The Influence of Students' Satisfaction in Online Learning and Its Implications on Students' Motivation and Learning Achievement

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ABSTRACT

This study aims to describe the process of lectures conducted online, namely how the influence of online learning service satisfaction on learning motivation and student achievement of a state Islamic university in Riau. The data collection method in this study was a survey in the form of a questionnaire which was distributed to students with a total sample of 246 people who were distributed to all faculties. Data analysis using SEM Path Analysis 3.0 and SPSS 21. The results showed that satisfaction in online learning was in the satisfied category, motivation was quite high, and achievement was very high, and the effect of satisfaction in online learning on learning motivation was significant in the 2-sided test (t table = 1.97) with a t-statistic value of 9.525 or greater than t table, and the p-value is smaller than alpha 5% (0.000 < 0.05). The effect of satisfaction in online learning on learning achievement is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 0.856 which is smaller than the t table, and the p-value is smaller than alpha 5% (0.392 > 0.05). The effect of learning motivation on learning achievement is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 3.090 greater than the t table, and the p-value is less than 5% alpha (0.002 < 0.05). The effect of satisfaction in online learning on achievement is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 2.999 greater than the t table, and the p-value is smaller than alpha 5% (0.003 < 0.05). The results of the research above indicate that satisfaction in online learning has a significant effect on learning achievement through student learning motivation at university.

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1. INTRODUCTION

The 2019 coronavirus outbreak, known as Covid-19, has affected the academic community. In education, UNESCO reported that 1.6 billion high school graduates were enrolled in postsecondary
education in April 2020. With this as a guide, the traditional classroom setting was phased out in favour of an online format (Pusdatin Kemendikbud, 2020). Because of the COVID-19 pandemic, universities in Riau, like many other universities, have been forced to adopt online education. The e-learning system is subpar, which is a concern for online classes because many students are located in rural areas where internet access is still spotty. During the Covid-19 period, Google Classroom was the primary tool for teaching and learning at universities, while tools like Zoom were employed to supplement and enhance classroom instruction.

Students who have never done face-to-face learning get a better idea of what online learning is like from teachers. The study’s results show that students are ready to learn online systems with the right internet network tools, and students prefer to study online or use blended learning (Appin Purisky, etc., 2021). The study’s results also showed that most students, up to 95.8%, already had the tools they needed to do Distance Learning. However, students didn’t like the current method of Distance Learning because they couldn’t keep track of how well they were doing (Rodame MN, 2020). More motivation is needed for online learning because the learning environment rests on motivation and curiosity (Selvi, 2010). Research (Widiya Alam Sur et al., 2020) also shows that using an online learning system makes people more interested in learning during the Covid-19 pandemic. In line with this, it has been said that online learning methods greatly affect how motivated students are to learn (Nia Desriva, 2020). These results are also in line with a study that says online learning greatly affects how motivated people are to learn (Montessori, 2021).

In online learning, student learning achievement is very decisive, where learning achievement is a benchmark in taking credit scores in the following semester. The method used by the lecturer determines learning achievement because a lecturer must use the right method to produce learning that students can understand (Sujatmika et al., 2016). Changing learning to an online system positively impacts student learning achievement (Albinur Limbong, 2020). Students who study online experience more difficulties in learning (Syafiat, 2021). In addition to online learning methods, learning motivation is also very closely related to learning achievement (Slameto, 2010) says that learning achievement is determined by internal and external factors (Kemal, 2017) states that there is a positive influence of learning motivation on individual learning achievement of students in the accounting education study program. Motivation also significantly affects the student achievement index (Utami, 2014). In line with previous research, motivation significantly affects student achievement (Marlin, 2018).

Motivation comes from the word motive, which can be interpreted as the energy within a person that causes the individual to act (Uno, 2011). Motivation cannot be defined directly, but can be applied to behaviour in the form of stimulation, encouragement, or power generation that leads to certain behaviors. Motivation can be said to be the overall driving force in students that causes learning activities that guarantee the continuity of learning activities, so that the goals desired by the subjects can be achieved (Sardiman, 2012). Gupta (2015) said that academic motivation is the driving force for student learning motivation. Motivation is the need and desire to excel in academic work. Academic behavior can be seen as intrinsic motivation and extrinsic motivation. Khodijah (2014) defines learning motivation as a driving force that transforms inner energy into concrete activity to achieve certain goals. Motivation is not much different from that stated by Uno (2013) that learning motivation is an internal and external drive for students learning to make behaviour changes, generally with several indicators or supporting elements.

In light of the foregoing definition of motivation to learn, we can say that it is a force, both internal and external to the student, that ensures the maintenance of learning activities and the development of the student over time, especially in terms of learning achievement, the worth of which can be quantified. By "learning achievement," I mean the value students have attained on the Learning Achievement Index. According to (Uno, 2013), the motivation to learn is a key factor in understanding and interpreting human behaviour. Motivation plays a number of crucial functions in the learning process, including; identifying factors that can be used to reinforce new information and clear your learning goals. Third, find out how much leeway you have in selecting your learning stimulus. Finding out how dedicated a
student is to their studies. Students might gain insight into the learning and teaching sequence through intrinsic motivation. Students’ desire to learn is a key factor in whether or not they stick with a course of study. Motivating pupils to learn is essential if they are to engage in learning activities and progress towards their goals.

The value of intrinsic motivation in the classroom (Dimyati, 2009) includes having an early, ongoing, and mature awareness of one’s position in the learning process, and outcomes; gives feedback on how well one is doing in terms of learning, relative to their classmates; hands-on educational exercises; generating interest in education; and realisation that life is a voyage of constant education, followed by practise. The theory’s explanation of the role of motivation in learning leads us to the following conclusions: students need motivation to generate behaviour that makes learning difficult; to direct student behaviour that makes it more focused on learning objectives; and to increase enthusiasm that leads to maximum learning achievement. Success in learning is intrinsically linked to deliberate study. For the simple reason that accomplishment is the culmination of a learning process, but learning itself is a process. According to (Arifin, 2013), human beings have eternal difficulty with learning attainment since they strive for success throughout their lives in accordance with their abilities. Learning accomplishment is the end consequence of someone’s efforts to learn (Mulyasa, 2014). This exemplifies the significance of learning accomplishment, which is attained by a person’s unique skills acquired through engagement in learning activities. It is human nature to strive for success in whichever area one is most skilled in. Learning accomplishment is the end consequence of someone’s efforts to learn (Mulyasa, 2014). This exemplifies the significance of learning accomplishment, which is attained by a person’s unique skills acquired through engagement in learning activities. It is human nature to strive for success in whichever area one is most skilled in. Learning accomplishment is the end consequence of someone’s efforts to learn (Mulyasa, 2014). This exemplifies the significance of learning accomplishment, which is attained by a person’s unique skills acquired through engagement in learning activities.

Satisfaction is a feeling where hopes, needs and desires can be fulfilled by a service (Aktan, 2010). Satisfaction in learning, namely service in the teaching and learning process that students can feel. Therefore, learning satisfaction can be interpreted as a state of feeling satisfied because the desired achievement of a learning activity is felt by students. (Wu et al., 2015) said that satisfaction is a theory developed from the customer/consumer satisfaction theory by Cardozo (1965). Therefore, according to the definition of consumer satisfaction, the theory of learning satisfaction sees students as customers who can respond to learning activities in accordance with expectations and reality. Learning satisfaction can be interpreted as emotional strength (Calli et al., 2013 in Ekoto, 2015) or subjective perceptions regarding the state of student learning experience in accordance with student expectations of teaching materials (Ekoto, 2015). According to Ko’s statement in Ko and Chung (2014), learning satisfaction is the level of student satisfaction with the teaching and learning process and the results obtained from that process. In tertiary institutions, students are customers of learning products, where students have the right to invest in majors at the educational institutions they like. So, it is very important to pay attention to student learning satisfaction, starting from those that affect learning satisfaction to the factors that influence student learning satisfaction. Dabbagh and Ritland, (Khairuddin, 2019) state that online learning is an open learning system that uses various media such as the internet, and network-based technology, as a tool to facilitate the implementation of the teaching and learning process and the delivery of knowledge through activities and interactions. Moore et al. (2011), explain online learning is learning to create interactions between teaching and learning processes using internet equipment.

Regarding learning motivation and achievement, online learning satisfaction has an important role. This means that student satisfaction with online learning will have an influence on learning motivation and learning achievement. Students who have high learning motivation will also have an impact on student learning achievement, and conversely, if students are dissatisfied with online
learning then their learning motivation and learning achievement will be low, as well as student learning motivation. If the motivation is low, the learning achievement is also low.

Based on the theory and description that has been presented, the formulation of the hypothesis in this study is:

1. There is an influence on satisfaction in online learning to learning motivation and learning achievement of students.
2. There is an influence satisfaction in online learning on student learning achievement.
3. There is influence motivation to learn to students' learning achievement
4. There is an influence on satisfaction in online learning to achievement learning through student motivation.

2. METHOD

This research is quantitative descriptive. The population is UIN Suska Riau students. The subjects of this research are students. This research was conducted in January - September 2022 with a total sample of 246 people. Researchers used a Purposive sample technique by using Questionnaire and Documentation data collection techniques.

a. Questionnaires are written questions that are used to obtain information from respondents about their personalities or things they know (Arikunto, 2007). This technique is used in collecting respondent data about Online Learning Satisfaction and Student Learning Motivation. Respondents only choose the available answers. In this study, the questionnaire technique was prepared using a Likert scale. The Likert scale can measure satisfaction in online learning by using the answers 1) Very Satisfied, 2) Satisfied, 3) Fairly Satisfied and 4) Not Satisfied. To measure motivation to learn by using the answers 1) Always, 2) Often, 3) Sometimes - Sometimes and 4) Never.

b. Documentation is a data collection technique by viewing and recording reports and is used to find data about variables in the form of notes. This technique is to obtain data or reports from the administrative section of the academic section regarding the value of student achievement for the 2020/2021 academic year at UIN Suska Riau (Y).

The analysis in this study uses SPSS and Path Analysis using the Structural Equation Model (SEM) with Partial Least Square (PLS) using the SmartPLS software application. The benefits of PLS as a testing tool for predictive models or examples include the fact that it does not rely on a variety of opinions, that it can be used to determine which model to use despite its theoretical weakness, that it can be applied to problematic data where classical assumptions do not yield a normal contribution, multicollinearity, and autocorrelation, that it can be applied to small sample types, and that it can be applied to formative and reflective constructs (Tenenhaus et al., 2005 in Jogiyanto, 2009).

This description suggests that PLS, with its predictive character and its ability to analyse if there are independent latent variables and latent dependent variables in the data, is the appropriate method to utilise in this investigation; hence, the sample size of 246 is adequate. Key variables, known as latent variables or latent constructs (Wijanto, 2007), are the primary emphasis of Structural Equation Models. The concept of a latent variable is somewhat theoretical. This latent variable can be viewed imperfectly and inferentially through its effect on the observed variable. Latent variables in SEM can be either exogenous or endogenous. These two classes of variables are distinguished by SEM based on whether or not they serve as the dependent variable in the model equation. All of the model's equations contain exogenous variables as independent variables. All of the other equations in the model are independent variables, but the endogenous variable is the dependent variable in at least one of them.
3. FINDING AND DISCUSSION

3.1 Satisfaction with Online Learning

Table 1. Distribution of satisfaction frequencies in online learning

<table>
<thead>
<tr>
<th>Number</th>
<th>Intervals</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&gt; 130.3 – 155</td>
<td>Very satisfied</td>
<td>55</td>
<td>22.36%</td>
</tr>
<tr>
<td>2</td>
<td>&gt; 105.5 - 130.2</td>
<td>Satisfied</td>
<td>126</td>
<td>51.22%</td>
</tr>
<tr>
<td>3</td>
<td>&gt; 80.7 - 105.4</td>
<td>Quite satisfied</td>
<td>55</td>
<td>22.36%</td>
</tr>
<tr>
<td>4</td>
<td>&gt; 55.9 - 80.6</td>
<td>Not satisfied</td>
<td>10</td>
<td>4.07%</td>
</tr>
<tr>
<td>5</td>
<td>&gt; 31 - 55.8</td>
<td>Very dissatisfied</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: SPSS data processing (2022)

Based on table 1 above, the results show that most of the online learning satisfaction of students is in the interval 105.5 – 130.2; as many as 126 people or 51.22% are in the satisfied category, 55 people are in the interval 80.7 – 105.4 or 22.36% with quite satisfied category. The interval 130.3 - 155 is also 22.36% in the very satisfied category and 10 people are in the interval 55.9 - 80.6, and no students are very dissatisfied with online learning. Thus the data obtained shows that satisfaction in online learning for UIN Suska Riau students is in the "Satisfied" category.

3.2 Student Learning Motivation

Table 2. Frequency distribution of student learning motivation

<table>
<thead>
<tr>
<th>Number</th>
<th>Intervals</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&gt; 78.6 – 92</td>
<td>Very high</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>2</td>
<td>&gt; 64.4 – 78.2</td>
<td>Tall</td>
<td>64</td>
<td>26.02%</td>
</tr>
<tr>
<td>3</td>
<td>&gt; 50.6 – 64.4</td>
<td>High Enough</td>
<td>160</td>
<td>65.04%</td>
</tr>
<tr>
<td>4</td>
<td>&gt; 36.8 – 50.6</td>
<td>Low</td>
<td>22</td>
<td>8.94%</td>
</tr>
<tr>
<td>5</td>
<td>&gt;23 - 36.8</td>
<td>Very low</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

Source: SPSS data processing (2022)

The results of the above study indicate that most of the student learning motivation is in the interval 50.6 – 64.4 as many as 160 people or 65.04% with a fairly high motivation category, 64 people are in the interval 64.4 – 78.2 or 26.02% with high motivation category. 22 people were in the interval 36.8 – 50.6 or 22.8% with low motivation category and no students had very high and very low motivation. Thus the data obtained shows that the learning motivation of UIN Suska Riau students is in the "High enough" category.

3.3 Learning achievement

Table 3. Distribution of Student Learning Achievement

<table>
<thead>
<tr>
<th>Number</th>
<th>Intervals</th>
<th>Category</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>&gt; 3.59 - 3.97</td>
<td>Very high</td>
<td>134</td>
<td>54.47%</td>
</tr>
<tr>
<td>2</td>
<td>&gt; 3.19 - 3.58</td>
<td>Tall</td>
<td>101</td>
<td>41.06%</td>
</tr>
<tr>
<td>3</td>
<td>&gt; 2.78 - 3.18</td>
<td>High Enough</td>
<td>11</td>
<td>4.47%</td>
</tr>
</tbody>
</table>

Source: SPSS data processing (2022)

The results above show that most of the student learning achievements are in the interval 3.59 – 3.97; as many as 134 people, or 54.47% are in the very high learning achievement category, 101 people are in the interval 3.19 – 3.58 or 41.06% in the high learning achievement category and 11 people in the interval 2.78 - 3.18 or 4.47% with a fairly high learning achievement category. Thus the data obtained shows that the learning achievement of UIN Suska Riau students is in the "Very High" category.
3.4 Model Fit Evaluation

Data analysis with SmartPLS is used to evaluate the outer model according to three criteria: convergent validity, discriminant validity, and composite reliability. With the aid of the software’s projected correlation between item scores or component scores, we may evaluate the measurement model’s convergent validity in terms of a reflexive indicator. If an individual reflexive measure correlates with the dependent variable at a level greater than 0.70, we consider it to be of excellent quality. However, a measurement scale with a loading value of 0.5 to 0.6 is regarded as appropriate, as stated by Chin in Ghozali (2008). The maximum loading factor for this investigation is 0.5. Table 4 displays the PLS processing results.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Outer Loading</th>
<th>Critical Value</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPA</td>
<td>1</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP1</td>
<td>0.657</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP15</td>
<td>0.563</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP18</td>
<td>0.696</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP19</td>
<td>0.725</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP21</td>
<td>0.641</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP22</td>
<td>0.755</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP23</td>
<td>0.795</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP24</td>
<td>0.766</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP25</td>
<td>0.777</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP26</td>
<td>0.742</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP27</td>
<td>0.68</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP28</td>
<td>0.721</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP29</td>
<td>0.724</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP3</td>
<td>0.657</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP30</td>
<td>0.649</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>KEP31</td>
<td>0.768</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>MT10</td>
<td>0.684</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>MT11</td>
<td>0.695</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>MT12</td>
<td>0.564</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>MT13</td>
<td>0.611</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>MT17</td>
<td>0.556</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>MT19</td>
<td>0.638</td>
<td>0.5</td>
<td>Valid</td>
</tr>
<tr>
<td>MT7</td>
<td>0.578</td>
<td>0.5</td>
<td>Valid</td>
</tr>
</tbody>
</table>

Source: Data Processing (2022)

The table above shows the loading factor values for each construct of each variable. Based on this it can be seen that based on the loading factor, all constructs are declared valid. Furthermore, the Average Variance Extraction (AVE) test will be carried out to further strengthen the results of convergent validity with the criterion if the AVE value is > 0.5, then the construct used in the study is valid. Furthermore, Fornell and Lacker in Huang (2013) stated that if AVE < 0.5 and Composite Reliability > 0.6 then the construct is still acceptable.
Table 5. AVE Values and Correlation Between Latent Constructs

<table>
<thead>
<tr>
<th>Variable</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with Online Learning</td>
<td>0.942</td>
<td>0.504</td>
</tr>
<tr>
<td>Motivation to learn</td>
<td>0.813</td>
<td>0.385</td>
</tr>
<tr>
<td>Learning achievement</td>
<td>1.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Data Processing (2022)

The table above shows that the average value of the variance extract is used for the convergent validity results. All constructs are accepted as true because their AVE values are larger than 0.5, with the exception of the learning incentive variable, which nevertheless has a composite reliability value of > 0.6. All of these features indicate, when seen from the mean value of the variance extract, that the indicators making up the latent construct have strong convergent validity.

Table 6. Composite Reliability Value of Research Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Alpha Cronbach</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction in Online Learning</td>
<td>0.934</td>
<td>0.942</td>
</tr>
<tr>
<td>Motivation to learn</td>
<td>0.748</td>
<td>0.813</td>
</tr>
<tr>
<td>Learning achievement</td>
<td>1.000</td>
<td>1.000</td>
</tr>
</tbody>
</table>

Source: Data Processing (2022)

Based on Table 6 above, it can be seen that all latent constructs have a Cronbach’s alpha value and composite reliability of more than 0.7. This indicates that latent constructs have good reliability and it can be concluded that indicators as a measure of latent variables are valid and reliable measures.

3.5 Structural Model Testing

Structural model testing was carried out to see the relationship between variables, significance value and R Square of the research model. The structural model was evaluated using R Square for the t test of the dependent variable and the significance of the structural path coefficients. The following is an overview of the structural model in this study.
Figure 1 explains how latent constructs affect the covariance of indicator measurements or how variations from constructs to indicators are reflected in the covariance. This paradigm postulates that shifts in indicators are caused by modifications to latent constructs. One exogenous variable, learning satisfaction, and two endogenous variables, incentive to learn and knowledge retention, make up the model. When evaluating a PLS model, one first looks at the R Square for each latent variable that the model depends on. It is possible to evaluate the influence of some exogenous latent variables on endogenous latent variables by monitoring the change in the R Square value. The picture explains that changes in the value of satisfaction in online learning have a contribution of 20.5% to changes in the value of learning motivation. The remaining 79.5% is influenced by other factors not analyzed in this model. Furthermore, changes in the value of online learning satisfaction and learning achievement contribute 3.5% to changes in achievement scores, the remaining 96.5% is influenced by other factors not analyzed in this model.

3.6 Hypothesis testing

The estimated significance of the parameters provides very useful information about the relationship between the research variables. The basis used in testing the hypothesis is the value contained in the output results for inner weight. The following table presents the output results for testing the structural model:

| Table 7. The Bootstrap Test Result Coefficient of the Research Construct Path |
|---------------------------------|----------------|----------------|-----------------|------------------------------------------------------------------|
| Variable                        | Original Sample (O) | Sample Average (M) | Standard Deviation (STDEV) | T Statistics (O/STDEV) | P value |
| Satisfaction in Online Learning -> Learning Achievement | 0.452 | 0.469 | 0.047 | 9,525 | 0.000 |
| Satisfaction in Online Learning -> Learning Achievement | -0.060 | -0.069 | 0.070 | 0.856 | 0.392 |
| Learning Motivation-> Learning Achievement | 0.206 | 0.217 | 0.067 | 3,090 | 0.002 |

Source: Data Processing (2022)

3.6.1 Hypothesis Testing 1: The Effect of Online Learning Satisfaction on Learning Motivation

Based on the results in the table above, the path coefficient value of the original sample estimate (beta) is positive, which is 0.452. This means that the direction of the relationship between satisfaction with online learning and learning motivation is positive or one-way, which means that if satisfaction with online learning goes up, learning motivation will go up, and vice versa. The 2-sided test (t table = 1.97) shows that the effect of satisfaction with online learning on the desire to learn is significant, with a t-statistic value of 9.525 greater than t table and a p-value less than 5% (0.000 0.05). So, H1 is true, meaning that online learning satisfaction greatly affects the learning drive.

3.6.2 Hypothesis 2 Testing: The Effect of Satisfaction in Online Learning on Learning Achievement

From the results of the table above, the path coefficient value of the original sample estimate (beta) is negative, namely -0.060, indicating that the direction of the relationship between satisfaction in online learning and achievement is negative or vice versa, meaning that if satisfaction in online learning increases, learning achievement will decrease. The effect of satisfaction in online learning on learning achievement is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 0.856 which is smaller than t table, and a p-value smaller than alpha 5% (0.392 > 0.05 ). Thus, H1 is rejected, meaning that satisfaction in online learning has no significant effect on learning achievement.
3.6.3 Testing Hypothesis 3: The Effect of Learning Motivation on Learning Achievement

From the results of the table above, the path coefficient value of the original sample estimate (beta) is positive, namely 0.206, indicating that the direction of the relationship between learning motivation and learning achievement is positive or unidirectional, meaning that if learning motivation increases, learning achievement will increase, and vice versa. The effect of learning motivation on learning achievement is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 3.090 greater than t table and a p-value smaller than 5% alpha (0.002 <0.05). Thus, H1 is accepted, meaning that motivation has a significant effect on achievement.

3.6.4 Hypothesis 4 Testing: The Effect of Satisfaction in Online Learning on Learning Achievement Through Learning Motivation

The effect of satisfaction in online learning on achievement is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 2.999 greater than t table and a p-value smaller than alpha 5% (0.003 <0.05). Thus, H1 is accepted, meaning that satisfaction in online learning significantly affects learning achievement through learning motivation.

DISCUSSION

 Satisfaction in Online Learning

Student satisfaction with online learning falls well within the "satisfied" group, according to the available evidence. Students' responses to a questionnaire containing indicators were used to compile these findings. This study's findings corroborate those of Hanipar Mahyulis Satriana et al. (2020), who found that while online education has met the expectations of 76.82% of students, there was still room for improvement. Mohammad Auza'I Aqib and Muslimin Khoiriyah (2020) also studied student happiness with professors' online pedagogical effectiveness. According to the findings of this research, lecturers' performance in the classroom needs to be high quality for students to feel satisfied when the service provided is superior to their expectations. This study's findings also show how beneficial it might be to receive lectures online. While Maria Theresia and Suhadi (2020) found that students were dissatisfied with online learning due to the Covid-19 Pandemic, this study found that 63.6% of students were satisfied with the role of lecturers during online lectures and 56.4% evaluated online learning. His study's findings indicated that the vast majority of students had negative impressions of online education. With a score of 3.01% and an overall average respondent achievement level of 75.08%, the research results by Fadhila Suskha (2022) indicated that the degree of student satisfaction in implementing online lectures was in the unsatisfied category.

Student Learning Motivation

Based on the results of research that has been done shows that motivation to learn in the good category. These results are in accordance with research conducted by Dharma, et al. (2021) showing that student learning motivation in online learning during the Covid-19 pandemic is in the good category. The conclusion from this research is that the pandemic that has hit the world is not a reason for students to have high motivation. Even though in practice there are deficiencies found, there is no choice but to optimize online learning, because in an emergency like this, only technology is the bridge in transferring knowledge. Likewise research conducted by Fitriyani et al (2020) the results of his research showed that student motivation in learning during Covid-19 was very good. It is hoped that the results of his research will become material for evaluating various parties who organize online learning in tertiary institutions, especially those involving motivation and become study material for researchers in developing student learning motivation. Sur et al. (2020) stated the results of her research that the online learning system had a positive effect on learning motivation during the Covid 19 pandemic.
Technology-enhanced learning, or e-learning, helps students both in and out of class. Students’ interest in and drive to learn from their online lectures are described in the findings of research by Nurhanifah, Evendi, and Nurulwati (2021). His findings indicate that pupils’ levels of interest and motivation are about average. The paradigm shift from traditional classroom instruction to internet resources occurred during the Covid-19 pandemic. Research by Vhalery et al. (2020) indicates that students’ perceptions of online learning have an effect on their motivation to learn, and that many students express dissatisfaction with the format of online courses, which often consist of only assignments with little in the way of explanation of the subject matter being covered. Students still conduct online lectures and use the classroom, zoom, and Meet applications despite the findings of a study by Syariani and Rohana (2021) that they are not very motivated towards online learning, it is not very effective, and there are several obstacles including networks, data packages, etc.

Student Learning Achievement

The findings of the studies conducted place the level of academic success at a very high level. This study’s findings corroborate those of Purnawinadi (2021), who found that students’ achievement in one particular area increased both before and after the pandemic, to the point where the disparities between the two became statistically significant. Student learning both before and during the pandemic, this study also explains how the true concept of independent learning can be realised through technology in the classroom, allowing students the chance to learn and grow on their own accord despite the pandemic’s mandate for online education.

Harsono et al. (2021) also stated that online learning has an influence on student learning achievement. The results of their research also suggest that online learning only predicts 14.5% of student achievement. The results of this study are also supported by research conducted by Imania et al. (2021) which suggests that online learning has a significant influence on student learning achievement and online learning is a helper to the world of education during the Covid-19 pandemic and student learning achievement tends to increase and is stable even though learning is done online. In contrast to the findings of Suci Yuniarti’s (2021) study, which found no difference in learning achievement between offline and online learners prior to the Covid-19 outbreak, our data suggests otherwise.

The Effect of Online Learning Satisfaction on Learning Motivation

Based on the results of the study, it shows that the path coefficient value of the original sample estimate (beta) is positive, which is 0.452, indicating that the direction of the relationship between satisfaction in online learning and learning motivation is positive or unidirectional, meaning that if satisfaction in online learning increases enthusiasm for learning will increase, so vice versa. The effect of satisfaction in online learning on learning motivation is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 9.525 greater than t table, and a p value smaller than alpha 5% (0.000 <0.05) . Thus, H1 is accepted, meaning that satisfaction in online learning has a significant effect on learning motivation. The results of this study are in line with those conducted by Muhammad Fakhri et al (2022) showing that there is a positive effect of online lecture satisfaction on learning motivation during the Covid-19 pandemic with a large effect of 3.8%. The implication of this research is that increasing learning motivation can be intervened through increasing online lecture satisfaction, the higher the online lecture satisfaction, the higher the learning motivation. Cahyani et al. (2020) shows that student satisfaction with the learning climate in the online learning system also influences student learning motivation, so educators need to create a conducive classroom atmosphere to maintain student learning motivation so that they have a good learning climate.

This is consistent with the findings of the study, which indicated that 153 individuals were very satisfied with their online lessons. Nortvig et al. (2018) found that students’ levels of learning motivation in online lecture courses were significantly affected by the presence of a strong online lecture identity. According to a study by Kuo et al. (2013), students are more engaged and motivated to learn when they are satisfied with their online lectures. Research confirms that students who report
high levels of satisfaction with their online lectures are also more likely to be highly motivated to learn, which can speed up the learning process and help them graduate on time.

The Effect of Satisfaction in Online Learning on Learning Achievement

The study's findings show that the direction of the relationship between online learning satisfaction and achievement is negative, or vice versa, with a path coefficient value of -0.060, indicating that if online learning satisfaction increases, learning achievement will decrease, and vice versa. With a t-statistic of 0.856, which is smaller than t table, and a p-value smaller than alpha 5% (0.392 > 0.05), the effect of online learning pleasure on learning accomplishment is statistically significant at the 2-tailed level (t table = 1.97). Since this is not the case, we must conclude that H1 is false and that learner happiness with online courses has no bearing on their performance. This study's findings corroborate those of Fifian lie et al. (2022) with respect to the correlation between students' happiness with their academic advisors and their GPAs. The 0.833 p-value at the 5% level of significance is indicative of this.

Unlike the research conducted by Basuki Rahmat and Irmayanti (2020) that there is a relationship between the level of student learning satisfaction by using online and student learning achievement. So it is expected that educational institutions need to increase the evaluation of student learning outcomes through monitoring at the end of each semester and for researchers it is hoped that they can continue this research with different variables such as learning motivation variables, other learning methods, their relationship with learning achievement. This result is in line with what was done by Suryandari and Ika (2022) who argued that there is a positive influence between student satisfaction on academic achievement. The limitation in this study is that data collection is done by questionnaire so that the objectivity of the respondents is the only thing that is relied upon for the validity collected.

The studies by Dewiningsih (2020) are similar. According to his findings, students' levels of satisfaction with the blended learning approach and their perceptions of their own learning both had a favourable impact on their IP scores. According to studies conducted by Cintia KDL Telambanua (2021), student satisfaction with online learning methods has a direct bearing on students' academic performance.

The Effect of Learning Motivation on Learning Achievement

Based on the findings, it was determined that the direction of the relationship between learning motivation and learning achievement is positive or unidirectional, such that an increase in learning motivation will lead to an increase in learning achievement and vice versa. This value of the path coefficient (beta) was 0.206. The effect of learning desire on learning achievement is statistically significant at the 95% confidence level (t table = 1.97, t-statistic = 3.090 > t table, p = 0.002 0.05) in a two-tailed test. Therefore, H1 is accepted; this suggests that motivation significantly affects performance. The study's findings corroborate those of Resti Setia Ningsih and Hanung Atmaja (2021), who found that students' academic performance improved when they were more invested in their studies.

Student learning motivation has a considerable influence on learning accomplishment, as indicated by Ferdy Muslifiansyah et al (2022), who conducted the same research. This suggests that high levels of student motivation will have a positive effect on academic success. Further research into student learning motivation is anticipated in light of findings contradicting those of a study by Widya Frenka Sari and Tri Kurniawati (2020), who suggested that student learning motivation did not have a substantial effect on student learning achievement.

The Effect of Satisfaction in Online Learning on Learning Achievement Through Learning Motivation

The effect of satisfaction in online learning on achievement is significant in the 2-sided test (t table = 1.97) with a t-statistic value of 2.999 greater than t table and a p-value smaller than alpha 5% (0.003 <0.05). Thus, H1 is accepted, meaning that satisfaction in online learning has a significant effect on learning achievement through learning motivation. This is consistent with findings from a study by Sumarsono et al. (2021) that found that students' levels of learning motivation directly and indirectly
affected their levels of satisfaction with their academic performance. Satisfaction with the service received promotes the drive to learn, which in turn boosts academic success. This agrees with the view of Kotler (1999), who argues that customer satisfaction is an expression of the joy or dismay one feels as a result of contrasting the product's actual performance with one's expectations. Therefore, it is time to make improvements in service to students so that they will feel satisfied with the service they receive, arouse their learning motivation, and find it easy to achieve their academic goals when they are satisfied with the service they receive.

CONCLUSION
According to the study that has been done, students at UIN Suska Riau are satisfied with their online learning, are motivated to learn, and have very high learning achievement. The effect of satisfaction with online learning on learning motivation is significant in the 2-sided test ($t$ table = 1.97), with a $t$-statistic value of 9.525 greater than $t$ table and a $p$-value less than 5% (0.000 0.05). This means that H1 is accepted, which shows that satisfaction with online learning has a significant effect on learning motivation. The effect of satisfaction with online learning on learning achievement is significant in a two-sided test ($t$ table = 1.97) with a $t$-statistic value of 0.856, which is smaller than $t$ table, and a $p$-value smaller than alpha 5% ($0.392 > 0.05$). This means that H1 is rejected, which shows that satisfaction with online learning has no significant effect on learning achievement. The effect of learning motivation on learning achievement is significant ($t$ table = 1.97) with a $t$-statistic value of 3.090 greater than $t$ table, and $p$ is less than 5% alpha (0.003 < 0.05). This means that H1 is accepted, which shows that motivation has a significant effect on achievement. The two-sided test ($t$ table = 1.97) shows that the effect of satisfaction with online learning on achievement is significant. The $t$-value is 2.999 more than the $t$-table, and the $p$ value is less than 5% ($0.003 < 0.05$). This means that H1 is accepted, which shows that satisfaction with online learning has a significant effect on learning achievement at UIN Suska Riau through student learning motivation.

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