The Effect of Learning Independence, Self-Regulation, and Social Support on Learning Achievement among Psychology Department Students X University in Covid-19 Pandemic Era

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Abstract
During the Covid-19 pandemic, the Indonesian Government issued a policy to implement Distance Learning (PJJ) or Online Learning. This applies to all levels of education, including higher education. During online learning, students are not only required to have learning independence but also self-regulation and social support to meet the expected learning outcomes. This study aims to analyze the effect of learning independence, self-regulation, and social support on students’ learning outcomes. The subjects of this study were 115 students from the Psychology Study Program at University X. The research design used was multiple regression with a quantitative approach. A questionnaire was used as the research instrument. The validity and reliability of the measuring instrument used were adequately credible. The classical assumption test was conducted in the form of a normality test, homogeneity test, and correlation test before the hypothesis testing was carried out with regression testing. Partially, each independent variable independently affects the dependent variable. Learning independence affects Learning Outcomes with a significance value of 0.448, self-regulation also affects Learning Outcomes with a significance value of 0.551, and social support also affects Learning Outcomes with a significance value of 0.104. The three independent variables, namely Learning Independence, Self-Regulation, and Social Support, jointly affect the dependent variable on Learning Outcomes with a significance value of 0.527.

Keywords: learning independence; self-regulation; social support; learning achievement.

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INTRODUCTION

Pembelajaran dan perkuliahan Jarak Jauh – which are shortened to PJJ (Syarifudin, 2020) have become a policy launched by the government. Online learning and lectures are learning activities that are facilitated via the internet network. This online learning and lecture rely on the ease of accessing the internet network, a stable, flexible and agile internet connection in cyberspace to accommodate a variety of non-physical interactions in the learning process and lectures (Moore, Deane, & Galyen, 2011). Google Classroom, Edmodo, Schoology, Zoom, Teams Webex and WhatsApp, Twitter and Instagram can organize online learning and virtual lectures (Kumar & Nanda, 2019).

During the pandemic (Khasanah, Pramudibyanto and Widuroyekti, 2020) with the new habit of staying at home, working from home, and online learning...
demands an adaptation process for learners (Suler, 2004). Social interaction, including in learning, is carried out on a limited basis through the use of technology. Learning places more emphasis on strong independence and self-control (Voggeser, Singh & Göritz, 2018). This requires learners to be able to adjust to certain conditions and environments (Hodges, Moore, Lockee, Trust & Bond, 2020).

The Ministry of Education and Culture, through the Director General of PAUD, Dikdas and Dikmen of the Ministry of Education and Culture, Jumeri, admitted that the quality of student learning actually decreased when distance learning (PJJ) was carried out during the Covid-19 pandemic. Jumeri said that the PJJ system requires the participation of all parties: stakeholders, schools, teachers, parents, families, and the environment around students (Kompas.com, 2021).

The government and various related parties have sought various support in the field of technology to support the implementation of PJJ. However, it is still recognized that there is still room that must be suspected as the cause of online learning during the Covid-19 pandemic is considered ineffective. Prof. Dr. Budi Santoso Wignyosukarto, an education observer from Gadjah Mada University (UGM), is quite worried about this online learning. If this online learning takes place for a long time, there may be a condition called learning loss or academic knowledge and skills are drastically reduced or there is even a learning process that is missing (kompas.com, 2021).

At the tertiary level, students experience changes in interaction in the learning process where previously the learning and teaching process was carried out offline or face-to-face, now it must be carried out through online learning, students are required to undergo lectures online to carry out the teaching and learning process during the pandemic (Febrilia & Patahudin 2019, 56; Houlden, & Veletsianos, 2020). As an illustration that shows that student learning achievements have problems during this pandemic, among others, it is contained in kompas.com which reports that amid the Covid-19 pandemic 69 STAN students have dropped out and cannot continue their studies (kompas.com, 2021).

The implementation of online learning (Firman & Rahman, 2020), apart from its advantages, also reaped pros and cons due to the emergence of various obstacles. Students who oppose online learning policies are dominated by those who experience accessibility constraints, devices, and the ability to use technology that is not ready. Those who oppose this policy feel that online learning does not provide a complete understanding of the material presented. In addition to this, there are not a few students who feel comfortable and benefit from online learning.

The results of statistical data observations derived from the PDDIKTI annual report which provides data for the last 2 years, the percentage of student graduation at the tertiary level tends to decrease. From 2018 to 2019, students who were able to complete their studies increased from a total of 1,247,116 to 1,757,169 students. This result is inversely proportional when compared to 2020 during the pandemic where the percentage of student graduations decreased from 1,757,169 to 1,535,074 students.

This research focuses on the Psychology Study Program at University X. During the Covid-19 pandemic, the Psychology Study Program at University X
also conducted online learning. Therefore, students who are actively studying in 2020 to 2022 will experience online lectures. It is these students who will be the respondents of this study. There are a total of 646 active students from the Psychology Study Program at University X. The problems faced are relatively similar to some of the illustrations presented earlier. Even some aspects became affirmed. For example, during the Covid-19 pandemic, learning independence is one of the variables that can affect the variable of learning achievement. Such is the case with Self-Regulation. It is suspected that the variable of learning independence can have an influence on the variable of learning achievement during online lectures taking place during the Covid-19 pandemic because online lectures presuppose the ability and skills of individuals in managing themselves. Online lectures presuppose that each individual is capable of managing things personally. Therefore, it makes sense when Social Support is needed by students who experience online lectures so that although everything is done independently, there is a support system that supports it.

Student independence in the lecture process is a predictor of decent learning achievement and needs to be explored. Successful online learning produces students who are able to manage their own learning (Winters, Greene & Costich, 2008). According to Kusuma (2020), self-regulated learning of students, when undergoing online learning using Edmodo, has a positive influence on the independence of learning that students have in Geometry lessons. The use of the Edmodo application turned out to be more interesting and motivating to learn. Self-regulated learning reflects the implications of online learning both positive and negative. A self-regulated learner has the view that the learning process is something that is done and benefits oneself (Schunk & Zimmerman, 1998).

In addition to the factors of independence and Self-Regulation, the success of online learning is also determined by social support, from parents, and learning facilitators. The ideal online learning will be very different in form and impact with emergency distance learning in response to the emergence of the pandemic. One of these differences can be seen from the emergence of social support in the learning process (Hodges, Moore, Lockee, Trust & Bond, 2020).

In a study conducted by Eggers, Oostdam and Voogt (2021) Self-Regulated Learning (SRL) is a way or strategy used by an individual actively and constructively that includes monitoring, regulating, and controlling themselves on aspects of cognition, motivation, and behavior. An individual who is able to organize this will responsibly and act in a real way in achieving their academic goals. This is corroborated by Wolters and Brady (2020) that independent learning and time management are things that are related and intertwined with each other where the two variables are related in the learning process in students (Wolters & Brady, 2020).

Self-Regulated Learning also has a positive relationship that leads to intrinsic motivation, assignment value, self-efficacy, and academic outcomes of learners. So that students who can control Self-Regulated Learning are better able to learn and use their cognitive in managing the strategies they use (El-Adl & Alkharusi, 2020).

Based on the results of existing research and statistical data. Therefore, this variable certainly requires further study to identify what factors influence the
decline in the level of Self-Regulated Learning. According to Haertel, Walberg and Heartel (1981) there are about 9 variables affecting learning achievement variables, namely skills and skills, stages and processes of development, learning motivation, quality of learning processes, frequency and quantity of learning, family environment and environment, social and peer environment and use of time outside the classroom. The application of Problem Based Learning, by Shofwani and Rochmah (2021) is also suspected to have an influence on student learning achievement. Meanwhile, according to Husna (2020), mobile learning media from research results also has an impact on learning achievement in this pandemic era. Motivation variables since before the pandemic and in this pandemic era have been widely studied as factors that affect learning achievement (Andriani & Rasto, 2019; Nurmala, Tripalupi & Suharsono, 2014; Palittin, Wolo & Purwanty, 2019; Nasrah & Muafiah, 2020).

Accordingly, the corresponding hypotheses are presented:

H1: There is an influence of learning independence on the learning achievement of students who experience online lectures during the pandemic.

H2: There is an influence of Self-Regulation on the learning achievement of students who experience online lectures during the pandemic.

H3: There is an influence of social support on the learning achievement of students who experience online lectures during the pandemic.

H4: There is an influence of learning independence, social support and Self-Regulation on the learning achievement of students who experience online lectures during the pandemic together.

METHODS

The research was conducted in the Psychology Program at University X online by filling out a Google form sheet. The reason why researchers chose the Psychology Program at University X to be the main place for research is because the background of the problem that occurs is the decrease in student learning achievement in the Psychology Program at University X during online lectures. The study was conducted from March and April 2022. The research subjects were students at the Psychology Program of University X who lectured online during the pandemic with a total of 120 subjects.

Constructively, learning achievement is a measurement of student progress in their studies which includes various things that exist in lectures, both knowledge and skills which are then assessed. Learning achievement has a process. Therefore, learning achievement is the result of the process of learning activities from learning. The changes obtained through learning activities can be said to be learning achievements. Learning achievements in students can be known through information such as the achievement index they achieved during learning. Operationally, the measurement of learning achievement is based on results, knowledge, attitudes, and discipline. In this study it is operationalized as a measurement involving indicators: cognitive, affective and psychomotor. Measure learning achievement in the form of grades taken from the Semester
Achievement Index (IPS) of students in the Psychology Study Program of University X, who experienced online lectures during the pandemic.

The validity and reliability of learning achievement instruments was tested to the university students in Tangerang. It was carried out with 120 respondents falling 5 students so that 115 respondents were obtained $r$ table of 0.181. From the results of the validity test, the learning achievement instrument is declared valid. The Cronbach Alpha ($\alpha$) calculation is worth 0.748. The value is greater than the calculation of $r$ table ($r$ count > $r$ table) and more than 0.6 which indicates that the learning achievement instrument is valid and is included in the category of quite reliable in the Cronbach Alpha test.

This research uses quantitative data analysis techniques. Data analysis techniques are activities that are carried out after data from all respondents are collected. Statistics are used in quantitative data analysis techniques. Descriptive and inferential statistics were used in this study.

Data analysis techniques are carried out descriptively by looking at the data description through the frequency and mode distribution tables. So that from each existing data table of the three variables a general conclusion can be drawn for each data table.

Inferential data analysis techniques are performed using correlation and linear regression tests. Correlation tests are performed to determine whether there is a relationship between a free variable and a bound variable. If the result of the correlation test is that there is a relationship between the free variable and the bound variable, a linear regression test is carried out. However, if there is no relationship between the free variable and the bound variable, a linear regression test cannot be carried out.

A linear regression test is performed to determine whether there is any influence between the free variable and the bound variable. It can also be determined the value of $R$ square (coefficient) of determination. The coefficient of determination determines how correctly the model explains the variance of the data. The higher the coefficient of determination, the better. For example, an $R$ square of 0.8 means that the variance of a free variable can describe a bound variable of 0.8. The $R$ square is the square of the correlation between the free variable and the prediction of the free variable of the model. It can be understood or interpreted as the correlation of $y$ with $y$ prediction. If the correlation is high then $y$ prediction matches the data.

If a linear regression test is performed, and then the test fails ($F$ calculates < $F$ table) which means that receiving 0 cannot necessarily be concluded that the free variable has no effect on the bound variable. However, it can be concluded that free variables have no linear effect on bound variables. However, it can have a quadratic effect, or logarithmic or exponential or it may also have no effect.

Before the correlation test and regression test, the prerequisite analysis test is carried out in the form of a normality test and a heteroskedastic (homogeneity) test. If the normality test results show that the data has a normal distribution and the homogeneity test results show homogeneous data (no heteroskedastic occurs) then the analysis prerequisites are met. So that correlation and regression tests can be carried out. However, if the result is the opposite, it cannot be tested for correlation and regression.
The normality test was carried out using the Chi-Square technique, namely by comparing the Chi-Square value from the data with the Chi-Square table. It can be said that the distributed data is normal when the Chi-Square value of the data is smaller than the table value. Meanwhile, the heteroscedastic test was carried out with the Glejser test technique. Data homogeneity testing is a prerequisite for regression testing. The data is said to have no heteroskedastic if the errors that occur from the results of data regression are not affected by the variance of the free variables. The test was carried out with the Glejser test technique. The Glejser test is performed by regressing between an independent variable and its residual absolute value. If the calculated F value is greater than the table F, it can be said that heteroskedastic occurs.

RESULTS & DISCUSSION

Results
The data of this study consisted of 120 students with the number of participants who are not qualified of 5 so that 115 respondents of the Psychology Study Program at University X from various semesters.

Learning Independence & Learning Achievement

| Tabel 1. Learning Independence Regression Test with Learning Achievement |
|-------------------------|-------|--------|-------|-------|
|                        | DF    | SS     | MS    | Fc    | Ft    |
| Regression             | 1     | 1350,393 | 1350,393 | 91,674 | 3,93 |
| Residual Error         | 113   | 1664,529 | 14,730   |
| Total                  | 114   | 3015    |

In table 1 it is seen that F counts is greater than F of the table. This indicates that Ho was rejected. Thus, it means that H1 is accepted. This means that the learning independence variable has a positive effect on learning achievement. Its regression equation is expressed in the form = 9.217 + 0.298 1 with a coefficient of determination of 0.448. This means that the Learning Independence variable can explain the learning achievement variable of 44.8%. In other words, there is an influence of 44.8% of the Learning Independence variable on the increase in student learning achievement. The conclusion that can be drawn from this regression test is that there is a considerable influence of the Learning Independence variable on increasing student learning achievement.

Self-Regulation & Learning Achievement

| Tabel 2. Self-Regulation Regression Test with Learning Achievement |
|-------------------------|-------|--------|-------|-------|
|                        | DF    | SS     | MS    | Fc    | Ft    |
| Regression             | 1     | 8      | 104982.58 | 8771.62 | 3.93 |
| Residual Error         | 113   | 1352,42 | 11,968    |
| Total                  | 114   | 3015    |
In table 2 it is seen that F counts is greater than F of the table. This indicates that Ho was rejected. Thus, it means that H1 is accepted. This means that the Self-Regulation variable has a positive effect on learning achievement. Its regression equation is expressed in the form $= 5.198 + 0.169$ with a coefficient of determination of 0.551. This means that the Self-Regulation variable can explain the 55.1% learning achievement variable. In other words, there is an influence of 55.1% of the Self-Regulation variable on increasing student learning achievement. The conclusion that can be drawn from this regression test is that there is a considerable influence of the Self-Regulation variable on increasing student learning achievement.

### Social Support & Learning Achievement

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<td>Total</td>
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<td>3014,922</td>
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In table 3 it is seen that F counts greater than F of the table. This indicates that Ho was rejected. Thus, it means that H1 is accepted. This means that the Social Support variable has a positive effect on learning achievement. Its regression equation is expressed in the form $= 7.348 + 0.138$ with a coefficient of determination of 0.104. This means that the Social Support variable can explain the 10.4% learning achievement variable. In other words, there is an influence of 10.4% of the Social Support variable on the increase in student learning achievement. The conclusion that can be drawn from this regression test is that there is a sufficient influence of the Social Support variable on improving student learning achievement.

### Learning Independence, Self-Regulation, Social Support, & Learning Achievement

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<td>3014,922</td>
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In table 4 it is seen that F counts greater than F of the table. This indicates that Ho was rejected. Thus, it means that H1 is accepted. This means that the variables of Learning Independence, Self-Regulation and Social Support have a positive effect on learning achievement. Its regression equation is expressed in $= 6.653 + 0.000 KB - 0.011 DS + 0.172 SR$ with a coefficient of determination of 0.527. This means that the variables of Learning Independence, Self-Regulation and Social Support can explain the variable Learning
achievement of 52.7%. In other words, 52.7% of the variables of Learning Independence, Self-Regulation and Social Support is an influence on increasing student learning achievement. The conclusion that can be drawn from this regression test is that there is a considerable influence of the variables of Learning Independence, Self-Regulation and Social Support on increasing student learning achievement.

Discussion

In the world of education, especially in college, of course there are various kinds of things or variables that are considered to have a big role in the learning process and achievements of students. Internal to external things contribute to shaping or growing performance for each student. Internal factors in the form of learning independence and Self-Regulation are certainly needed by students in general so that they are able to survive or survive in their academic world. Other factors outside of oneself are also needed considering that an individual is felt to be lacking if it only overlaps the internal factors contained in him. As with social support, students need support, whether it is support such as moral, material, information, or psychological support. These kinds of things will shape the person and performance of students which in turn will then become a unity that has a real effect on student performance in the academic world.

Referring to the results of research by researchers conducted on students at the Psychology Study Program, University X, it was found that there was an influence of Learning Independence, Self-Regulation, and Social Support on student learning achievement. This is indicated by the acquisition of a regression coefficient value of 0.527. From the results of this efficiency, it can be interpreted that respondents who have Learning Independence, Self-Regulation, and Social Support will be directly proportional to the learning achievements of students of the Psychology Study Program, University X. That is, if the three variables have increased in every aspect, it will also experience an increase in the learning achievements of students. This picture is also supported based on previous opinions that illustrate that in the learning process, an individual must at least have components that are able to maintain and improve their performance during the study period. In addition, these three variables also play an important role in developing a model or concept so that how these students are able to live and survive in the academy environment they live in.

In addition to these results showing an influence on learning achievement, on the other hand, the three variables also show a correlation in the learning achievement of students. The close relationship between Learning Independence, Self-Regulation, Social Support in the learning achievements of students of the Psychology Study Program, University X above is shown with significant results of 0.751 which means that there is a correlation between the variables of Learning Independence, Self-Regulation, and Social Support with student learning achievement. In addition, the aspects contained in each of the three variables also have a significant influence and have a linear relationship on learning achievement in students of the Psychology Study Program, University X.

In previous studies, there was a harmony that showed that the three variables had a relationship and influenced the learning achievement of students.
Among other things, research such as those conducted by Laksana and Hadijah (2019) which shows the role of learning independence in improving learning achievement. Other than that, the study by Fathiyah, Rahma, and Aminah (2022), also show a significant correlation between the variable of learning independence towards learning achievement. Then the research conducted by El-Adl and Alkharusi (2020) explained that students who can control Self-Regulation in the context of learning will be better able to learn in using cognition and set the strategies they will use. Nurdianasari (2020) stated that the influence of self-regulated learning on learning achievement has proven to exist. Researches discussing the influence of social support on learning achievement were also carried out by Sucipto (2014), Jamaluddin, et al (2020), and Tea, Anakaka, and Amseke (2020) whose research showed that social support has a large share and influences the learning achievement / pretation of students. The research carried out by Li et. al (2018), showed that social support can help students increase their self-esteem, which will improve their academic performance.

**CONCLUSION**

The three free variables, namely Learning Independence, Self-Regulation, and Social Support, showed a correlation with bound variables Student learning achievement. The significance level is 0.527 which means that the contribution of the three variables can predict learning achievement of 52.7%. Partially each free variable also has a contribution to predicting learning achievement. This means that Learning Independence affects learning achievement, Self-Regulation also affects learning achievement and Social Support also affects learning achievement. Independently, the Learning Independence Variable affects learning achievement with a significance level of 44.8%. The detailed significance of the correlation of the Self-Regulation variable to learning achievement is valued at 55.1%. Independently, the Social Support variable affects learning achievement with a significance level of 10.4%.

The factors that determine 52.7% of learning achievement have been tested, namely Learning Independence, Self-Regulation, and Social Support, this leaves 47.3% who are still not explored through this test study. In addition, there are other factors that affect learning achievement in addition to Learning Independence, Self-Regulation, and Social Support that can be explored in future research.

To maximize learning achievements in students who are in the andragogic type of learning, Self-Regulation plays an important role as well as Learning Independence. Lecturers as facilitators of learners or students are required to be able to guide students to optimize Self-Regulation both through conditioning and assignment. The learning atmosphere also needs to be considered to increase the Learning Independence of students through easier access to learning resources.

Judging from the existing conclusions, to further improve learning achievement, students need to be encouraged to improve their Self-Regulation skills and hone their learning independence. Parents, lecturers, peers and universities as managers are expected to be able to provide a supporting
atmosphere that motivates externally for the improvement of learning achievement.

With the limitations of research conducted in the pandemic setting, where all elements of education are trying to adjust to new circumstances and the results of research that show that the three free variables, namely kb (learning independence), SR (Self-Regulation), and DS (social support) show that there is a correlation with variables bound to student learning achievement. The significance level is 0.751 which means that the contribution of the three variables can predict the learning outcome by 75%. Then it still leaves 25% of the contribution determined by the undetected variability. This is a suggestion for subsequent researchers regarding the topic of learning achievement research in online education in the future.

The first limitation faced by researchers is when trying to find references to both books and journal articles with similar research topics but already with the context of the Covid-19 pandemic. Existing references, based on searches, are still fairly minimal and limited. In addition, this study was conducted online by distributing questionnaires using g-forms. This means that respondents fill out a questionnaire online. Therefore, this study experienced several limitations as a consequence of the Covid-19 pandemic situation, including limited access.

The most essential limitation in this study is the direct absence of the researcher when the respondent fills out the Research instrument. Thus, rapport does not wake up directly but rather is represented by self-declare. The number of item grains in the research instrument (of the 4 variables studied) is also quite a lot. Meanwhile, students who are respondents also struggle with online lecture activities which are sometimes not easy to overcome. Therefore, it takes quite a long time to get an adequate number of respondents.

REFERENCES


