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Student Autonomy, Self-Efficacy on Engagement, and Student Engagement and Service Quality on Student Satisfaction

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ABSTRACT

Online learning is currently being carried out thoroughly in order to decrease interaction between students and lecturers in order to minimize the consequences of corona virus transmission. In such a learning experience, it is believed that the contact between lecturers and students would drive students to engage in the learning that takes place, hence not lowering the learning process's quality. Student satisfaction is an evaluation that the quality of information or knowledge meets students' expectations. This paper aimed to examine the effect of student autonomy and student self-efficacy on student engagement, and student engagement and service quality to student satisfaction. Variables were measured using a questionnaire adopted from previous research. This research focused on accounting students at universities in East Java, Indonesia, especially students from batch 2018 – 2021 in three universities. A survey was distributed online and had gathered 323 valid responses. The Partial Least Squares (PLS) method was used to evaluate the hypotheses in this research. This study found that the students with higher self-efficacy and higher autonomy will have higher level engagement. Higher student engagement will lead to higher student satisfaction. Higher service quality will also lead to higher student satisfaction.

Keywords: *Service quality, Student Autonomy, Self-efficacy, Student Satisfaction, Student Engagement*

1. INTRODUCTION

As a student, the satisfaction in absorbing course material and graduating is heavily influenced by the learning experience. The student learning process may be observed in how someone interacts with the professor, absorbs the information that the lecturer has delivered, and completes the assigned work. Students may take advantage the current transition in the learning process from traditional mode to distant mode in order to enhance the learning process and their competencies.

Much research on distance learning satisfaction have been conducted with student satisfaction being one of the most important variables [1]. Students may demonstrate positive conduct related to student involvement in school activities by following school regulations and not breaking them, maintain a positive attitude, and participating in school activities. Student involvement has an influence on the learning process by enhancing scientific knowledge or behavior and reaching academic values desired by students and educators. Student involvement may offer feedback to the lecturer about how successfully the lecturer is educating and encouraging students in the learning process [2]. In today's online learning, student participation may be shown by students' interactions with lecturers during online learning and meeting deadlines given by the lecturer; this can represent student activity throughout the pandemic online learning [3].

Some of the drivers of customer satisfaction are the accessibility of accessing information, the degree of performance attributes [4], previous experiences [5], and search time in selecting services [6]. Satisfaction is characterized as a student's feeling towards the quality of learning, process flexibility, and student attitudes [7].

2. LITERATURE REVIEW AND HYPOTHESES FORMULATION

2.1 Self-efficacy

According to the Social Cognitive Theory [8], self-efficacy is a factor that may influence engagement and motivation. Self-efficacy is described as a person's evaluation of one's ability to execute certain tasks and is a source of motivation [9] and relates to an individual's self-assurance in his capacity to achieve the desired objective [10]. A person's perception of their own ability to accomplish what is required to attain a certain result [11]. [12] stated that the degree to which individuals may enhance their performance is determined by the events that occur in their life. Students who are confident in their capacity to accomplish what is necessary to attain certain outcomes likely to exert more effort in goal-related tasks than students who are insecure about their ability. When students participate in challenging activities, they show more perseverance and resilience [12].

2.2 Student Autonomy

Student Autonomy has the basic word autonomy which means controlling one's own actions [13]. Student autonomy is one approach for enhancing teaching which is recognized as a motivating perspective for making teaching more effective [14]. [3] described autonomy as students' psychological requirements that underpin intrinsic motivation, as well as objectives and values that aid them in engagement, exploration, and learning. Self-determination theory stated that there are three core human psychological needs: competence, relatedness, and autonomy. When these needs are fulfilled, students will be encouraged to engage in actions that are beneficial to their psychological development [15]. Self-determination theory emphasizes the role of autonomy in intrinsic motivation. Based on [16], a source of student intrinsic motivation helps in developing classroom engagement.

2.3 Service Quality

The service quality literature has a lot to do has with higher education [17]. Perceived quality could be distinguished between customer expectations and customer perceptions [18]. However, when the customer's perception is higher than the customer's expectation, it shows that the quality perceived by the customer is higher [18]. Students are the primary customers of a university [19]. "A form of attitude linked but not identical to satisfaction, and the outcome of contrasting expectations with perceived performance" is how service quality is described [20].

2.4 Student Engagement

The level of interest, how students interact with others, and desire to learn may all be used to characterize student involvement. Student satisfaction is an indicator of how well faculty and institutions satisfy their expectations and objectives [21]. The degree to which a customer is satisfied with the services they get may be seen as an overall evaluation of those services based on their experience with the service provider [20]. [22] defines student engagement as a positive, satisfying, and work-related state of mind characterized by passion, commitment and absorption.

2.5 Student Satisfaction

Student satisfaction is defined as a "short-term feeling that occurs as a consequence of reviewing the educational experiences, services, and facilities that students encounter throughout the learning experience" [23]. If student satisfaction with education is high, then student satisfaction may be viewed as a preference that students assess subjectively based on educational outcomes and experiences [24]. Student satisfaction is measured by the quality of information and knowledge or by the information and knowledge itself in relation to student expectations. Good service standards may lead to student satisfaction. According to [25] student satisfaction in online learning is influenced by four factors: the amount of time spent collecting assignments, engagement and communication between students and professors, active learning, and collaboration among classmates. Students believe that audio responses are more helpful than written ones because communication is clearer [26]. This can be seen when students have completed their tasks and responsibilities in accordance with their expectations.

2.6 Relationship Between Variables

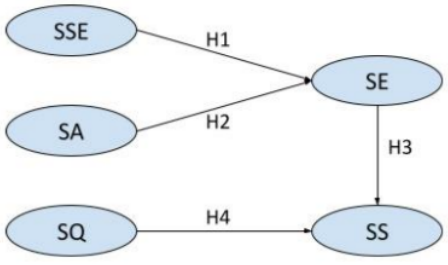

Figure 1 Research Model

2.6.1. Self-Efficacy and Student Engagement

Self-Efficacy is one of the critical factors that can encourage learning. The belief that they can

accomplish a task in certain situations may be used to assess student self-efficacy [27]. Previous study has shown that students with strong levels of self-efficacy are more engaged in their learning [28]. Meanwhile, poor self-efficacy leads to higher apathy in class [29]. Self-efficacy is one's faith in one's accomplish certain jobs and may be a source of motivation [9]. Students with a strong self-efficacy are more likely to work hard to enhance their cognitive skills and learning techniques [2] and be more dedicated when confronted with learning challenges [30]. Thus, students will show high involvement to achieve certain goals.

The findings of prior study by [31]; [32]; [33] shows that there is a significant and positive correlation between self-efficacy and student engagement. In addition, research conducted by [3], also demonstrated a significant relationship between self-efficacy and student engagement and has an impact on online classes.

H1: Self-efficacy has a positive impact on Student Engagement.

2.6.2. *Student Autonomy and Student Engagement*

Autonomy support is related to the connection between educators and students [34]. According to [35], teachers' support for autonomy may boost students' enthusiasm and motivation to learn, as well as their academic success. By meeting students' autonomy needs, we can boost student engagement and motivation [36]. [37] claimed that at the university level of education, students must develop into autonomous learners, or learners who make their own learning decisions. [38] The degree of student involvement among undergraduates has been demonstrated to be linked to the degree of student autonomy. Additionally, autonomy might boost an individual's participation in an activity [39]; [40].

H2: Student Autonomy has a positive impact on Student Engagement.

2.6.3. *Student Engagement and Student Satisfaction*

Student participation is not directly linked to student satisfaction, but it may have a major impact on student persistence, retention, or ability [41]. Student involvement is a prerequisite for offering high-quality education that is linked to student satisfaction [42]. In this situation, various characteristics of successful virtual teaching model implementation may be recognized, including the creation of a knowledge exchange platform and virtual learning forums to assist one another. It emphasizes engaged and active learning [3]. [43], underlined the importance of student participation in their process of education for student satisfaction and learning, and so student involvement may boost student satisfaction. The findings of an earlier paper performed by [44] argued that student involvement can be considered one of the most significant aspects of student satisfaction. The finding of this study are confirmed by previous researchers who suggested that student involvement strengthen the relationship between student interaction and student satisfaction [45].

H3: Student Engagement has a positive impact on Student Satisfaction.

2.6.4. *Service Quality and Student Satisfaction*

Students are treated as customers in today's online learning environment, and student satisfaction is the primary goal of a university [46]. To get a student's satisfaction, a university must first understand the quality of service perceived by students, as well as the activities that must be done in order to reach the target of student satisfaction [47]. The major factor influencing student satisfaction is the quality of service perceived by learners (teaching, administrative support, educational facilities, school infrastructure, support services, and internationalization) [48]. The impact of service quality on student satisfaction is determined by the extent of interaction between learners and institutions, which involve the real surrounding, such as lecturers and staff members, lesson material, classroom settings, social activities, and intangible contexts such as friendships, and relationships [49]. Students may observe the difference in quality between traditional classrooms and virtual classrooms while switching from traditional classrooms to online learning as it relates to campus resources, learning procedures, and lecturers [23]. The results research done by [50] overall service quality has a significant relationship to student satisfaction. Clearly, there is a correlation between the two of service quality perceived by students on student satisfaction [20]. In research conducted by [51], service quality has an impact on consumer trust and satisfaction in the area of e-banking.

H4: Service Quality has a positive impact on Student Satisfaction.

3. RESEARCH METHODOLOGY

3.1 Data Selection and Collection

In this paper, quantitative data is obtained by distributing questionnaires that had previously been used by researchers to test hypotheses. Data collection was carried out within a period of 1 month from March 2022 to April 2022.

3.2 Population and Sample

This study's population was accounting students from universities in East Java of Indonesia. This was represented by three well-known universities in Surabaya, namely Petra Christian University, Surabaya University, and Airlangga University with total population of 2,370 students. First two universities represent private and the last represents a public university.

This study selects respondents using purposive sampling method based on the criterion: students from batch 2018 - 2021 where batch year represents the year students admitted to university. The reason was these were active students at the time of data collection that experienced some form of learning online due to Covid-19 pandemic. This study received 385 respondents, but only 323 met the requirements.

3.3 Measurement

Variables were measured using instruments adopted from previous research. The questionnaire is divided into two parts; where the first part on sociodemographic included university, study program/department, class, gender, age, GPA, average online study hours per week, learning methods, devices used during online lectures, and student status. The second section comprises of questions pertaining to each variable being studied. Questions for Student Autonomy, Self-efficacy, Student Engagement, Student satisfaction were adapted from [3], while Service Quality variable was adopted [21].

3.4 Data Analysis Method

This paper uses the Partial Least Square (PLS) data analysis method with the assistance of the SmartPLS software to discover the relationship between variables.

4. RESULTS AND DISCUSSION

4.1 Outer Model Analysis

Outer Model analysis was performed to test the validity and reliability of the data utilized in the study to determine the relation between indicators and variables. Results from the Outer Model test are as follows:

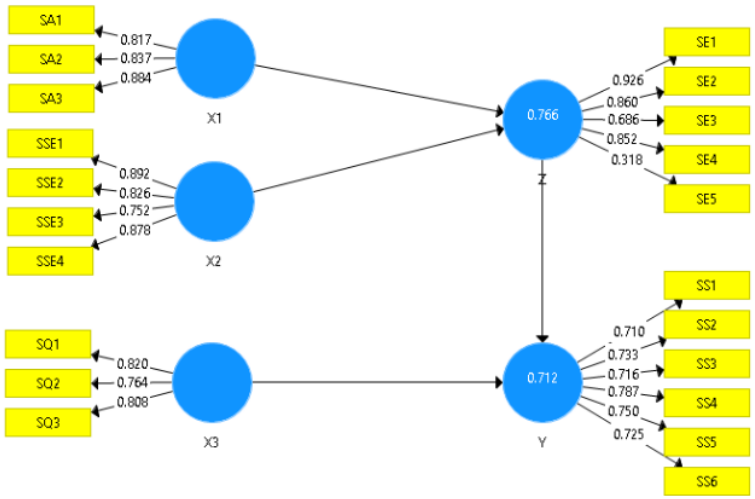

Figure 2 Outer Model

4.1.1 Reliability and Validity Test

Researchers utilized reliability and validity tests to verify the validity and reliability of the data they collect in the study, as well as to identify any data anomalies.

Table 1. Construct Reliability and Validity

Variable	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted
Student Autonomy	0.804	0.809	0.883	0.717
Self – Efficacy	0.858	0.872	0.904	0.704
Student Engagement	0.785	0.868	0.863	0.579
Service Quality	0.713	0.714	0.840	0.636
Student Satisfaction	0.833	0.836	0.877	0.544

When conducting reliability and validity tests, there is a minimum value for each test. Cronbach's Alpha is expected to have a value of > 0.6, Composite Reliability is expected to have a value of > 0.8, and AVE is expected to have a value of > 0.5. Table 1 shows that all of the variables in the research have passed the minimum value required for each test, demonstrating that all variables have fulfilled the criteria and are reliable in their nature.

4.2 Inner Model Analysis

Figure 3 shows the Inner Model after reviewing the Outer Model.

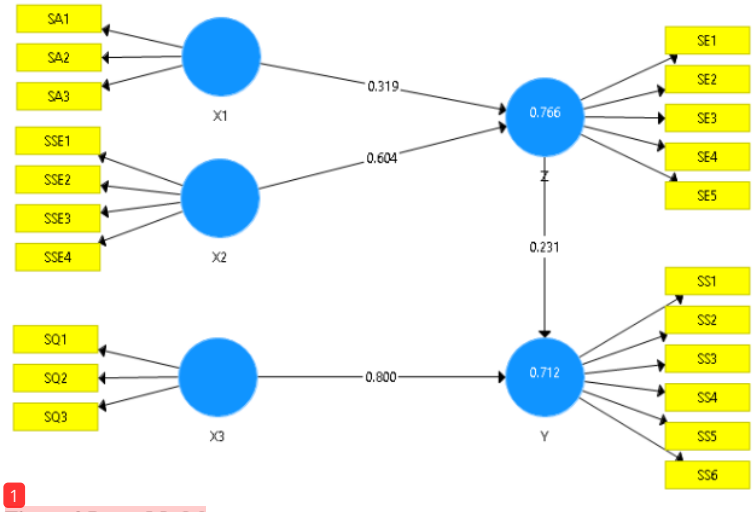

Figure 3 Inner Model

4.2.1 R-Square

The R-Square test was conducted to see whether the independent variables could explain the dependent variables. The R-Square value should be between 0 and 1, with a higher number indicating better result.

Table 2. *R-Square*

Variable	R-Square	R-Square Adjusted
Student Engagement	0.766	0.765
Student Satisfaction	0.712	0.710

Based on the data presented in Table 2, the R-square value of the SE 0.766, suggests that 76.6% of SE variation is explained by the independent variables SA and SSE, while the remaining 23.4% is

explained by other factors not included in the research. SS, which has an R-square value of 0.712, which defines that the independent variable SQ and SE influences SS by 71.2%, while 28.8% is explained by other variables not examined in this paper.

4.3 Hypotheses Testing

Table 3. *Path Coefficient*

Indicator	Original Sample	T. Statistics	P. Value	Result
Student Autonomy → Student Engagement	0.319	7.114	0.000	H1 Accepted
Self – Efficacy → Student Engagement	0.604	15.873	0.000	H2 Accepted
Student Engagement → Student Satisfaction	0.231	6.296	0.000	H3 Accepted
Service Quality → Student Satisfaction	0.800	40.744	0.000	H4 Accepted

Results of hypotheses testing is presented in Table 3. The relation between Student Autonomy and Student Engagement is significant because it has a t-statistic value of 7.114 or > 1.96 and a p-value of 0.000 or <0.05. In the Original Sample, the value is 0.319, which indicates a positive result. H1 is accepted since it shows a significant positive relationship between student autonomy and student engagement. This result in line with previous research, which showed a positive and significant relationship between student autonomy and student engagement [31]; [32]; [33]; as well as having an impact on online classes [3].

The relationship between Self-Efficacy and Student Engagement is significant because it has a t-statistic value of 15,873 or > 1.96 and a p-value of 0.000 or <0.05. The Original Sample value is 0.604, which indicates a positive value which means the direction of the test is in accordance with the proposed hypothesis. It can be said that the relationship between Self-Efficacy and Student Engagement is significantly positive; therefore, H2 is accepted. This supports previous study where student autonomy can increase individual involvement in an activity [39]; [40]; among undergraduate students [38].

The relation between Student Engagement and Student Satisfaction can be said to be significant because it has a t-statistic value of 6296 or >1.96 and a p-value of 0.000 or <0.05. The Original Sample value is 0.231, which mathematically and theoretically shows a positive value. It may be stated that the relationship between Student Engagement and Student Satisfaction is significant and positive; hence H3 can be accepted. This supports prior research, which confirmed that student involvement is one of the factors in determining student satisfaction [44]; and strengthens the relationship between student interaction and student satisfaction [45].

The relationship between Service Quality and Student Satisfaction can be said to be significantly positive because it has a t-statistic value of 40,744 or > 1.96, a p-value of 0.000 or <0.05, and an Original Sample value of 0.800, which indicates a positive value, thus H4 can be accepted. This supports research conducted by [50] that service quality has a significant relationship to student satisfaction, as well as service quality perceived by students has a direct effect on student satisfaction [20].

Based on the value of the Original Sample, the highest value that affects the Student Engagement variable is Self-Efficacy, which is 0.604. This shows that Self-Efficacy has a more significant influence than the effect of Student Autonomy on Student Engagement (0.319). At the same time, the highest value that affects the Student Satisfaction variable is Service Quality, with an Original Sample value of 0.800. As a result, Service Quality has a more significant effect than Student Engagement (0.231).

5. CONCLUSIONS AND SUGGESTIONS

According to the Social Cognitive Theory put forward by [8] self-efficacy is an element that may affects motivation and engagement. In consideration of the pandemic of COVID-19, this research investigates student participation and student satisfaction in distance learning. This research model is tested using the PLS method and the SmartPLS program. All hypotheses proposed in the study related to Student Engagement and Student Satisfaction were found to be significantly positive. The variable that has more influence on Student Engagement is Self-Efficacy, while the variable that has more influence on Student Satisfaction is Service Quality. This demonstrates that students with higher self-efficacy are more actively engaged in the learning process and higher service quality lead to higher student satisfaction.

There were limitations in this study, such as limitations in data collection and scope, the data collected only from 3 major universities in Surabaya, East Java with students majoring in accounting. Future research could involve accounting students recruited from more accounting universities in East Java or even in other provinces and comparing results between universities in big and smaller cities.

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