## **Jurnal Ilmiah Mandala Education (JIME)**

Vol. 9 No. 1 Januari 2023

p-ISSN: 2442-9511, e-2656-5862

DOI: 10.58258/jime.v9i1.4134/http://ejournal.mandalanursa.org/index.php/JIME

# Students' Attitude Toward E- Learning During Covid 19 Pandemic At Informatics Department Of Universitas Pgri Sumatera Barat

<sup>1</sup>Rani Autila, <sup>2</sup>Dian Noviani Syafar, <sup>3</sup>Yulmiati <sup>123</sup>English Department, Universitas PGRI Sumatera Barat

#### **Article Info**

#### Article history:

Accepted: 15 November 2022 Publish: 4 Januari 2023

#### Keywords:

Covid 19, E- Learning, Sikap, Siswa

### Article Info

Article history:

Accepted: 15 November 2022 Publish: 4 Januari 2023

### ABSTRAK

Penelitian ini menginvestigasi sikap siswa terhadap E – learning selama pandemi covid 19 pada jurusan Informatika Universitas PGRI Sumatera Barat. Sikap dapat mempengaruhi cara berfikir, perasaan, dan cara berperilaku siswa di dalam proses belajar mengajar. Jadi, guru harus mengetahui sikap siswa. Dalam studi ini, peneliti menginvestigasi sikap siswa yaitu cara berfikir, perasaan siswa dan cara berperilaku dengan menggunakan data empiris. Metode penelitian ini adalah metode kuantitatif dengan desain deskriptif atau penelitian survey. Tipe suvey adalah Cross-sectional. Studi ini meneliti semua siswa pada jurusan Informatika Universitas PGRI Sumatera Barat sesi 2020 A yang berjumlah dua puluh tiga siswa. Data di ambil dari kuisioner. Temuan dari penelitian ini menunjukkan bahwa siswa memiliki pikiran dan perasaan yang positif terhadap penggunaan e-learning dengan rata- rata nilai 3,5 5 (N=23, st.d=0.9). Namun sebaliknya, mereka memiliki perilaku yang negative terhadap penggunaan e-learning dengan rata- rata nilai 2,9 (N=23, st.d=1,0). Jadi, di sarankan kepada guru untuk mengubah siswa dari yang memiliki sikap negative terhadap penggunaan e-learning menjadi sikap positif.

#### Abstract

This study examined how students felt about online learning during the COVID 19 Pandemic at the Informatics Department of the University of Sumatera Barat. Students' ways of thinking, experiencing, or understanding the learning process might be influenced by their attitude. Teachers must therefore be aware of pupils' attitudes. Using empirical data, the researcher used this study to analyze how pupils think, feel, and behave. At the Informatics Department of Universiatas PGRI Sumatera Barat, the goal was to determine how the students' attitudes about thinking, feeling, and acting during the Covid 19 Pandemic influenced their usage of online learning. Research was conducted using a quantitative approach using either a survey or a descriptive design. Cross-sectional research was the study's research design. All students at Informatics Department session 2020 A are examined in this study of the twenty-three students of Universitas PGRI Sumatera Barat. The information was gathered using a survey. According to the study's findings, students exhibit a favorable attitude toward online learning, with a mean score of 3,5 (N = 23, st.d = 0.9). They behave negatively toward online learning, with a mean average of 2,9 (N=23, st.d = 1,0). Therefore, it is advised that teachers help their students transform their negative attitudes into good ones.

> This is an open access article under the <u>Lisensi Creative Commons Atribusi-</u> <u>BerbagiSerupa 4.0 Internasional</u>



Corresponding Author:

Rani Autila

English Department, Universitas PGRI Sumatera Barat

Email: rani.autila.academic@gmail.com

# 1. INTRODUCTION

The way global education released is reshaped by Covid 19. Due to the pandemic, the largest online movement in educational history affected millions of students (El Said, 2021). Online educational technologies, such as Google Classroom, zoom meeting, and Google meet are adopted by teachers to execute teaching and learning processes during the pandemic. Teachers prepare themselves to carry out online education in an instant due to sudden transition of the nature of education (Wen & Hua, 2020). Students who are geographically distant provided by online education (Wen & Hua, 2020).

As a tool for distance learning, E-learning have many definitions across obtainable literature. E-learning define as application of Internet and connected tools and technologies to deliver a broad range of solutions to the teaching learning process. E-learning also refer to instructional material supported by electronic technologies (Thakkar et al., 2017). Furthermore, E-learning incorporates any form of

technology in an educational setting where the teaching and learning process is carried out (Sabah, 2013). In addition, e-learning makes interactive and collaborative learning by connecting each student flexible to time, cost and location (Sabah, 2013). Students' characteristics are used to evaluate the effect of e-learning on system of education. Students' attitudes toward e-learning and reasons for adopting e-learning are influenced by student characteristics (Sabah, 2013).

There is a strong relation between attitude and action. Therefore, evaluating the attitudes has a significant role in diagnosing students' actions. Attitude signify in a possible degree of adopting certain action. Hence, students with positive attitude display a greater possibility of believing e-learning system (Sabah, 2013). Students with positive attitudes and logical language-related beliefs are more likely to engage in constructive learning than those with negative attitudes and incorrect beliefs (MANTLE-BROMLEY, 1995). Also, (Mori, 1999) claimed that positive beliefs can compensate for students' lack of skills.

On the contrary, (Horwitz, 1985) was worried that some errors beliefs may weaken learners success in language learning. A tangle that researchers have in defining the term beliefs is the distinction between beliefs and knowledge; some explain that they are the same, while others believe they are not. Pajares concludes belief is based on evaluation and judgment, whereas knowledge is based on objective reality (Pajares, 1992).

The aim of this study is to investigate the most common attitude among informatics department students. The following research question guides the design of this study. How are the students' attitude of thinking, feeling and behavior on the use of E-learning during Covid 19 Pandemic at informatics Department of Universitas PGRI Sumatera Barat?

Because of Covid-19, higher education institutions all over the world are converting traditional classes to online classes. The study about students' attitude toward online classes during covid 19 pandemic become concentrated of many researchers around the world. In Hungary (Ismaili, 2020) has completed a study titled "Evaluation of students' attitudes toward distance learning during the pandemic (Covid-19): an ELTE university case study." This study evaluates students' early experiences with the Microsoft Teams and Zoom platforms. They also examine the impact of distance learning on student satisfaction and attitudes towards teaching. The findings of this study show that distance learning is still evolving, and while traditional classrooms appeared to be essential, the majority of students engaged in distance learning had a positive impact in the post-COVID19 pandemic. Their positive attitude and willingness suggest that distance learning has great potential for the future. A learning platform in higher education institutions.

Then, (Hamid et al., 2020) from Indonesia conducted a study titled "Online learning and its problems in the Covid-19 emergency period." The purpose of this study is to obtain a detailed description of: 1) the distribution of PGSD FKIP UHO students based on domicile in implementing online learning during the Covid-19 period. (2) Infrastructure support for online learning effectiveness during Covid-19. (3) The student's perception of online learning at her UHO by a PGSD FKIP instructor during the Covid-19 period. The investigation revealed that: (1) PGSD FKIP UHO online learning students were concentrated in three major cities, namely Kendari City, Muna District, and Konaweseratan District. (2) The viability of network access and the ability of devices to access the Internet were the primary factors underlying the effectiveness of online learning during Covid-19. (3) During COVID-19, students discovered that online learning practices were insufficiently effective.

In addition, (Wen & Hua, 2020) A study titled 'ESL Teachers' Intentions to Adopt Online Teaching Technologies During the Covid-19 Pandemic' was conducted in Malaysia. The purpose of this study was to investigate the relationship between ICT competencies, infrastructure, online resources, and work environments, as well as teachers' intentions to use online teaching technologies. The study also identified the most important factors influencing teachers' behavioral intentions. The results showed that work environment was moderately correlated with teachers' behavioral intentions, but the other two factors of her were highly correlated with teachers' behavioral intentions. The study found that infrastructure and access to online resources were the most important factors influencing teachers' behavioral intentions.

Additionally, Egypt's (El Said, 2021) published a study titled 'How has the COVID-19 pandemic affected learning experiences in higher education?' An empirical study on student performance in universities in developing countries", in which her COVID-19 lockdown at one of his universities in Egypt abruptly switched from face-to-face to online distance learning investigating the impact. The results of this study provide concrete recommendations for universities, educators, and university portal designers for the future application of online distance learning.

Moreover, a study named "Assessing Distance Learning in Higher Education during the COVID-19 Pandemic" was conducted by Moroccan researchers (El Firdoussi et al., 2020). This study looks into the constraints of online learning environments and how these activities are carried out at public and private universities in Morocco when the country is under coronavirus quarantine. In this study, instructors and students agreed that online learning is not more engaging than traditional instruction and that professors should deliver at least 50% of their lectures in person.

Additionally, a study titled "Strategy to improve English vocabulary success amid COVID-19 outbreak" was conducted by Malaysian researchers Huei et al. in 2021. Are tests helpful? In order to improve vocabulary achievement among primary English as a Second Language (ESL) students in rural schools, this project will make use of Quizizz. The findings of this study Quizizz may help primary English as a Second Language (ESL) students in rural schools reach higher vocabulary levels.

Before the Covid 19 Pandemic, researchers began to concentrate on students' attitudes about online learning. Indian researchers (Thakkar et al., 2017) conducted a study named "Students Attitude Towards E-Learning." This study aims to understand how diploma engineering students feel about elearning adaptation. Results indicate that diploma engineering students have a very favourable tendency to use online learning. Additionally, this attitude is unaffected by pupils' disparities in gender, location, or social class.

In addition, a study named "Students' attitude and motivation towards e-learning" was conducted by a Palestinian researcher, Sabah (2013). This study examines the effects of four learning strategies used by students at Alquds Open University: face-to-face instruction, blended learning, virtual classrooms, and video streaming. He also looks into how students feel about online learning and what drives them. The data gathered indicates that students value and embrace the integration of e-learning and in-person instruction. When the complete learning and teaching strategy is used, e-learning is more effective.

Additionally, a study titled "E-learning: A study on secondary students' views toward Online Web Assisted Learning" was conducted by researchers from South Australia in Paris in 2004. In this study, 52 Year 10 students from an Adelaide Public Secondary School were asked about their affective, behavioral, and cognitive attitudes about a particular kind of online e-learning called online web-assisted learning (OWAL). The data gathered reveals that OWAL activities are positively ranked over PAL activities.

Next, a study titled "Students' Attitude Toward E-Learning in South-West Nigerian Universities: An Application of Technology Acceptance Model" was conducted by Adewole-Odeshi in Nigeria in 2014. The study looked at how students at a few south-west Nigerian universities felt about e-learning. According to research, students view online learning favorably because they find it convenient and helpful for their academic work. The intention to use an electronic learning system is also influenced by attitude.

Finally, a study titled "Attitude Towards E-Learning: the Case of Mauritian Students in Public Teis" was conducted by Odit-Dookhan from Mauritius in 2018. By examining students' views and usage habits of a typical e-learning system, this paper aims to close the gap. The findings show that students are utilizing technology in their coursework and want to do so in a more advanced manner.

### 2. RESEARCH METHOD

Students' attitude of thinking, feeling and behavior on the use of E-learning can affect the ways learners interact with different learning activities.

This study was conducted at college of teacher training and education, Universitas PGRI West Sumatera, where Indonesian is spoken as the official language. The majority of students in this college, however, come from some provinces and regencies in Sumatra Island. The participants of this study were 23 students of Informatics Department of Universitas PGRI Sumatera Barat who studied English subject for one semester. That is, the participants were all first-year college students and they were native speakers of Indonesian.

The questionnaire was adapted from (Thakkar et al., 2017), (Sabah, 2013), (Ismaili, 2020), (Paris, 2004), (Adewole-Odeshi, 2014), (Odit-Dookhan, 2018). This survey consists of 15 items measuring in three major components: (1) Students' Attitude of Thinking on the Use of E-learning during Covid 19 Pandemic, (2) Students' Attitude of Feeling on the Use of E-learning during Covid 19 Pandemic, (3) Students' Attitude of Behaviour on the Use of E-learning during Covid 19 Pandemic. The scores of each response are 5 = strongly agree (SA), 4 = agree (A), 3 = undecided (U), 2 = disagree (D), and 1 = strongly disagree (SD). SPSS was used to analyze the students' responses to different items on this survey.

### 3. FINDING AND DICUSSION

- 1. How are the students' attitude of thinking on the use of E-learning during Covid 19 Pandemic at Sosiology Departement of STKIP PGRI Sumatera Barat.
  - The analysis of students' responses to the adapted questionnaire was carried out and the results were grouped and reported under different categories. Table 1 shows the results of students' opinions on the students' attitude of thinking on the use of E-learning during Covid 19 Pandemic. More than a half of students agreed "E- learning allows me to share knowledge faster" (item 1) and "E- learning allows me to discuss lesson easily" (item 2). When a half of students neutral about statement "My interaction by using E-learning is understandable" (item 4). However, only one third agreed "E- learning allows me to interact with the teachers and friends clearly" (item 3) and "Using E-learning allows me to improve my skills in English " (item 5).
- 2. How are the students' attitude of feeling on the use of E-learning during Covid 19 Pandemic at Sosiology Departement of STKIP PGRI Sumatera Barat.

  Table 2 illustrates the results of students' responses to items on Students' Attitude of Feeling on the
  - Use of E-learning during Covid 19 Pandemic. The results indicated a majority of students agreed "Learning language using E-learning is a pleasant idea"(item 6), "Learning how to use E-learning is easy" (item 7), "I like to collect assignments at E-learning rather than traditional method" (item 9) and "Using E-learning helps me to improve my grades" (item 11). However, a half of students neutral about the statement "Learning language using E -elarning is convenient" (item 8). While on third of students agreed "I like to do quiz at E-learning rather than traditional method" (item 10).
- 3. How are the students' attitude of behavior on the use of E-learning during Covid 19 Pandemic at Sosiology Departement of STKIP PGRI Sumatera Barat.
  - Table 3 presents the results of students' responses to the Students' Attitude of Behaviour on the Use of E-learning during Covid 19 Pandemic. The results revealed that almost a half of students agreed "E-learning allows me to become skill full in discovering information from teachers and friends" (item 12) and "E-learning allows me to engage with teachers and friends anytime and anywhere" (item 14). When more than a half of students disagreed with the statement "Using E-learning is more pleasant rather than face to face learning" (item 13). Additionnaly, one third students disagreed with the statement "I hope teacher continue to use E-learning in teaching learning process" (item 15)

Table 1. Students' Attitude of Thinking on the Use of E-learning during Covid 19 Pandemic

No	Items	Percent	age in a Likert	Means and SD				
		SA	A	N	D	SD	M	SD
1	E- learning allows me to share knowledge faster	22%	52%	26%	-	-	4.0	0.7
2	E- learning allows me to discuss lesson easily	9%	52%	30%	9%	-	3.6	0.8
3	E- learning allows me to interact with the teachers and friends clearly	9%	39%	30%	17%	4%	3.3	1.0
4	My interaction by using E-learning is understandable	9%	35%	52%	4%	-	3.5	0.7
5	Using E-learning allows me to improve my skills in English	4%	35%	17%	35%	9%	2.9	1.1
	Students' Attitude of Thinking on the Use of E- learning during Covid 19 Pandemic						3.5	0.9

Notes: A five-point Likert scale are shortened as: SA (strongly agree), A (agree), N (neutral), D (disagree), SD (strongly disagree).

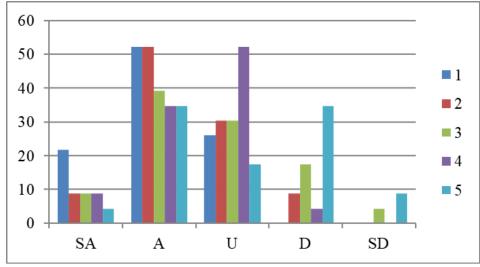


Chart 1. Students' Attitude of Thinking on the Use of E-learning

Table 2. Students' Attitude of Feeling on the Use of E-learning during Covid 19 Pandemic

No	Items		ntage in a	Means and SD				
		SA	A	N	D	SD	M	SD
6	Learning language using E- learning is a pleasant idea	4%	39%	26%	30%	-	3.2	0.9
7	Learning how to use E-learning is easy	17%	52%	26%	4%	-	3.8	0.8
8	Learning language using E - elarning is convenient	4%	17%	52%	26%	-	3.0	0.8
9	I like to collect assigments at E- learning rather than traditional method	22%	61%	4%	13%	-	3.9	0.9
10	I like to do quiz at E-learning rather than traditional method	30%	35%	13%	13%	9%	3.7	1.3
11	Using E-learning helps me to improve my grades	4%	57%	35%	4%	-	3.6	0.6
	Students' Attitude of Feeling on the Use of E-learning during Covid 19 Pandemic						3.5	0.9

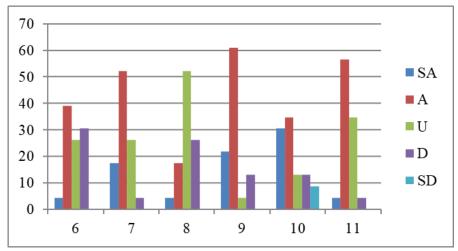


Chart 2. Students' Attitude of Feeling on the Use of E-learning

Table 3. Students Attitude of Benaviour on the Use of E-learning during Covid 19 1 andenne								
No	Items	Percer Likert	ntage in a scale	Means and SD				
		SA	A	N	D	SD	M	SD
12	E-learning allows me to become skill full in discovering information from teachers and friends	9%	48%	30%	13%	-	3.5	0.8
13	Using E-learning is more pleasant rather than face to face learning	-	4%	17%	57%	22%	2.0	0.8
14	E-learning allows me to engage with teachers and friends anytime and anywhere	22%	39%	22%	17%	-	3.7	1.0
15	I hope teacher continue to use E-learning in teaching learning process	4%	26%	13%	30%	26%	2.5	1.2
	Students' Attitude of Behaviour on the Use of E-learning during Covid 19 Pandemic		•	•	•	•	2.9	1.0

**Table 3.** Students' Attitude of Behaviour on the Use of E-learning during Covid 19 Pandemic

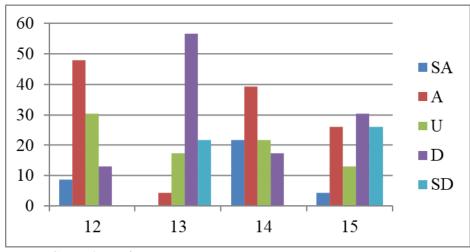


Chart 3. Students' Attitude of Behavior on the Use of E-learnig

The present study aimed to investigate the students' attitude of thinking, feeling and behavior on the use of E-learning during Covid 19 Pandemic at Sosiology Departement of STKIP PGRI Sumatera Barat, especially for the firstyear students who studied English subject. The prime data-collection instrument used for researching learner was adapted from (Thakkar et al., 2017), (Sabah, 2013), (Ismaili, 2020), (Paris, 2004), (Adewole-Odeshi, 2014), (Odit-Dookhan, 2018). Those items measuring learners' Attitude on the Use of E-learning during Covid 19 Pandemic in three major components: (1) Students' Attitude of Thinking on the Use of E-learning during Covid 19 Pandemic, (2) Students' Attitude of Feeling on the Use of E-learning during Covid 19 Pandemic, (3) Students' Attitude of Behaviour on the Use of E-learning during Covid 19 Pandemic. In this research, according to the statistical analysis, the findings from the questionnaire revealed that item 1 component 1 received the mean average 4,0 (N=23, st.d=0.7). This indicate that E-learning allows students to share knowledge faster. Then, for item 2 in component 1 the mean average 3,6 (N=23, st.d=0,8). This indicate that E- learning allows students to discuss lesson easily. Further, item 4 component 1 showed the mean average 3.5 (N=23, st.d=0.7). This showed that students' interaction by using E-learning is understandable. Furthermore, for item 7 component 2 the mean average 3,8 (N=23, st.d=0,8). This indicate that learning how to use E-learning is easy for students. Moreover, for item 9 component 2 the mean score 3,9 (N=23, st.d=0,9). This indicate that students like to collect assignments at E-learning rather than traditional method. In addition, for item 10 component 2 the mean score 3,7 (N=23, st.d=1,3). This indicate that students like to do quiz at E-learning rather than traditional method. In addition, for item 11 component 2 the mean score 3,6 (N=23, st.d=0.6). This finding showed using E-learning helps them to improve their grades. Further, for item 12 component 3 the mean score 3,5 (N=23, st.d=0.8). This revealed E-learning allows students to become skill full in discovering information from teachers and friends. Then, for item 14 component 3 the mean score 3,7 (N=23, st.d=1,0). It means E-learning allows students to engage with teachers and friends anytime and anywhere. These findings are consistent with previous research (Wen & Hua, 2020), (Yen & Mohamad, 2021), (Huei et al., 2021), (Hamid et al., 2020), (Moliner et al., 2021), (El Said, 2021), (El Firdoussi et al., 2020), (Ismaili, 2020).

# 4. CONCLUSION

The results of this study which questionnaire as the instrument indicated that (1) Students' Attitude of Thinking on the Use of E-learning during Covid 19 Pandemic are E-learning allows students to share knowledge faster. E-learning allows students to discuss lesson easily and students' interaction by using E-learning is understandable; (2) Students' Attitude of Feeling on the Use of E-learning during Covid 19 Pandemic are learning how to use E-learning is easy for students, students like to collect assignments at E-learning rather than traditional method, students like to do quiz at E-learning rather than traditional method and using E-learning helps them to improve their grades; (3) Students' Attitude of Behaviour on the Use of E-learning during Covid 19 Pandemic are E-learning allows students to become skill full in discovering information from teachers and friends and E-learning allows students to engage with teachers and friends anytime and anywhere. Additionally, the findings of the research showed that students have a positive thinking and feeling toward e-learning with mean average 3,5 (N=23, st.d= 0.9). In contrast, they have a negative behavior toward e- learning with mean average 2,9 (N=23, st.d =1,0). Learners with positive attitudes and realistic language-related beliefs are more likely to behave in a way that is conducive to learning than those with negative attitudes and false beliefs. (MANTLE-BROMLEY, 1995). So, it is a teacher' role to change their students from negative attitude into positive attitude because learner attitude have the potential to influence both their experiences and actions in learning (Inozu, 2011)

### 5. REFERENCES

- Adewole-Odeshi, E. (2014). Attitude of students towards e-learning in south-west Nigerian universities: An application of technology acceptance model. *Library Philosophy and Practice*, 2014(1).
- El Firdoussi, S., Lachgar, M., Kabaili, H., Rochdi, A., Goujdami, D., & El Firdoussi, L. (2020). Assessing Distance Learning in Higher Education during the COVID-19 Pandemic. *Education Research International*, 2020. https://doi.org/10.1155/2020/8890633
- El Said, G. R. (2021). How Did the COVID-19 Pandemic Affect Higher Education Learning Experience? An Empirical Investigation of Learners' Academic Performance at a University in a Developing Country. Advances in Human-Computer Interaction, 2021. https://doi.org/10.1155/2021/6649524
- Hamid, R., Sentryo, I., & Hasan, S. (2020). Online learning and its problems in the Covid-19 emergency period. *Jurnal Prima Edukasia*, 8(1), 86–95. https://doi.org/10.21831/jpe.v8i1.32165
- Horwitz, E. K. (1985). Using Student Beliefs About Language Learning and Teaching in the Foreign Language Methods Course. *Foreign Language Annals*, 18(4), 333–340. https://doi.org/10.1111/j.1944-9720.1985.tb01811.x
- Huei, L. S., Yunus, M. M., & Hashim, H. (2021). Strategy to improve english vocabulary achievement during COVID-19 epidemic. Does quizizz help? *Journal of Education and E-Learning Research*, 8(2), 135–142. https://doi.org/10.20448/JOURNAL.509.2021.82.135.142
- Inozu, J. (2011). Beliefs about foreign language learning among students training to teach english as a foreign language. *Social Behavior and Personality*, *39*(5), 645–652. https://doi.org/10.2224/sbp.2011.39.5.645
- Ismaili, Y. (2020). Evaluation of students' attitude toward distance learning during the pandemic (Covid-19): a case study of ELTE university. *On the Horizon*, 29(1), 17–30. https://doi.org/10.1108/OTH-09-2020-0032
- MANTLE-BROMLEY, C. (1995). Positive Attitudes and Realistic Beliefs: Links to Proficiency. *The Modern Language Journal*, 79(3), 372–386. https://doi.org/10.1111/j.1540-4781.1995.tb01114.x
- Moliner, L., Lorenzo-Valentin, G., & Alegre, F. (2021). E-Learning during the Covid-19 pandemic in Spain: A case study with high school mathematics students. *Journal of Education and E-Learning Research*, 8(2), 179–184. https://doi.org/10.20448/JOURNAL.509.2021.82.179.184
- Mori, Y. (1999). Epistemological beliefs and language learning beliefs: What do language learners believe about their learning? *Language Learning*, 49(3), 377–415. https://doi.org/10.1111/0023-8333.00094
- Odit-Dookhan, K. (2018). Attitude Towards E-Learning: the Case of Mauritian Students in Public Teis. *PEOPLE: International Journal of Social Sciences*, 4(3), 628–643. https://doi.org/10.20319/pijss.2018.43.628643
- 46 Students' Attitude Toward E- Learning During Covid 19 Pandemic At Informatics Department Of Universitas Pgri Sumatera Barat (Rani Autila)

- Pajares, M. F. (1992). Teachers' Beliefs and Educational Research: Cleaning Up a Messy Construct. *Review of Educational Research*, 62(3), 307–332. https://doi.org/10.3102/00346543062003307
- Paris, P. G. (2004). E-learning: A study on secondary students' attitudes towards Online Web Assisted Learning. *International Education Journal*, *5*(1), 98–112.
- Sabah, N. M. (2013). Students' attitude and motivation towards e-learning. *Proceedings of The First International Conference on Applied Sciences (ICAS), May,* 1–6.
- Thakkar, S., Polytechnic, G., & Joshi, H. (2017). Students Attitude Towards E-Learning. *International Journal of Advance Engineering and Research Development*, 4(11). https://doi.org/10.21090/ijaerd.15380
- Wen, K. Y. K., & Hua, T. K. (2020). Esl teachers' intention in adopting online educational technologies during covid-19 pandemic. *Journal of Education and E-Learning Research*, 7(4), 387–394. https://doi.org/10.20448/journal.509.2020.74.387.394
- Yen, E. L. Y., & Mohamad, M. (2021). Spelling mastery via google classroom among year 4 elementary school esl students during the covid-19 pandemic. *Journal of Education and E-Learning Research*, 8(2), 206–215. https://doi.org/10.20448/journal.509.2021.82.206.215