.0588	0.0502	0.1275	0.1136	0.0710	0.1325	0.0694	0.1297	0.0636	0.1611
Convenience	0.1402	0.0270	0.1293	0.1108	0.0987	0.0440	0.0582	0.1127	0.1079	0.0852

Efficiency	0.0303	0.2893	0.0664	0.0863	0.0711	0.1489	0.0448	0.0993	0.0396	0.0820
Face to Face Socialization	0.0231	0.1322	0.0538	0.0331	0.0955	0.1566	0.0694	0.1248	0.0937	0.0915
Infrastructure Constraints	0.0149	0.0541	0.1070	0.0225	0.0855	0.0496	0.1124	0.0750	0.2389	0.0661
Situational Demands	0.0362	0.0195	0.1270	0.1882	0.1427	0.0334	0.0952	0.0563	0.0105	0.0754

To see the comparison between the criteria, it applied the geometric mean technique (Table 4). Based on the results of the geometric mean calculation on the priority value of those two criteria, it shows that the highest respondent preference criteria on both learning methods are personal health (for online and offline learning methods). By seeing from the variance of respondent preference between online and offline learning methods, the lowest respondent preference criteria on both learning methods are situational demands (for online learning method) and face-to-face socialization (for offline learning method). By seen from the ranking order of preference in online or offline learning methods, the values of those criteria vary greatly. It shows the difference in the respondents' point of view in assessing the preferences for both learning methods.

Table 4. The Priority Geometric Mean Value for Criterion Preferences

Online			Offline		
Ranking	Criteria	Geomean Value	Ranking	Criteria	Geomean Value
1	Personal Health	0.2344	1	Personal Health	0.2016
2	Mobility	0.1419	2	Convenience	0.1373
3	Government Advice	0.1131	3	Effectiveness	0.0938
4	Effectiveness	0.1129	4	Efficiency	0.0906
5	Convenience	0.0806	5	Mobility	0.0823
6	Efficiency	0.0587	6	Government Advice	0.0774
7	Face-to-Face Socialization	0.0502	7	Situational Demands	0.0755
8	Infrastructure Constraints	0.0466	8	Infrastructure Constraints	0.0637
9	Situational Demands	0.0463	9	Face-to-Face Socialization	0.0566

The results of the geometric mean value to analyze the level and strength of the relationship between the respondents' criteria using Kendall's concordance by

utilizing the SPSS program are presented in table 5. These results indicate that the respondents have a strong level of agreement on the given responses meaning that the answers are in line with the situation that is being felt in the learning process during the COVID-19 Pandemic.

Table 5. Kendall's Concordance Coefficient Value

Kendall's W[a]	0.833
Kendall's Coefficient of Concordance	

After finding out the level of relationship, to see how the comparison of preference criteria in the learning process during the COVID-19 pandemic, the geometric mean value was analyzed using the Super Decision program to see the final decision. The results of the analysis are shown in Figure 2. The results indicate that the criteria that need to be considered in carrying out the learning process in the middle of the COVID-19 pandemic outbreak are personal health and convenience. Both of these criteria are in the second-highest rank. Meanwhile, criteria of the face-to-face socialization and infrastructure constraints are not the criteria that are too highly regarded by respondents.

Name	Graphic	Ideals	Normals	Raw
1PersonalHealth		1.000000	0.235791	0.117896
2GovermentAdvice		0.403715	0.095192	0.047596
3Effectivity		0.468688	0.110513	0.055256
4Mobility		0.447964	0.105626	0.052813
5Convinience		0.612963	0.144531	0.072266
6SituationalDemands		0.338968	0.079926	0.039963
7InfrastructureContraints		0.292231	0.068906	0.034453
8FaceToFaceSocialization		0.267470	0.063067	0.031534
9Efficiency		0.409042	0.096448	0.048224

Figure 2. The Final Decision of the Criteria of Learning Method Preference during the COVID-19 Pandemic

To make it easier to describe the final decision results from the Super Decision program, Figure 2 is interpreted in Figure 3.

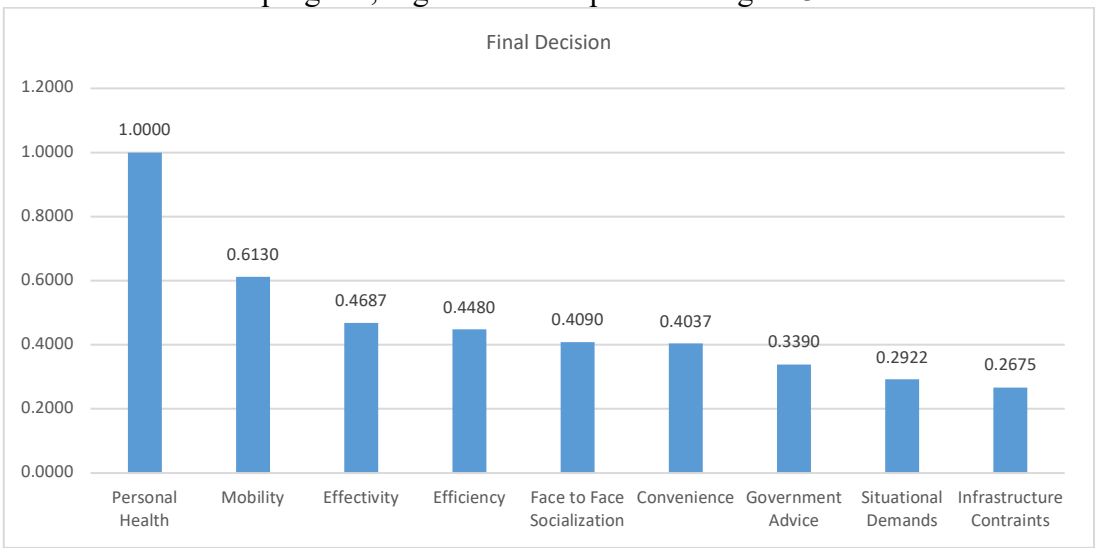

Figure 3. The Final Decision of the Criteria of Learning Method Preference during the COVID-19 Pandemic

Discussion

The number of samples involved in this study was only about 10% of the total population of respondents who had filled out the questionnaire. The samples were selected by considering that all respondents had a wise view of seeing a phenomenon (Solomon, 2006). The researcher also refers to several studies using the AHP method that had been carried out previously in which the number of selected samples was a small part of the population. Some of the studies are studies conducted by Duleba & Moslem (2018) with a sample size of only 0.05% of the total population, Duleba et al, (2012) with 47 samples of the total population in the city of Yurihonjo, Japan, and Duleba (2018) with 31 samples of the total population of all students of the public transportation users in Budapest University of Technology and Economics. Generally, the AHP method is one way of judgment and is used to minimize the respondents' inconsistencies when faced with a choice that cannot be measured accurately through just two choices between A or B (Saaty, 2003). By considering its usage, the AHP method has been used more by 32.57% of the number of articles related to the Multi-Criteria Decision-Making (MCDM) method that has been published (Mardani, Jusoh, Nor, et al., 2015). Therefore, the use of the AHP method in this study has been carefully considered by the researcher based on the data of the use of the AHP method in the studies previously mentioned.

As one of the Multi-Criteria Decision-Making (MCDM) methods, the AHP applies hierarchy to localize problems in separate groups and connect between components in the hierarchy (Saaty, 2003). Hierarchy is highly important to know and identify existing problems in an environment (Saaty, 1990). Therefore, a pre-research was carried out in advance to identify problems that exist among first-year students of Biology Education who were enrolling in the Biophysics Course at Siliwangi University concerning the learning process during the COVID-19 pandemic.

Table 1 shows that respondents tend to choose the learning process by using the offline method. This is due to some perceptions that exist in the mindset of students and parents who consider that the use of gadgets has more negative effects than positive effects (Amarulloh et al., 2020) and factors of behavior and honesty of students that are difficult to monitor during the online-based learning process (Muqarrobin & Kuswanto, 2016). Therefore, these two factors become obstacles in implementing the online-based learning process in Indonesia. Furthermore, infrastructure that has not been evenly distributed throughout the country is also a problem that has not yet been fully resolved. These factors may make offline learning more desirable than online learning.

The preference of selection for the online learning process in Table 4 shows that personal health becomes the main consideration of respondents in conducting the learning process in the middle of the COVID-19 pandemic. It is very clear that the COVID-19 has a high impact on health (Y.-H. Chen & Fang, 2020) with a very easy level of a spread between individuals through droplets, airborne, or surface objects (Brown et al., 2020; Goldschmidt, 2020) in which it makes learning process in the classroom impossible to be carried out (d'Orville, 2020). Although the online learning process can reduce the risk of the COVID-19 spread, it is also important to note that there will be a very drastic change from the offline learning process to the online learning process. It is because students' needs for always connected with the outside world are still a vital aspect (Center for Disease Control and Prevention [CDC],

2020a). Therefore, there must be the supervision of the level of stress faced by students (Center for Disease Control and Prevention [CDC], 2020b; Chew et al., 2020; Zhai & Du, 2020). Furthermore, students' spiritual needs must also be monitored by people around the students (Goldschmidt, 2020). Therefore, to minimize shortcomings in the offline learning process, respondents prefer to choose the online learning process. However, it must still pay attention to students' mental health by providing online counseling or giving advice to students to tell stories more often with their colleagues or counselors when dealing with stress in the online learning process.

Nevertheless, the choice for the online learning process still emerges some problems for students. Based on table 4, the criterion of infrastructure constraints becomes obstacles for students to participate in the online learning process. By considering the needs of students in participating in the online learning process, several aspects need to be prepared carefully such as hardware to access learning resources and internet connections (Arnove, 2020; Tezer & Çimşir, 2018). The main problem faced by first-year students of the Department of Biology Education is an internet data package which becomes a facility to access the internet. If viewed from the first aspect, based on observations during the learning process taking place before the COVID-19 pandemic occurred, almost 98% of first-year students already had smartphones and more than 50% had computers so that the first problem was not faced by respondents. It is a different thing with the second problem. Based on the results of the pre-research survey, it shows that the use of internet data for participating in the online learning process through teleconference with the Zoom or Google Meet program, for downloading the learning module, and for uploading the task spent a lot of internet data. Therefore, respondents complained about these. Some respondents complained that they spent money on purchasing internet data nearly doubled after the online learning system was implemented. In addition, the results of the pre-research survey also showed that the network constraints to accessing the internet became an obstacle to participate in the online learning process in their respective home areas. It is because (Sujarwoto & Tampubolon, 2016) the spread of the internet network in Indonesia is not yet stable in reaching all regions. Therefore, to decide for learning online, the criterion of infrastructure constraints must be highly considered by policyholders at the level of the Department of Biology Education or even at the level of Siliwangi University.

The impact of the COVID-19 pandemic also greatly affected the socio-economic structure of the global community. Since the outbreak occurred in China in December 2019, it has put the city of Wuhan in lockdown. This also happened in countries that have been exposed to the widespread distribution of the COVID-19. Some impacts of lockdown in the field of education are that face-to-face learning process is changed to online learning and distance learning (Favale et al., 2020), school closures occur in nearly 165 countries in the world (d'Orville, 2020), and a change occurs in the curriculum and the mechanism of student evaluation by the teacher (Arnove, 2020). In facing this pandemic, UNESCO launched the Global Education Coalition (UNESCO, 2020) to coordinate and to take innovative steps in finding solutions to support the learning process for teachers, students, and also the government. It is undeniable that digital-based learning is the best solution to facing the crisis in the middle of this pandemic (d'Orville, 2020). If looking further ahead, this is a form of preparation for future learning or can be called a portal to a new world that has never been known at all previously (Roy, 2020). This will greatly influence people's viewpoints on digital and online learning. In this case, we will

enter the post-digital period (Coeckelbergh, 2020). Therefore, seeing how the world will change dramatically after this pandemic makes the learning process in Indonesia have to be prepared to get used to and able to carry out the online learning process. It is in terms of infrastructure preparation, curriculum, teachers' readiness, students' readiness, and government's readiness in coordinating the new learning process.

If we are focused on the influence of the COVID-19 pandemic which makes the learning process must be carried out online, the students' behavior in the learning process becomes one of the very important aspects to be considered as well. That is because, in the context of learning in normal times, there are differences in students' learning behavior during school days and on holidays (Wagner et al., 2008). Therefore, it is also a very important aspect to study because until now there has been no research that studies on very drastic and significant changes in the world of education regarding students' learning behavior in the middle of this pandemic (Thomas & Rogers, 2020; Trung et al., 2020). Students' behavior and self-learning processes not only arise automatically from students' views towards the learning process but are also influenced by teachers, parents, and colleagues (Mcneal, 2001). Because respondents cannot conduct practicum when doing online learning, it makes respondents less happy about the online learning process. When considering the curriculum of the Biophysics Course, it requires at least 14 materials that must be practiced in the laboratory. However, because of this online learning process, it becomes one of the obstacles in implementing online learning. This absolutely can affect the competence and expertise of students in the procedural ability to prepare, carry out, and assess practicum that will be very important for prospective teachers in the future so that it affects their careers (Cho, 2020).

In the offline learning process category, the criterion of personal health remains the top priority in implementing the learning process. It indicates that when the learning process is carried out offline, then every aspect related to preventing the COVID-19 spread in the classroom during the learning process must be considered carefully. Furthermore, for minimizing the COVID-19 spread in a closed room, it can be by requiring wearing a mask for each student (Cheng et al., 2020), implementing a physical distancing system by rearranging chairs and giving distance in-between students in the range of 1 – 1.5 meters, and providing a hand-washing area in each classroom (Paakkari & Okan, 2020). In looking at the policies of several countries such as South Korea and the United Kingdom that have reopened schools (Lu et al., 2020; Sujarwoto & Tampubolon, 2016), it is possible to do the offline learning process in the middle of the COVID-19 pandemic. However, applicable health protocols still must be run.

The lowest criterion on the offline learning process preference is the face-to-face socialization. By considering students' independence, the level of needs for social friends has decreased (Eyel & Vatansever Durmaz, 2019; Madahi et al., 2013). This indicates that they already have priorities and interests that are reflected in what they do and need (Madahi et al., 2013). Therefore, the criterion of face-to-face socialization is not a too important consideration in implementing the offline learning process. This may be different if the respondent is a student at the elementary or secondary school level in which the need for recognition and social friends is in a high phase (Demirtaş-Zorbaz & Ergene, 2019; Guo et al., 2018; Liu et al., 2020). This can be an interesting study towards perspectives on offline or online learning methods when viewed from the level of formal education.

Although carrying out the learning process in the middle of a pandemic is very risky, it cannot be denied that the infrastructure and the preparedness of student,

teachers, and the government that is not ready yet to carry out the online learning process make education in Indonesia have to go the offline learning process or through direct learning. Based on a study on the readiness for implementing the learning process in Indonesia, only a small proportion of schools in large urban areas can carry out digital or the online-based learning process (Pujilestari, 2020). Most public and private schools claim they are not ready to carry out the online learning process (Pujilestari, 2020). Therefore, it is illustrated by the online learning process conducted in the middle of this pandemic that shows ineffectiveness in its implementation in which teachers and students are still not ready yet (Purwanto et al., 2020). Furthermore, online learning facilities, and media that are open access, massive, and friendly interface are still difficult to find. It causes the implementation of the learning process in the middle of a pandemic is conducted improperly under the excuse of "demanding circumstances" to carry out the online learning process. As a result, by collaboration between the government, i.g. the Ministry of Education and Culture and the Ministry of Research and Technology, and the private parties, they develop educational-based applications as benchmarks for preparing Digital-based Indonesian Education. It is also to increase the readiness of teachers in using information technology devices as a means to prepare and deliver the learning material. Furthermore, students are also trained to use digital devices in the learning process and to conduct the self-regulating learning process without a full direction from the teacher.

THE IMPLICATION FOR PRACTICE OR POLICY

1. For Students
   The results of this study can be used as an illustration of the needs of the learning process during the COVID-19 pandemic and can be used as a reference for preparing the online learning system.
2. For Lecturers
   The results of this study can be used as input to prepare the learning process during the COVID-19 pandemic so that the learning process can be better and learning objectives can be achieved.
3. For University Leaders (Siliwangi University)
   The results of this study can be used as a reference for decision making related to the learning process during the COVID-19 pandemic.

CONCLUSION

In Figure 3, it shows the final decision result of the respondents' geometric mean value using the Super Decision program. In that graph, in carrying out the learning process during this COVID-19 pandemic, based on the respondents' preferences, the criterion of personal health becomes a top priority. Therefore, the policyholder (in this case, it is the campus) must always pay attention to aspects of students' health in determining the type of the learning process that will be carried out during this pandemic. The next criteria are the mobility and the effectiveness of the learning process in the second and third ranks respectively. Those two criteria are also considered important by the first-year students of the Department of Biology Education of Siliwangi University who were enrolling in the Biophysics Course. The lowest preference is the criterion of the infrastructure constraint. Respondents considered that this criterion is not too important because the majority of respondents choose offline learning so that infrastructure is not too much of a problem.

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