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Identification of Students' Online Learning Readiness (KBO) in the Post-Pandemic Period

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Abstract: This study aims to identify online learning readiness (KBO) students of FKIP University of Mataram. This type of research is quantitative with a descriptive approach. The study used a KBO questionnaire instrument which was compiled with a scoring system. Analysis of the data used is the Pearson product moment correlation to see the correlation between KBO scores and academic abilities possessed by students. The results showed that students' online learning readiness (KBO) was at a score of less than 80, meaning that students' online learning readiness was still not very good. Meanwhile, according to the Pearson product moment correlation data analysis, it shows that the student correlation value from JIP is 0.815. For students from JMIPA it is 0.10. Meanwhile, students from JPBI and JIPS got a correlation value of 0.386 and 0.59. Based on these data, it can be concluded that JIP and JIPS students have a strong correlation between academic ability and students' KBO scores. While JMIPA and JPBI, students' academic ability and KBO scores have a low level of correlation.

Keywords: Academic ability; Online learning readiness (KBO); Post-pandemic

Introduction

The COVID-19 pandemic that has hit Indonesia since the last 2 years has directly impacted the education system in Indonesia. Since its inception, the education system in Indonesia has changed from Conventional Education (face to face) to Distance Education (Online) (Mahmudul Haque, 2019; Radha et al., 2020; Şeren et al., 2021). This educational paradigm shift has an impact on several specific things such as technical learning, teaching materials, psychological conditions of teachers and students and so on (Sanmee et al., 2021; Wijaya et al., 2017). This impact does not only occur at the elementary and secondary education levels, but also occurs in the lecture process in Higher Education (Higgins, 2020). Online lectures have occurred even before the COVID-19 pandemic began to spread. Specifically in Indonesia, the distance lecture process has been used by the Universitas Terbuka (UT) (Husain, 2020; Masruroh, 2020). However, the online lecture process still raises some problems, especially for other universities that have never implemented it before the concept of online lectures in the educational process (Maulyda et al., 2020).

The emergence of the COVID-19 vaccine and several regulations to minimize the impact of the spread of the virus finally paid off. The decline in the trend in the number of COVID-19 patients finally affected the change in the education system used. In 2021, the lecture paradigm began to be popular using the Blended-Learning concept (Ismaniati et al., 2016; Noervadila et al., 2021; Risnani et al., 2019). Lectures in the blended-learning system allow lecturers to conduct lectures face-to-face and online simultaneously. Technically, lecturers will conduct face-to-face lectures for 50% of classroom capacity, and the other 50% will be conducted online through online lecture platforms (Zoom Meeting, Googl Meet, etc.) (Moya et al., 2021; Noervadila et al., 2021; Oktasari et al., 2018).

It should be noted that this change in the education system occurred suddenly. The regular education system that had previously been running for years, maybe even hundreds of years had to change significantly. These pandemic demands that social

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distancing is required to break the chain of the spread of the Covid-19 virus. This appeal ultimately has an impact on the face-to-face learning process, which must turn into online learning. This significant change has led to learning difficulties experienced by students, teachers, as well as related policy makers. For students, the first difficulty is the change in the learning climate which is usually carried out directly and communally into learning that is carried out individually (Huang et al., 2005). The existence of difficulties in this learning process will result in the emergence of learning loss (Yusuf et al., 2020).

Learning loss is one of the concepts defined as the absence of the maximum learning process carried out in schools (Zhao, 2022). The learning process is not optimal, will result in the results of the information obtained by students and student learning outcomes are also not optimal. Thus, learning loss will be able to have an impact on the quality of human resources that will be born in the years during the Covid-19 pandemic (Wong et al., 2019). In addition, Michelle Kaffenberger, an academic at the Blavatnik School of Government, University of Oxford, predicts that children could lose more than a year of learning following a three-month school closure due to missing lessons when schools reopen. In terms of history, the problem of learning loss has been proven to exist from experiences that occurred in the past. Based on research based on the 1916 polio pandemic it has been found that school closures can have a long-term negative impact on children's educational outcomes, such as reduced school achievement and their cognitive skills over their lifetime (Cleaver et al., 2017).

The risk of learning loss has been predicted to occur from the beginning of the closure of schools around the world due to the COVID-19 pandemic. Based on a report on the school reopening framework released jointly by UNESCO, UNICEF, the World Bank, and WFP in April 2020, it was stated that global school closures in response to the pandemic present risks of undermining children's education, protection, and well-being (Higgins, 2020). Therefore, it is necessary to study further in this study how is learning loss in online learning during the corona pandemic in universities. In the conditions of the Covid-19 pandemic, all online learning processes require lecturers to carefully choose media that are suitable to be applied by considering the conditions of students and lecturers. With the results of this study, it is hoped that lecturers can find out what strengths and weaknesses are experienced by students when meaningful learning during online lectures is carried out and can be used as a basis for choosing other online media and even combining them in online learning (Chakrabarti et al., 2018). Based on these research reports, it shows that the risk of learning loss is indeed very large during the corona pandemic. However, this should not make us sit idly by and do nothing. There are many things we can do to overcome this learning loss, especially with the advancement of the current digital technology era (Zhao, 2022).

In the application of the lecture process that uses the blended-learning paradigm, it causes several problems in its application (Kumar & Chand, 2019). According to research results Luke et al. (2014) and Cahyana et al. (2020) the internet network is one of the key problems in the application of online learning. The results of other research conducted (Hedberg et al., 2018; Kumar & Goundar, 2019; Ozdamli et al., 2011) state that the problem of learning evaluation is an issue that makes it difficult for lecturers as educators in higher education. Based on the results of preliminary research conducted by the research team showed that students' cheating behavior in the form of plagiarism was increasing during the online lecture process. This study was conducted on 100 subjects who were given questions related to how students completed assignments. The results of tabulation of data obtained are as follows:

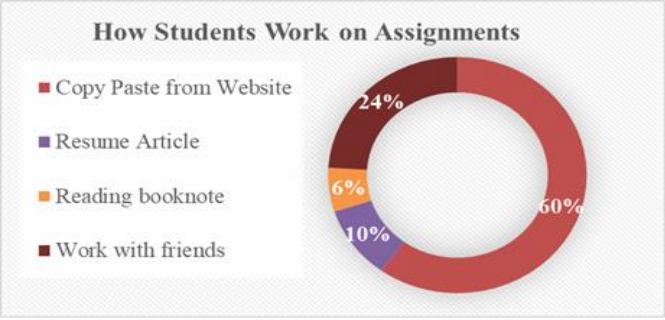

Figure 1. Results of preliminary studies

Based on preliminary studies and previous research, it is concluded that the online Learning Readiness (KBO) problem that students have is very important to identify. Online learning readiness is quite important to ensure students are ready to face the Blended-Learning lecture paradigm which will be implemented in 2022. For this reason, it is necessary to have a valid identification related to problems that may be the cause of students' unpreparedness in facing online lectures. There are several aspects that are assumed to be the cause, namely gender aspects, geographical aspects, academic value aspects (GPA) and educational background aspects (from the faculty).

Method

This research is quantitative research using a correlational approach. Qualitative research is research that tends to use descriptive analysis (Sugiyono, 2017). In accordance with the research objectives, namely, to

describe the level of Online Learning Readiness (KBO) of Mataram University students based on gender, based on place of residence (Geography), Grade Point Average (GPA), and based on educational background (Faculty Origin), qualitative research focuses more on the process a description of the occurrence of a phenomenon (Creswell et al., 2018). The results that will be obtained in this study are descriptive data which is the result of in-depth analysis by researchers. This research was conducted on FKIP Mataram University students in all semesters. The total number of respondents was 191 students who were given an online questionnaire.

The instrument used in this research is a questionnaire that measures the level of online learning readiness (KBO) of Mataram University students. The online learning readiness index (KBO) studied refers to 5 dimensions, namely the computer/internet self-efficacy index, self-directed learning, learner control, motivation for learning, and online communication self-efficacy. Further, the questions asked for each of the dimensions studied are presented in Table 1.

Table 1. Online Learning Readiness Scale (KBO)

Dimension	Item
Computer/Internet self-efficacy	I feel confident in performing the basic functions of Microsoft Office programs (MS Word, MS Excel, and MS PowerPoint).
	I feel confident in my knowledge and skills of how to manage software for online learning.
	I feel confident in using the Internet (Google, Yahoo) to find or gather information for online learning.
.Self-directed learning	I carry out my own study plan.
	I seek assistance when facing learning problems.
	I manage time well.
	I set up my earning goals.
	I have higher expectations for my learning performance.
Learner Control	I can direct my own learning progress.
	I am not distracted by other online activities when learning online (instant messages, Internet surfing).
	I repeated the online instructional materials on the basis of my needs.
Motivation for learning	I am open to new ideas.
	I have the motivation to learn.
	I improve from my mistakes.
Online communication self-efficacy/confidence to communicate online	I feel confident in expressing myself (emotions and humor) through text.
	I feel confident in posting questions in online discussions.

The data collection technique used in this research is a questionnaire or questionnaire. A questionnaire is a data collection technique that is done by giving a set of questions or written statements to respondents to answer. The type of questionnaire used in this study is a closed questionnaire with a choice of answer items that have been provided. The selection of the type of closed questionnaire was due to the large and varied number of respondents. The questionnaire in this study was prepared with reference to the Online Learning Readiness scale (KBO) which has been presented in Table 1. Respondents or students responded in the form of a scaled statement, namely strongly agree, agree, undecided, disagree, and strongly disagree.

The data collected from the results of this study is the response data from the questionnaire instrument used. In accordance with the research objectives, the data analysis used to analyze the data in this study is a qualitative analysis proposed by Miles et al. (1992), then the interactive model in data analysis is shown in the Figure 2.

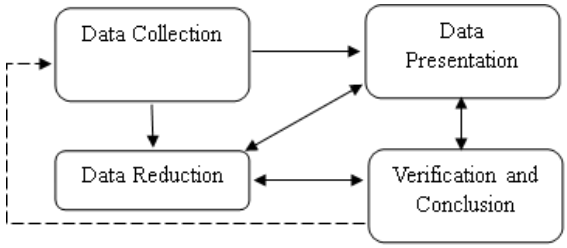

Figure 2. Data analysis flow

Data obtained from the results of questionnaires, interviews and documentation recorded in the field description, which includes two aspects, namely description and reflection. Descriptive annotations are natural data that contains what researchers see, hear, feel, witness, and experience themselves without any opinions and interpretations of the phenomena at hand. Reflective notes are notes that contain the impressions, comments, and explanations of researchers on the findings obtained, and are used as material for the next stage of data collection plans. Data reduction is a process of selection, centralization, simplification and abstraction. The way to reduce data is to select, make a

summary or brief description, and classify it into certain patterns by making research transcripts to emphasize, shorten important points, and delete parts that are not important and arrange and organize data so that conclusions can be drawn clearly.

After the data obtained are analyzed descriptively, the researcher will use statistical analysis to test the correlation between the GPA data and the KBO data from the respondents. The correlation test analysis used is the Pearson product moment correlation test to see the relationship between the two variables. After that, the data will be presented systematically and comprehensively based on the origin of each respondent's major.

Result and Discussion

Based on the results of the distribution of the data, the number of students who became the research respondents was 191 students spread from various semesters. The percentage of the number of respondents based on the origin of the majors of the respondents can be seen in Figure 3.

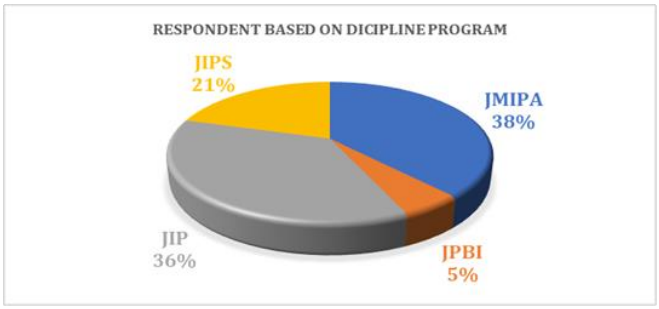

Figure 3. Distribution of respondents based on the origin of the department

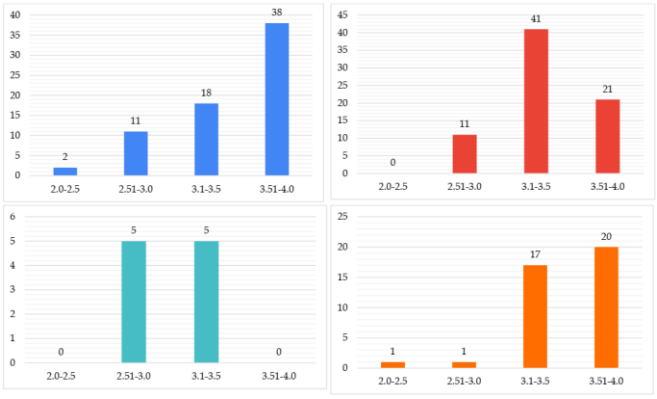

Figure 4. Data on respondents' GPA recapitulation results per each department

In Figure 3 the largest number of respondents came from the Department of Mathematics and Natural Sciences (JMIPA) as many as 73 respondents, followed by respondents from the Department of Education (JIP) which amounted to 69. Meanwhile, respondents from the Department of Social Sciences (JIPS) totaled 39 respondents. The Indonesian Language Education Department (JPBI) has at least 10 respondents. Furthermore, the data on the recapitulation of the results of the respondents' GPA data will be presented, which can be seen in Figure 4.

Based on the data above, the Pearson Product Moment Correlation data analysis was conducted to see the relationship between student GPA and KBO scores owned by students from the Department of Educational Sciences. The results of the analysis can be seen in Table 2 and Figure 5.

Table 2. Results of Correlation Analysis of Two Variables

Correlation		KBO	IPK
KBO	Pearson Correlation	1	.029
	Sig. (2-tailed)		.815
	N	69	69
IPK	Pearson Correlation	.029	1
	Sig. (2-tailed)	.815	
	N	69	69

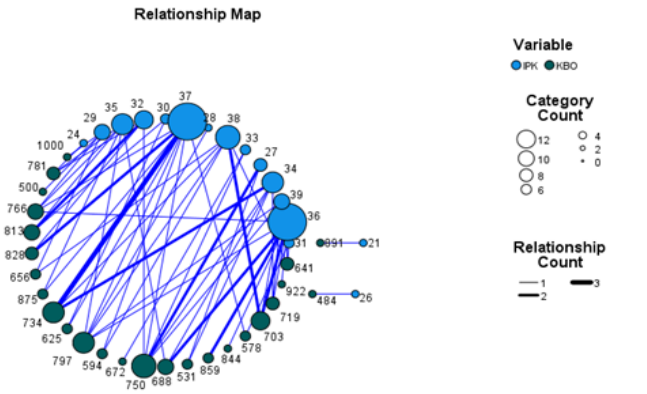

Figure 5. Variable correlation graph

Based on the results of the correlation data analysis, the correlation value between the KBO variable and the student GPA has a value of 0.815. Because the correlation value of 0.815 is in the interval 0.8 - 1, the relationship between the variables is said to be very strong. Thus, the results of KBO scores and student GPAs from JIP have a very strong relationship. This is also reinforced by the variable correlation graph shown in Figure 5, where all points are connected except for 2 respondent data. This also shows that there is a very strong relationship between KBO scores and student GPAs from JIP. This is in line with the results of research (Pei et al., 2019; Visser et al., 2018) where students who have good academic abilities tend to be able to take online lectures well. In addition, according to the data presented by Wei (2020) that one of the important aspects that can be interpreted as the success of online learning is the value that

students get during online learning. Based on the data above, the Pearson Product Moment Correlation data analysis was conducted to see the relationship between student GPA and KBO scores owned by students from the Department of Mathematics and Natural Sciences. The results of the analysis can be seen in Table 3 and Figure 6.

Table 3. Results of Correlation Analysis of Two Variables

Correlation		KBO	IPK
KBO	Pearson Correlation	1	.103
	Sig. (2-tailed)		.386
	N	73	73
IPK	Pearson Correlation	.103	1
	Sig. (2-tailed)	.386	
	N	73	73

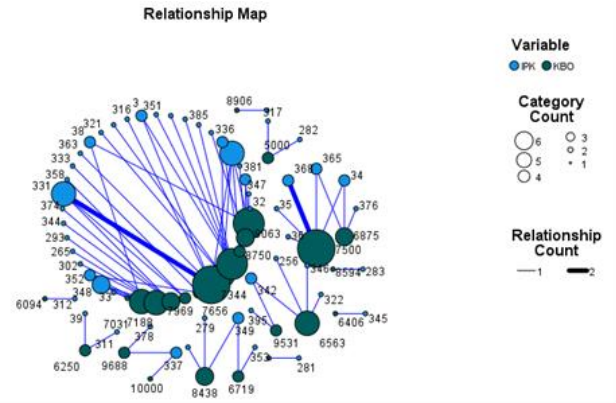

Figure 6. Variable correlation graph

Based on the results of the correlation data analysis, the correlation value between the KBO variable and the student GPA has a value of 0.386. Because the correlation value of 0.386 is in the interval 0.2 - 0.4, then the relationship between variables is said to be low. Thus, the results of KBO scores and GPA of students from JMIPA have a low relationship. This is also reinforced by the variable correlation graph shown in Figure 6, where the variation in the relationship between points is quite large and spreads not close together. This also shows that there is a low relationship between KBO scores and student GPAs from JMIPA.

This finding is not in line with the results of research Lo et al. (2012) and Hammarlund et al. (2015) where academic ability is one of the key factors in the online learning process. The low correlation between the KBO scores and the GPA of students from JMIPA shows that the very good GPA scores of JMIPA students (87% of students have a GPA > 3) does not mean that the online learning readiness of JMIPA students is also good. It is possible that other factors in online learning can cause this to happen, such as poor internet connection, low IT skills, or the lack of availability of online learning tools (Atmojo et al., 2020; Pham et al., 2021; Wong et al., 2019). Based on the data above, the Pearson Product Moment Correlation data analysis was conducted to see the relationship between student GPA and KBO scores owned by students from the Department of Indonesian Language Education. The results of the analysis can be seen in Table 4 and Figure 7.

Table 4. Results of Correlation Analysis of Two Variables

Correlation		KBO	IPK
KBO	Pearson Correlation	1	.767
	Sig. (2-tailed)		.010
	N	10	10
IPK	Pearson Correlation	.767	1
	Sig. (2-tailed)	.010	
	N	10	10

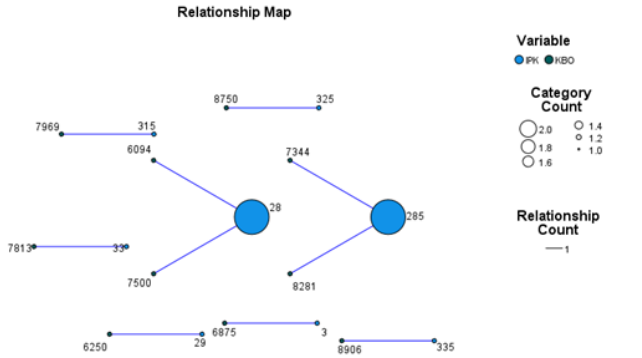

Figure 7. Variable correlation graph

Based on the results of the correlation data analysis, the correlation value between the KBO variable and the student GPA has a value of 0.10. Because the correlation value of 0.10 is in the interval 0 – 0.10, then the relationship between variables is said to be very low. Thus, the results of KBO scores and student GPAs from JPBI have a very low relationship. This is also reinforced by the variable correlation graph shown in Figure 7, where the points between variables do not show any relationship at all. This is also suspected because of the very small amount of data from JPBI which causes the relationship between the KBO and GPA variables to be difficult to relate.

This finding is not in line with the results of research Lo et al. (2011) and Hammarlund et al. (2015) where academic ability is one of the key factors in the online learning process. The low correlation between KBO scores and student GPAs from JPBI shows that the GPA scores of JPBI students tend to be good (92% of students have 2.5 > GPA > 3) does not mean that JPBI students' online learning readiness is also good. It is possible that other factors in online learning can cause this to happen, such as poor internet connection, low IT skills, or the lack of availability of online learning tools

(Atmojo et al., 2020; Pham et al., 2021; Wong et al., 2019). Based on the data above, the Pearson Product Moment Correlation data analysis was conducted to see the relationship between student GPA and KBO scores owned by students from the Department of Social Sciences. The results of the analysis can be seen in Table 5 and Figure 8.

Table 5. Results of Correlation Analysis of Two Variables

Correlation		KBO	IPK
KBO	Pearson Correlation	1	.306
	Sig. (2-tailed)		.059
	N	39	39
IPK	Pearson Correlation	.306	1
	Sig. (2-tailed)	.059	
	N	39	39

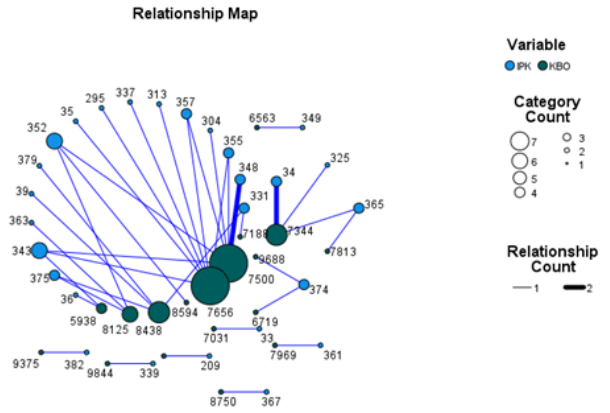

Figure 8. Variable correlation graph

Based on the results of the correlation data analysis, the correlation value between the KBO variable and the student GPA has a value of 0.59. Because the correlation value of 0.59 is in the interval 0.4–0.6, the relationship between variables is said to be strong. Thus, the results of the KBO scores and the GPA of students from JIPS have a strong relationship. This is also reinforced by the variable correlation graph shown in Figure 8, where all points are connected except for 6 respondent data. This also shows that there is a strong relationship between KBO scores and student GPAs from JIPS. This is in line with the results of research (Pei et al., 2019; Visser et al., 2018) where students who have good academic abilities tend to be able to take online lectures well. In addition, according to the data presented by Wei (2020) that one of the important aspects that can be interpreted as the success of online learning is the value that students get during online learning.

Component 1 consists of five statements in which each item states about the conditions of student interaction when participating in online learning, as evidenced by the word 'interact response/feedback', 'more organized learning', 'prefer distance learning', and 'recommend online learning'. These keywords can be interpreted as that the online learning process can give the impression of being more flexible, interesting, fun and give students freedom of learning. This is reinforced by overall learning readiness, online learning style readiness and strategy readiness to improve the quality of online learning. Component 2, which consists of five items states that the technology utilization policies set by the government play a role in providing students' readiness to take part in online learning. It is assumed that with clear policies, learning will be easy to implement because various other supporting factors will be fulfilled over time. There are keywords that indicate policy conditions and supporting factors for online learning, including 'more effective', 'government policies as supporting factors', 'technology, information and communication support', 'computers are getting cheaper', and 'the internet provides bright prospects'. This factor is also reinforced that management support and information technology greatly determine the course of online learning.

Component 3 consists of the keywords 'adequate computer and internet access', 'able to find various sources of information', and 'able to use various applications. This shows that self-ability both cognitively, affectively, psychometrically is needed in participating in online learning, especially matters relating to the technical operation of information technology. Therefore, the readiness of human resources (students) and technological skills possessed by students will be factors supporting the effectiveness of online learning. Component 4 contains only two items with the keywords 'cheaper costs for online learning' and 'online can be done anytime and anywhere' which means that financial or financial capability factors greatly determine the success of online learning, because it will consider operational funds for implementing learning will be more pressurized.

Component 5 also contains two items with the keywords 'students have internet access' and 'technology and information infrastructure preparation'. Both indicate that infrastructure readiness factors are needed and prioritized. If you look at the condition of Indonesian education and especially at the tertiary level today it is quite good in terms of the quality of infrastructure supporting online learning, this will certainly help significantly implement online learning. Component 6 contains two keywords 'not able to use technology' and 'delayed response from lecturers frustrates students'. Both are very closely related to psychology students when they cannot use or operate technology and there is a response that is less responsive makes student enthusiasm for learning decrease, so that psychological readiness factors also greatly affect student readiness to take part in online learning.

In addition, in open-ended question items an outline of students' opinions regarding online learning can be obtained, namely the emergence of concerns that online learning is less effective, communication between lecturers and students which is feared that misunderstandings often occur, the ability of each student is different in terms of the quality of facilities and infrastructure that support online learning. But there is also a lot of optimism in the implementation of online learning, things like this there is flexibility in terms of time and freedom to obtain information from various learning sources, guaranteeing the health and safety of both lecturers and students during the co-19 pandemic.

Conclusion

Based on the results of the research conducted, it can be concluded that the KBO questionnaire scores, respondents from the Department of Education had an average score of 73.44 with a good category. For students from the Department of Mathematics and Education, the average KBO score they have is 75.73, which indicates that students' online learning readiness in this Department is better than students from the Department of Education. Furthermore, for students from the Department of Indonesian Language Education, the average KBO score is 75.78, which is a slightly higher score than students from JMIPA. Meanwhile, students from the Department of Social Sciences got the highest average KBO score with 76.68. This shows that JIPS students are students who are most prepared to face online lectures. However, there are no majors that get a KBO score > 80 which indicates that students' online learning readiness still needs to be improved. In Addition, based on the results of data analysis using IBM SPSS software version 2022, it was found that there was a correlation level of 0.815 (very strong correlation category) between JIP students' GPA and students' online learning readiness. For JIPS students, the correlation level between GPA and KBO is 0.59 where this value also shows a strong correlation between the two variables. On the other hand, for students from JMIPA and JPBI, the correlation values obtained were 0.386 and 0.10 (respectively). This shows that between GPA and KBO scores, students from JMIPA and JPBI have a low correlation.

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Author Contributions
First author: Conceptual of Learning Readiness, Administrative Stuff, Comprehensive Discussion of the Statistics Result, and Introduction section. Second author: Publication writer, methodology, data collection, and instrument validation. Third author: Data Analysis, Publication writer, Paper Submission, and Data Collection. All authors have read and agreed to the published version of the manuscript.

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Conflicts of Interest
The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

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