Students' Satisfaction Towards Online Learning at English Education Study Program

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Abstract

This study aims to explore students' satisfaction during online learning process related to 3 aspects which are: Course Structure, Online Learning Flexibility and Technology Quality in English Education Study Program of Pattimura University. This study was conducted with Mixed Method research design using questionnaire as the data collection technique. There were 2 types of questionnaires: Close-Ended Likert Scale questionnaires and Open-Ended Questionnaires. The participants were the active students of English Education Study Program of Pattimura University batch 2017, 2018, 2019 and 2020. The result shows that students' satisfaction rate is between Satisfied and Satisfied Enough. This means that the satisfaction rate is average. The study also produces a collection of students' feedbacks and suggestion.

Keywords: *Students Satisfaction, Course Structure, Online Learning Flexibility, Technology Quality, Students' Feedback*

INTRODUCTION

Online learning was chosen as the best alternative options by the government to ensure that learning and teaching process continue even during pandemic situation. Teachers and lecturers all over the world facilitated learning through internet either synchronous or asynchronous using various program and platforms without have to be in school and campus. Students were also restricted to come to campus and instead must study from home through internet. To address this situation, the campus stakeholders have utilized learning management system and created new regulations related to the application of the system and platform of studying and teaching from home.

In regards to the running of online learning, there are several aspects needed by both of lecturer and the students to support the learning process such as the course structure, online platform used and human resources that are able to engage and managed the online learning process. A well-designed component of online course will be able to ensure satisfaction as well as improve the learning experience and boost academic achievement (Ghaderizefreh & Hoover, 2018). Learning platforms, apps, and other technology should be correctly chosen to support the main objective of the subject as well as suitable with students' technology use ability is also another aspect (Hardini, Setyarini, & Harto, 2021). The online learning and teaching learning experience must also satisfy the attributes of stimulation and attractiveness (Agyeiwaah, Baiden, Gamor, & Hsu, 2022) where the design of the classroom engagement left students motivated and excited.

English Education Study Program of University of Pattimura has employed online learning as an immediate action to adhere to national policy regarding Covid-19 since March of 2020. Lecturers, students as well as the education institute was thrown in to the depth of unknown and scrambling to learn as we go. Currently, the English Education Study Program has resumed the offline and onsite class due to the low rate of covid-19 cases and according to local authority protocol. Nevertheless, the returning to classroom does not mean returning to the classroom and learning process that we know before the pandemic. The teaching and learning process nowadays have an integrated a hybrid approach in the classroom design. This research was conducted at the end of 2021 and early 2022 where students and teachers have learned so much during the 2 years' time and was preparing to return to onsite classroom. The discussion of student satisfaction is crucial as means to reflect and analyze the process of teaching that has been conducted and to gain feedback on what to improve in the future application of online learning.

Student satisfaction in online learning can be defined as "a short-term attitude resulting from an evaluation of students' educational experience, service, and facilities" (Weerasinghe & Fernando, 2018) of the online learning process. It is an aspect that encourage academic performance and continued participation in online class (Aldhahi, Alqhatani, Baattaiah, & Al-Mohammed, 2022) and Academic success (Jeong, Kim, Kim, & Jeong, 2022). A preliminary study was conducted by means of a focus group discussion where students of English Education Study program gave a mixed responses on their online learning experience. Students discussed the challenges they faced with technology and platform use, the teaching style and course structure as well as the design and application of the online learning. This preliminary study is in line with Harsasi & Sutawijaya (2018) who emphasized that the four variables that influence students' satisfaction in online learning are course structure, online learning flexibility, online tutorials quality, and technology quality.

This study was conducted to assess students' satisfaction towards online learning at English Education Study Program and to gather feedback from the students on their general opinion and suggestion to improve online learning process as to also improve the satisfaction rate for future online learning in English education study program. The study adapted Harsasi & Sutawijaya (2018) work where it took three out of four factors that influence students' satisfaction that can be seen from the model below:
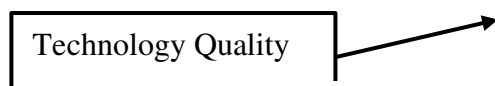
Technology Quality
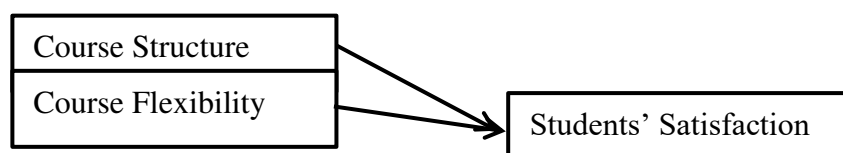
Chart 1 Determining Factor of Students Satisfaction used in this study

Course structure is the structure of course content, which is the systematic of lesson delivery which includes the course syllabus and lesson design and presentation. Meanwhile, online learning flexibility covers the professionalism of the lecturer in handling the whole of teaching and learning process in an online learning setting. It is in how the lecturer manage the time in an online learning process and build up good interaction between lecturer and the students also between students and students. Online flexibility also regards the language use by the lecturer, how lesson objectives and goals are conveyed, opening opportunity for learning for both active and passive students. Lastly, technology quality is related to the internet connection, access to gadgets and technology which can influence the whole of online learning process.

METHOD

The study applied the explanatory mixed method research. It was conducted at English Education Study Program of FKIP Unpatti which targeted students from academic year 2017, 2018, 2019 and 2020 at Pattimura University. These students were, at the time of the research, registered as active students. The total number of students for these 4 academic year were 375 students. Proportional stratified sampling (Gay, Mills, & Airasian, 2012) using Yamane's Formula (Yamane, 1967 in Sugiyono, 2014; Osahon & Kingsley, 2016; Israel, 2003) was used and yielded an estimation 194 samples needed for the questionnaire response. The participants were selected randomly and were asked to complete the questionnaire which aimed to get 194 students and get an even number of representations from each batch.

The instrument used was questionnaire with Close-Ended and Open-ended questions and statements. The close-ended questionnaire consisted of 18 statements which were adapted from Harsasi & Sutawijaya (2018). Statement number 1-4 were on Course Structure, number 5-11 were on Online Learning Flexibility, and number 12-18 were on Technology Quality. Student respondents were to choose from a Likert scale of 1 (Strongly Disagree) to 4 (strongly agree). There were two open-ended questions added to the questionnaire. The first question was to find out students' general perception or opinion about online learning process in pandemic situation. The second question was used to gather students' suggestion on how to improve students' satisfaction in online learning at English Education Study Program. This study was conducted at the end of 2021 to early 2022 where due to Covid-19 heath protocol restriction still in place, the questionnaire was distributed online.

The data were then calculated to get the satisfaction rate using the procedure adapted from Zunaidah & Amin (2016). First, each of the likert scale options were assigned score: Strongly Agree is 4, Agree is 3, Disagree is 2 and Strongly Disagree is 1. These scores were totaled for each of the questionaire items. Then calculated using the following formula:

$$Satisfaction\ rate = \frac{Total\ of\ Respondent\ score}{Maximum\ score\ for\ 158\ respondents} \times 100$$

The result was assessed based on the Satisfaction Criteria Indicator below adapted from Zunaidah & Amin (2016) and Sugiyono (2014).

85-100	Extremely Satisfied
70 – 84.99	Satisfied
55 – 69.99	Satisfied Enough
40 – 54.99	Not Satisfied / Unsatisfied
0 – 39.99	Extremely Unsatisfied

The qualitative data was obtained from the open-ended questionnaire questions. It was then treated with the thematic analysis technique (Nassaji, 2015) which prescribes the six steps in analyzing the data: Familiarization, Generating Initial Codes, Searching for Theme, Reviewing Theme, Defining and naming the themes, and producing report.

FINDINGS AND DISCUSSION

The research targeted 194 students as the respondents in this research. However, there were only 158 students who completed and submitted their responses to submit the questionnaire which shared by the researcher. That means, this research was able to obtain 85% of the targeted respondents. Lindemann (2021) and Willot (2019) stated that an average survey response rate of between 33% - 50% or higher should be considered "excellent in most circumstances". These 158 respondents are students from batch 2017 (23 respondents), 2018 (36 respondents), 2019 (51 respondents), and 2020 (49 respondents) at English Education Study Program Pattimura University.

FINDINGS

Close-Ended Items Questionnaire Findings

The result of this research shows a high rate of Students' satisfaction towards online learning process at English Education Study Program as seen from 3 satisfaction aspects: course structure, online learning flexibility and technology quality. This result can be seen in the following result table.

Table 1 Close-Ended Questionnaire Responses on Satisfaction for Course Structure, Course Flexibility and technology Quality

Questionnaire Items	Max Score for 158 respondents	Total Respondents score	%	Satisfaction Criteria
COURSE STRUCTURE				
Q1. Material is structured and systematic	632	498	78.80	**Satisfied**
Q2. Learning objective displayed properly	632	490	77.53	**Satisfied**
Q3. Online material is arranged in logical	632	502	79.43	**Satisfied**

and understandable way				
Q4. OL include all material I need	632	469	74.21	**Satisfied**
ONLINE LEARNING FLEXIBILITY				
Q. 5 flexibility in managing study time	632	470	74.37	**Satisfied**
Q6. OL benefit me	632	426	67.41	**Satisfied Enough**
Q7. OL benefit me	632	461	72.94	**Satisfied**
Q8. Flexibility to divide time with other activity	632	426	67.41	**Satisfied Enough**
Q9. can manage time effectively	632	436	68.99	**Satisfied Enough**
Q10. save time	632	393	62.18	**Satisfied Enough**
Q11. OL makes me want to skip class	632	361	57.12	**Satisfied Enough**
TECHNOLOGY QUALITY				
Q12. Can be accessed from anywhere	632	470	74.37	**Satisfied**
Q13. no experience - difficulties	632	390	61.71	**Satisfied Enough**
Q14. No difficulties in online discussion	632	395	62.50	**Satisfied Enough**
Q15. trouble in uploading assignment	632	402	63.61	**Satisfied Enough**
Q16. easy to use	632	446	70.57	**Satisfied**
Q17. Helpful for learning	632	436	68.99	**Satisfied Enough**
Q18. Facilitate Communication	632	456	72.15	**Satisfied**

The result shows that responses in the 3 aspects were marked Satisfied to Satisfied Enough. 8 out of the 18 questionnaire (50%) items were marked Satisfied and the other 8 items (50%) were marked Satisfied enough. Therefore, students' satisfaction can be categorized as average.

Open-Ended Items Questionnaire Findings

There were 2 open-ended questions included in the questionnaire. The first question asked the students to discuss their opinion and satisfaction concerning the online learning process. In answering this question, students also provided an elaborate answer on the reason for their satisfaction and unsatisfaction. The result indicated that 50 out of 158 students (31.64%) were not satisfied with the online learning. Despite the 50 students who were unsatisfied, a significant number of students (108 students or 68.36%) claimed that they are satisfied with their experience. The reasons for the unsatisfactory and satisfactory experience are mentioned below and categorized based on the 3 aspects of satisfaction: Course Structure, Online Learning Flexibility, and Technology Quality. The reasons below are ranked from the most mentioned to the least mention.

Table 2 Students' Feedback based on the satisfactory and unsatisfactory online learning experience on the aspect of Course Structure

Factors Influencing students' Satisfaction	Unsatisfied Feedback	Satisfied Feedback
Course Structure	1. Some students feels that online learning is not efficient to help with understanding 2. Prefer skill-based classes to be done in person (onsite – face-to-face) 3. Several Lecturers and class are boring and monotonous 4. Some lecturers teaching style is boring and unmotivated 5. Overwhelming workload where assignment left them to work for long hours 6. Some Lecturer only "dump" lesson without scaffolding their understanding 7. Some lecturers do not teach every week, always come late to zoom meeting and do not facilitate a good online class dynamic 8. Students did not get enough feedback for improvement 9. Significant number of students worried that their speaking skill is suffering	1. Depending on which lecturer and how they structure the class, some students believe that online learning actually helps them to understand the lesson better 2. There was more time for elaboration and for expanding the learning based on the suggested materials and links recommended. 3. Some lecturers provided clear, structured and systematic lesson to guide independent learning 4. Some lecturers have excelled in learning and applying new teaching techniques and strategy that are more suitable for online learning 5. File sharing and a working LMS helped students to build a collection of important reading materials and references.

Table 3 Students' Feedback based on the satisfactory and unsatisfactory online learning experience on the aspect of Online Learning Flexibility

Factors Influencing students' Satisfaction	Unsatisfied Feedback	Satisfied Feedback
Online learning Flexibility	1. Although online learning can be flexible, students preferred an offline class where they can interact face-to-face 2. Flexible time, means they have to spend long hours working at too many assignments that was	1. Online learning saves them time. They can multitask and they can save time where usually spent to travel to and from campus 2. Online learning saved them financially where the cost of transportation and food were significantly reduced.

designed to coax them to learn many things in short amount of time.	3. It provided them with flexible learning management where they can study anywhere and anytime as long as there is internet connection.
3. Students felt overwhelmed with too many deadlines and assignments	4. Online learning enabled them to be responsible for their own learning process and achievement.
4. Students struggled to managed their time wisely and efficiently	5. The asynchronous side of online learning gave them longer time to study the lesson and complete assignment.
5. Some students find online class too 'relax' where lecturers cannot reprimand them directly.	6. Students enjoy the direct conversation and discussion off class through LMS or WhatsApp Group.
6. Students finds way to avoid participation in class and there's likely no immediate punishment will be given	7. Students liked that online learning enabled them to be with their family and in the comfort of their own place all while learning so much.
7. Learning from home is difficult for many students because of the noise and distractions.	

Table 4   Students' Feedback based on the satisfactory and unsatisfactory online learning experience on the aspect of Technology Quality

Factors Influencing students' Satisfaction	Unsatisfied Feedback	Satisfied Feedback
Technology Quality	1. Significant challenge faced by almost all students were the limited access and affordability for internet connection either Wi-Fi or Mobile Phone Data/Quota 2. The uneven distribution of internet connection means some areas where students live have bad internet connection. This created problem for students when they cannot follow the synchronous session (zoom) because their connection keeps getting down or lost 3. A small number of students do not always have gadgets to use for online learning.	1. Students believed that their digital literacy and skills improved significantly 2. Students felt that they are now more confident in using technology and engaging in digital interaction. 3. Students believed that they are now better understand how to utilized the internet more wisely and effectively for the benefit of learning 4. Students felt that the present technology such as internet connection and gadgets, helped them in peer-to-peer, group or classroom discussion

This may be because they do not own their own Headphone or laptops. Or their gadgets were broken and took some time to be fixed or getting a new one

4. Some students also complained about the subsidized internet data provided by Kemdikbud. They believe that the distribution was unfair because not all of them receive it although they have submitted their data and that they belong to the underprivilege students who should be receiving this

5. Another problem is the memory storage in the gadgets, students reported that they were out of memory so many times because of the many apps they need to install and so many learning materials (PDFs or videos etc) they have to download so they can use in learning

6. Students also hoped that all lecturers will use the same Learning Management System (eq. only Google Classroom) and the same virtual meeting program (eq. only zoom). So, the students do not have to log in and out of different platforms

5. Online learning experience also helped them to improve their confidence therefore they are much braver to speak in a virtual setting

6. The virtual connectivity enabled them to connect with people from around the world. For example, they can participate in international conference, seminars, events, lectures etc. which they can only wish and imagined to attend before.

DISCUSSION

The research looks at students' satisfaction on 3 aspects of online learning: Course Structure, Online Learning Flexibility, and Technology Quality. **Course structure** is about the structure of course content, which is about the systematic of material delivering by the lecturer; this point refers to the professionalism of the lecturer in handling the whole of material while online learning process. The way teacher delivers the content of the material can improve teacher teaching quality and affect students' satisfaction about the whole of material Amos & Hassan (2017). Therefore, it can be seen from the result that course structure is the aspects which has the biggest role in affecting students' satisfaction during learning process. According to Harsasi & Sutawijaya (2018), course structure has become a factor that contributed in affecting students' satisfaction during learning process. They

emphasized further that lecturers have to develop coherent and structured learning material is also technically well as designed.

Students' satsifaction on the material can be affected by the structure or systematic deliverance of the material in the classroom. Ball et al (1993) as cited on Amos & Hassan (2017) explained that, the systematic of the material which was delivered by the lecturer can improve the chance in achieving high quality teaching and affecting students' satisfaction as whole. Harsasi & Sutawijaya (2018) added that, in designing, developing and delivering distance education course it is important to put students' needs and perception as a central consideration to achieve students' satisfaction about learning material.

Satisfaction is also influenced by the profesionalism of the lecturer in handling the class. Bennet et.al (1998) as cited in Amos & Hassan (2017) stated that, lecturer with the high professionalism are competent in handling and develop also to encounters current students' need and improve students' learning value which lead to students' satisfaction. It is important to evaluate students' satisfaction of distance learning because it is related to the quality of online learning and students' performance.

The findings of this research stated that all of the students in English education study program Patimura University represented by the students from batch 2017, 2018, 2019 and 2020 were satisfied with the course structure in classroom. Moreover, the structure of the learning materials in English Education Study Program of FKIP Unpatti has been conveyed properly with the high professionalism of the lecturer in English education study program which is related to the objective of the study during learning process.

Online learning flexibility is another important aspect contributing to students' satisfaction during learning process. online learning flexibility is about the management of classroom during learning process to make the students to be the center of learning process and the interaction between students-students and students-lecturer. In this case, online learning flexibility is about the good communication between students and lecturer during the learning process. It can be in the instance of good instruction given by the lecturer. The way lecturer explained the lesson, etc. Li & Wong (2018) emphasized that flexibility of learning process is the value principle, not a mode of study. They suggested that technology is not the vital element for flexibility of learning process, but flexibility is refers to the use of technology to minimize constrains in learning environment.

In addition, course flexibility consists of three aspects as follows: Flexibility of time management, flexibility of teacher contact, and flexibility of content (Kokoç, 2019). Flexibility of time refers to the possibility of students to determine learning time and pace of learning in online courses. Flexibility of teacher contact is related to the ease with which students can interact with the instructor through alternative ways of communication. Flexibility regarding the content refers to students' ability to learn the content when they want and decide (Bergamin, Ziska & Groner, 2010; Bergamin et al., 2012).

Flexibility during learning process is the important element in an effort to begin indentifying students' needs while learning process and to achieve students' satisfaction toward learning material (Winberg and Hedman, 2008 in Harsasi & Sutawijaya 2018). The flexibility of implementing online flexibility is dramatically contributed to affect students' satisfaction (Arbaugh, 2000 in Suryani & Sugianingrat, 2021). Finally, flexibility of online learning is about students' interaction and communication with the lecturer and peers according to the schedule, method that they agree on.

The presence of covid-19 has brought many changes in all human activities. Many of the activities were conducted online. School and learning process were radically changed by moving to online platform. These phenomena proved that the technology and internet were having the biggest role in human life. In higher education, especially in English Education Study Program, lecturers and students strived hard to adjust and to adapt to the ever-changing world of online. One, of the skill required is the ability to be flexible. The findings showed that most of the students were satisfied with the flexibilities in English Education Study Program FKIP-Unpatti.

Another contributing factor to students' satisfaction is the **quality of technology**. Online learning is the learning process that is conducted online using internet and technology. Online learning can be access anywhere as long as it is conducive and as long as they are connected to internet. Therefore, the success of online learning required the need of support system such as: computer, android, mobile device and also internet connection. Those things are the great platform which have crucial role in supporting learning process.

On the other hand, the effectiveness of teaching and learning process is affected by the quality of technology itself. In this case, learning through online has impact for both students and lecturer. The biggest impact that can be seen is the effectiveness of learning process that can influence students' satisfaction towards online learning process. These processes depended on the quality of technology that was used. It was found most of the time that the lessons delivered by the lecturer were disrupted by the unstable internet connection or incompatible computer and/or mobile device used by the learners or lecturers.

This aspect saw students responding to have only enough satisfaction for the overall experience. Students mentioned common problem such as unstable connection during learning process, low digital literacy on the effective and efficient use of technology, and unfamiliarity with the platforms or apps which required more time dedicated to catch on.

It was interesting to note that the suggestions that were given are mostly directed to themselves or to fellow classmates and not for the lecturers. From this, we can assume that students have had the awareness that the success of their learning is up to them. Therefore, they must be the one to take initiatives and be active in learning in order to achieve a higher mark. Thus, this article would like to end the discussion with one very interesting remark by one of the students which will perhaps give us something to think about when we reflect on the experience of teaching from the lecturers' point of views and the experience of learning from the students' point of views.

> *"... I am also worried about the quality of my learning. Although I get A or B in my courses, I feel like I am not worthy of this score. I do not think that my learning is as good as that. I still feel lacking and do not feel like I have given my maximum effort."* (ML – respondents No. 134, translated)

CONCLUSION

Online learning has been implemented for a total of 4 semesters at English education study program Pattimura University since the beginning of the pandemic. Online learning has been crucial to keep the learning process going during the pandemic situation. It has also become an effective and efficient method to be able to reach a large number of the students in different places. Students' satisfaction in the learning process is one of the

important factors that ensure that the learning process will see a good result academically. Therefore, understanding students' satisfaction is a must in order to become valuable feedback for the improvement of the learning course management and application.

The result enabled us to learn that learning process gave the students more opportunities to be active while learning process. Likewise, students' satisfaction toward online learning is not separated from the quality of technology. Technology is crucial to support learning and teaching process. The common problems faced by the students are the unstable connection and other problem that relate to the quality of technology as support system during teaching and learning process. Similar to the previous point, the course structure also has the biggest role in affecting students' satisfaction. This aspect cannot be separated from the other two aspects. It can be seen from the result in the findings and discussion that It has an important role to influence students' motivation during online learning which will affect students' satisfaction toward online learning process.

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REFERENCES

References

Agyeiwaah, E., Baiden, F. B., Gamor, E., & Hsu, F.-C. (2022, June). Determining the attributes that influence students' online learning satisfaction during COVID-19 pandemic. *Journal of Hospitality, Leisure, Sport & Tourism Education, 30*(1), 1-14. doi:https://doi.org/10.1016/j.jhlste.2021.100364

Aldhahi, M. I., Alqhatani, A. S., Baattaiah, B. A., & Al-Mohammed, H. I. (2022). Exploring the relationship between students' learning satisfaction and self-efficacy during the emergency transition to remote learning amid the coronavirus pandemic: A cross-sectional study. *Education and Information Technologies, 27*(1), 1323-1340. doi:https://doi.org/10.1007/s10639-021-10644-7

Bolinger , D. U. (2018). Engagement Matters: Students Perceptions on the importance of engagement Strategies in the online learning environment. *Online Learning, 22*(1), 205-222.

Gay, L. R., Mills, G. E., & Airasian, P. (2012). *Educational Research: Competencies for Analysis and Applications (10th Ed).* New Jersey: Pearson Education, Inc.

Ghaderizefreh, S., & Hoover, M. L. (2018, September). Student Satisfaction with Online Learning in a Blended Course. *International Journal of Digital Society, 9*(3), 1393-1398.

Hardini, T. I., Setyarini, S., & Harto, S. (2021). Remote Learning Implemented by BIPA Teachers during Covid-19 Pandemic . *Jurnal Kependidikan, 5*(1), 122-136. doi:https://doi.org/10.21831/jk.v5i1.35050

Harsasi, M., & Sutawijaya A. (2018, January). Determinant of Student Satisfaction in Online Tutorial" A Study of A Distance Education Institution. . *Turkish Online*

Journal of Distance Education , *19*(1), 89-99. Retrieved May 2021, from https://eric.ed.gov/?id=EJ1165872

Israel, G. D. (2003). Determining Sample Size. In University of Florida CooperativeExtension Servic, Institute of Food andAgriculture Sciences, & EDIS, *PEOD6* (pp. 1-5). Florida: Univeristy of Florida - IFAS Extension. Retrieved from https://www.tarleton.edu/academicassessment/documents/samplesize.pdf

Jeong, S. H., Kim, S., Kim, H. S., & Jeong, Y. J. (2022, January). Academic Success of Online Learning in Undergraduate Nursing Education Programs in the COVID-19 Pandemic Era. *Journal of Professional Nursing, 38*(1), 6-16. doi:https://doi.org/10.1016/j.profnurs.2021.10.005

Lindemann, N. (2021, August 9). *What's the average survey response rate? [2021 benchmark].* Retrieved from PointerPro: https://pointerpro.com/blog/average-survey-response-rate/

Nassaji, H. (2015). Qualitative and Descriptive Research: Data type versus Data Analysis. *Language Teaching Research, 19*(2), 129--132. doi:10.1177/1362168815572747

Osahon, O. J., & Kingsley, O. (2016). Statistical Approach to the Link between Internal Service Quality and Employee Job Satisfaction: A Case Study. *American Journal of Applied Mathematics and Statistics, 4*(6), 178-184. doi:10.12691/ajams-4-6-3

Sugiyono. (2014). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D.* Bandung: Alfabeta.

Weerasinghe, I. S., & Fernando, R. S. (2018). Critical Factors Affecting Students' Satisfaction with Higher Education in Srilanka. *Quality Assurance in Education, 26*(1), 115-130. doi:https://doi.org/10.1108/QAE-04-2017-0014

Willot, L. (2019, July 12). *Average Survey Response Rate – What You Need to Know*. Retrieved from Customer Thermometer: https://www.customerthermometer.com/customer-surveys/average-survey-response-rate/

Yamane, T. (1967). *Statistics: An Introductory Analysis, 2nd Edition.* New York: Harper and Row.

Zunaidah, F. N., & Amin, M. (2016). Pengembangan Bahan Ajar MataKuliah Bioteknologi Berdasarkan Kebutuhan dan Karakter Mahasiswa Universitas Nusantara PGRI Kediri. *Jurnal Pendidikan Biologi Indonesia, 2*(1), 19-30. doi:https://doi.org/10.22219/jpbi.v2i1.3368