

FACTORS AFFECTING ONLINE LEARNING MEDIA DURING THE COVID-19 PANDEMIC AT SCHOOL BATAM CITY STATE BASIS

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ABSTRACT

This study was conducted to determine the effect of teaching method variables, use of learning media, teaching materials, time utilization, student behavior, and learning facilities on online learning media variables during the Covid-19 pandemic, the study population was 5,975 teachers spread across 144 schools. Based on the State of Batam City, the sampling method according to Hair et al., (2014) in this study there are 45 question items, so the sample required is a minimum of $45 \times 5 = 225$ respondents. took 30 days to distribute the questionnaires that were distributed via the Google Form link, after the data was collected and then processed and analyzed further researchers. Based on data analysis, it shows the results of hypothesis testing as has been shown in the t test results that the variables of teaching methods, teaching materials, student behavior and learning facilities have a significant effect, while the variables of learning media use and time utilization has no significant effect on online learning media in this case. The results of the F test have a significant effect simultaneously on the independent variable on the dependent variable.

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1. INTRODUCTION

The Covid-19 pandemic condition that has been going on for the last two years has brought extraordinary changes, including in the field of education, of course it is not an easy thing, because both teachers and students are not fully ready to suddenly adapt to learning from home. through online media. This online learning is considered positive in helping learning take place during the pandemic determine teaching strategies and the selection of learning media and applications used, as well as the ability to relate learning materials to the current situation.

The ability of teachers' teaching methods to innovate will be able to change students' learning habits so far by utilizing the use of appropriate media for students. Teachers are required to be creative in delivering material through theleuasrneinogf omnelidnisiea that tailored to the level of education and needs through online learning media.

2. LITERATURE REVIEW

Teaching Method

The teaching method using online media is not alternative learning methods at this time, but are the only options so that the learning process continues even in pandemic conditions by utilizing technology and internet networks. Of course, teachers are required to be creative in for supporting facilities in the form of online learning media.

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Teaching Materials

According to (Gikas & Grant, 2013) in (Sadikin & Hamidah, 2020) that *mobile* devices such as android smartphones, laptops, computers, tablets, and iphones are a means of supporting online learning to access information anytime and anywhere. The use of teaching video applications in delivering information to students is considered better than information in the form of narratives, and the use of messaging features can also be used as a means of discussion, as well as quiz applications that provide convenience and time efficiency for teachers, especially in terms of preparing teaching materials.

Mulyasa (2006) suggests that teaching materials are one part of teaching resources which can be interpreted as something that contains learning messages, both specific and general in nature that can be used for learning purposes. The teaching materials used by teachers at this time are in the form of online or digital, making online learning more effective and efficient, making it easier for teachers and students to carry out learning process activities without space and time limits. Parents are very dominant especially when it comes to student behavior while at home. Because learning from home using online media expects parents as role models in mentoring learning and children's attitudes.

Basically the online learning process currently requires teachers and students to transform into independent learning that is character development of students, but it can't be denied that after running for some time the school is only cognitive development of students, teachers should understand it not just completing the learning curriculum, In learning, it is not just a transfer of *knowledge* by conveying material or giving assignment to students. A teacher must continue to control the daily behavior of student before studying, having breakfast, taking a nap, studying at night, how to study or student behavior when studying parental duties, then in addition to controlling student behavior while at home, is to fulfill supporting facilities for learning needs.

Student Behavior

However thereby the increasingly protracted condition of the Covid-19 pandemic, which cannot be predicted until when it will end, has recently resulted in more and more complaints from parents because children are required to do all activities at home, which causes feelings of boredom to arise due to the many school assignments that are needed. and the lack of interaction and socialization of children in the surrounding community. This is an important task for parents in paying attention and controlling the free time that children have so that they can be used for positive activities.

Learning Facilities

All agreed that learning facilities will affect learning outcomes. Students who have complete facilities and are supported by high teacher performance, tend to have better learning comfort so that they can achieve maximal learning outcomes. However, the actual success of students does not only depend on the performance of the teacher, but is also caused by the factor of learning facilities.

Learning facilities are tools that can be used in order to facilitate and support learning activities. Adequate learning facilities for the needs of the teaching and learning process will support students in achieving optimal learning outcomes. This process becomes important during a pandemic that is affected by learning facilities. In relation to the online learning process, the fulfillment of learning facilities is a natural thing to support teaching and learning activities that are not carried out at school, but at home with various online media that can be utilized.

Use of Learning Media

So in general, online learning media can be interpreted as media equipped with controllers that can be operated by users and can be controlled in accessing what is needed. Learning during a pandemic requires students to be able to understand various online learning media. Currently, various online learning media consisting of various learning media applications are also available and can be accessed easily such as the *WhatsApp application, Google SitPesa, dGleot, oEgglemColdaos, sroorm, video conferencing* such as *Google Meet, Zoom and Webex*, to quiz applications such as *Kahoot, Quizizz*, and the like.

Based on the explanation above, the learning process using online learning media does not mean without obstacles, there are many obstacles that are generally related to technical problems, problems using applications used to quota and signal problems, especially problems from students. with different character backgrounds and learning styles as well as family economics, as well as the problem of teacher competence. There are many factors that hinder the implementation of online learning in many schools that have limited IT systems so that teachers have to fight over the use of learning support devices.

Internet network, online learning cannot be separated from the use of the internet network, the use of cellular networks is sometimes unstable because the location of residence is still far from the reach of cellular signals. Another obstacle is the cost of the internet network, which is very much needed in online learning, which is a problem in itself. The quota purchased for internet needs has increased, and assignments have piled up even though students cannot live at home studying in peace, because they have to face assignments given by the teacher, and other obstacles that may not have been mentioned in this study. This problem certainly has an impact on the performance of teachers in carrying out their main duties, namely educating, teaching, guiding, directing, training, assessing, and evaluating their students. The quality of the educational process, in this case the teacher's performance, greatly determines the quality of education outcomes in Indonesia in general, more specifically in the city of Batam.

Online Learning Media

Online learning media consists of three syllables namely, media, learning and online. The meaning of media in a number of literatures is explained as any tools that can be used as a channel for messages to achieve goals learning (Djamarah, 1995), while (Purnamawati, 2001) states that the media is anything that can be used to channeling messages from the sender to the recipient so that it can stimulate the thoughts, feelings, concerns and interests of students in such a way that the learning process occurs.

3. METHOD

In this study the variables tested were teaching methods, use of learning media, teaching materials, time utilization, student behavior, and learning facilities as variables free (independent) online learning media as the dependent variable (dependent). The population of this study is Teacher Public Elementary School. To find out how much the population is, the researchers asked for data on all public elementary school teachers at the Batam City Education Office. 5,975 people. All teachers.

These are spread across 144 State Elementary Schools. The researcher took the sample of this study using the *convenience sampling* method where the researcher had the freedom to choose any respondents or teachers at the State Elementary Schools he met to be used as research samples based on the theory of Hair *et al.*, (2014) which preferably sample size should be 100 or larger. As a general rule, the minimum sample size is at least five times more than the number of question items to be analyzed, and the sample size will be more acceptable if it has a ratio of 10:1. In this study there are 45 question items, so the required sample size is at least $45 \times 5 = 225$ samples.

The data used in this study is primary data. The primary data in question is research data

obtained directly from the first source, namely teachers at State Elementary Schools in Batam City who were taken as research samples. This primary data was collected through a survey using a questionnaire distribution media. Filling out and collecting this questionnaire takes about 30 days. In this tabulation, a summary, arrangement or arrangement of data is presented in the form of numerical tables and graphs. Descriptive statistical analysis provides demographic data characteristics including gender respondent, respondent's age, education final respondent and employment status respondents.

Next, test the validity and reliability of the variables studied, measured by a number of statement items including teaching methods, teaching materials, student behavior, learning facilities, use of learning media, use of time and online learning media, all independent variables have 5 statements each, there are 2 invalid items in the statement which are then discarded, while online learning media consists of 15 statements, of all statement items after being tested are declared valid and reliable.

Then the *outlier* test is carried out which aims to find the existence of data that have extreme properties that deviate from the normal or reaswohniacbhle valutees,tt,htehnthtehenot rtemissat lity carried out aiming to find out whether each independent variable has a significant effect on the dependent variable partially and the F test to determine the feasibility from data research and it will be known whether the independent variables if viewed together have an influence on the dependent variable.

4. RESULT AND DISCUSSION

In general, the research results can be clearly illustrated as follows :

	Koefisien	t hitung	($\alpha=0,05$)	Sig.	Kesimpulan
Metode Mengajar	.090	1.749	0.05	0.081	Signifikan
Penggunaan Media Pembelajaran	.083	1.404	0.05	0.161	Tidak Signifikan
Bahan Ajar	.155	2.702	0.05	0.007	Signifikan
Pemanfaatan Waktu	.053	1.053	0.05	0.293	Tidak Signifikan
Perilaku Siswa	.125	2.216	0.05	0.027	Signifikan
Fasilitas Belajar	.368	6.747	0.05	0.000	Signifikan

The results of path analysis calculations and the significance of the direct influence between variables can be explained as follows :

- H1 : The teaching method has a significant effect on online learning media, the coefficient value of the teaching method variable is 0.090 which can be concluded that the teaching method has a positive influence on the use of time. Furthermore, if viewed from the significance of $0.081 < 0.05$ or the probability is below 0.05 which means that H1 is accepted, thus the test shows that the teaching method has a significant effect.
- H2 : The use of learning media has a significant effect on online learning media, value of the variable the use of learning media shows the coefficient value of the variable using learning media is 0.083 with a significance level of $0.161 > 0.05$ or the probability is above 0.05 which means H2 is rejected, thus testing shows that the use of learning media has an insignificant effect.
- H3 : Teaching materials have a significant effect on online learning media, the coefficient

value of the teaching materials variable is 0.155 with a significance level of $0.007 < 0.05$ or profitability is below 0.05, then H3 is accepted because there is a significant influence on the dependent variable, thus the test shows that teaching materials have a significant effect.

- H4 : Time utilization has a significant effect on online learning media, the coefficient value of the time utilization variable is 0.053 with a significance level of $0.161 > 0.05$ or profitability is above 0.05, then H4 is rejected because there is no significant effect.
- H5 : Student behavior has a significant effect on online learning media, the coefficient value of the student behavior variable is 0.125 with a significance level of $0.027 < 0.05$ or profitability is below 0.05 then H5 is accepted because there is a significant effect.
- H6 : Learning facilities have a significant effect on online learning media, the coefficient value of the teaching materials variable is 0.368 with a significance level of $0.000 < 0.05$ or profitability is below 0.05 then H6 is accepted because there is a significant effect.
- H7 : Simultaneously teaching methods, use of learning media, teaching materials, use of time, student behavior, and learning facilities have a significant effect on online learning media, the Fcount value is 95.962 while the significance value is $0.000 < 0.05$ or profitability is below 0.05 then H7 accepted because there is a significant effect.

On testing the coefficient of determination (R^2) shows the results of the *adjusted R*. test with the dependent variable of online learning media is 0.422, the value of 0.422 can be interpreted that the independent variable consisting of teaching methods, the use of learning media, teaching materials, time utilization, student behavior and learning facilities used are only able to have an influence on the dependent variable, namely student behavior by 42.2%.

5. CONCLUSION

Based on the analysis of the data in this study, as has been shown in the results, it shows that the variables of teaching methods, teaching materials, student behavior and learning facilities have a significant effect, while the variables the use of learning media and the use of time have no significant effect. The test results on the F test showed that there was a simultaneous significant effect on the variables of teaching methods, use of learning media, teaching materials, time utilization, student behavior and learning facilities on online learning media variables.

Furthermore, in the test results, the value of the *adjusted R* is 0.422 which means that the independent variable teaching methods, use of learning media, teaching materials, use of time, student behavior and learning facilities used in general are only able to give an effect of 42.2% on online learning media, while the remaining 57.8% are influenced by other variables or other reasons outside this research model.

REFERENCES

- [1] Ahmad Chairudin. (2020). *The Effect of Online Learning on the Achievement of 5th and 6th Grade Students of Mi Ma'arif Gedangan, Tuntang District, Semarang Regency* [Salatiga State Islamic Institutme]e. ah.tmtipists:/u/ bishielectric.com/ar/products-solutions/factory automation/index.html.
- [2] Akanbi, AO (2020). Availability and utilization of e-learning facilities in the teaching of Senior School Physics in Ilorin, Nigeria. *Journal of Education and Learning (EduLearn)*, 14(3), 331–337. <https://doi.org/10.1006/10.1006/1413.16342>.
- [3] Alimi, OS, Ehinola, GB, & Alabi, F. O. (2012). School Types, Facilities and Academic Performance of Students in Senior Secondary Schools in Ondo State, Nigeria *International Education Studies*, 5(3), 44–4.
- [4] Alyami, A., Abdulwahed, A., Azhar, A., Binsaddik, A., & Bafaraj, SM (2021). Impact of Time Management on the Student's Academic Performance: A Cross Sectional Study. *Creative Education*, 12(03), 471–485. <https://doi.org/10.4236/ce.2021.123033>

- [5] Atsumbe, BN, Raymond, E., Enoch, EB, & Duhu, P. (2012). Availability and utilization of e learning infrastructures in Federal University of Technology, Minna. *Journal of Education and Practice*, 3(13), 56–64. www.iiste.org
- [6] Azwar, S. (2012). *Research methods*. Learning Library.
- [7] Bustani, B., Khaddafi, M. ., & Nur Ilham, R. (2022). Regional Financial Management System of Regency/City Regional Original Income In Aceh Province Period Year 2016-2020. *International Journal of Educational Review, Law And Social Sciences (IJERLAS)*, 2(3), 459–468. <https://doi.org/10.54443/ijerlas.v2i3.277>.
- [8] Carla J. Burrus, RDMBJC (2014). *Gender differences in the impact of leadership style on subordinate embeddedness and job satisfaction. The Leadership Quarterly*. 25, 660–67.
- [9] Champaign, et al. (2014). J., *Correlating skills and improvement in 2 MOOCs with a student's time on tasks*.
- [10] Chang, HS (2020). Online Learning in Pandemic Times. *Revista Romaneasca Pentru Educatie Multidimensionala*, 12(2Su1p17),. 1h1tt1p-s:// doi.org/10.18662/rrem/12.2 soup1/296.
- [11] Coman, C., ru, LG, Meseşan Schmitz, L., Stanciu, C., & Bularca, MC (2020). Online teaching and learning in higher education during the coronavirus pandemic: Students' perspective. *Sustainability (Switzerland)*, 12(24), 1–22. <https://doi.org/10.3390/su1224103>.
- [12] Davis, RH, Alexander, LT, & Yelen, SL (1974). *Learning Systems Design: An Approach to the Improvement of Instruction*. McGraw-Hill Book.
- [13] Dhawan, S. (2020). Online Learning: A Panacea in the Time of COVID-19 Crisis. *Journal of Educational Technology Systems*, 49(1), 5–22. <https://doi.org/10.1177/0047239520934018>.
- [14] Djamarah, S. . (1995). *Teaching and Learning Strategy*. Rineka Cipta.
- [15] Estacio, RR, & Raga Jr, RC (2017). Analyzing students online learning behavior in blended courses using Moodle. *Asian Association of Open Universities Journal*, 12(1), 52–68. <https://doi.org/10.1108/aaouj-01-2017-0016>.
- [16] Eze, SC, Chinedu-Eze, VC, & Bello, AO (2018). *The utilization of e-learning facilities in the educational delivery system of Nigeria: a study of M- University. International Journal of Educational Technology in Higher Education*, 15(1). <https://doi.org/10.1186/s41239-018-0116-z>.
- [17] Falahuddin, F., Fuadi, . F., Munandar, M., Juanda, R. ., & Nur Ilham, R. . (2022). Increasing Business Supporting Capacity In Msmes Business Group Tempe Bungong Nanggroe Kerupuk In Syamtalira Aron District, Utara Aceh Regency. *Irpitage Journal*, 2(2), 65–68. <https://doi.org/10.54443/irpitage.v2i2.313>.
- [18] Firdausy, AR, Setyaningsih, N., Ishabu, LS, & Waluyo, M. (2019). The Contribution of Student Activity and Learning Facilities Learning to Independence and it's Impact on Mathematics Learning Outcomes in Junior High School. *Indonesian Journal on Learning and Advanced Education (IJOLAE)*, 1(2), 29–37. <https://doi.org/10.23917/ijolae.v1i2.8104>.
- [19] Foltynnek, T., & Motycka, A. (2018). *Time Management in E-learning Time Management in E-learning. October*.
- [20] Fuady, I., Sutarjo, MAS, & Ernawati, E. (2021). Analysis of Students' Perceptions of Online Learning Media During the Covid 19 Pandemic (Study of E-learning Media: Zoom, Google Meet, Google Classroom, and LMS). *Randwick International of Social Science Journal*, 2(1), 51–56. <https://doi.org/10.47175/rissj.v2i1>.
- [21] Geovani, I. ., Nurkhotijah, S. ., Kurniawan, H. ., Milanie, F., & Nur Ilham, R. . (2021). Juridical Analysis of Victims of The Economic Exploitation of Children Under The Age to Realize Legal Protection From Human Rights Aspects: Research Study At The Office of Social and Community Empowerment In Batam City. *International Journal of Educational*

- Review, Law And Social Sciences (IJERLAS), 1(1), 45–52.
<https://doi.org/10.54443/ijerlas.v1i1.10>.
- [22] Gikas, J., & Grant, MM (2013). *Mobile computing devices in higher education: Stluedaernitnpgewrsitphcetivllpehsoones, smartphones & social media*. Internet and Higher Education. <https://doi.org/10.1016/j.jheduc.2013.06.02>
- [23] Glava a, Adina Elena Glava; B. N Atsumbe; E. Raymond and EB Enoch, Patrick Duhu; Deepa Joshi, Vasudha A. Gokhale, AA (2012). Time Management on the On-Line Learning Platforms. A Case Study Regarding the BSCW Platform Used by Future Teacher Student. *Procedia - Social and Behavioral Sciences*, 46, 35d5o1i.–o3r5g5/150.j.hs1bt0tsp1ps6r://o/.20 12.06.103
- [24] Goodson, CE, Miertschin, SL, & Stewart, BL (2016). Time management skills and student performance in online courses. *Computers in Education Journal*, 16(2), 37–48. <https://doi.org/10.1284296201/>
- [25] Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies*, 0123456789. <https://doi.org/10.1007/s10639-021-10523-1>
- [26] Haddiuoi, I. El, & Khaldi, M. (2012). Learner behavior analysis on an online learning platforms. *International Journal of Emerging Technologies in Learning*, 7(2), 22–25. <https://doi.org/10.3991/ijet.v7i2.1932>.
- [27] Hamtini, T. and Ateia, H. (2016). *A proposed dynamic technique for detecting learning style using a literature based approach*. In 2015 (AECT (ed.)). Jordan Conference on Applied Electrical Engineering and Computing Technologies,.
- [28] Hart, CMD, Berger, D., Jacob, B., Loeb, S., & Hill, M. (2019). Online Learning, Offline Outcomes: Online Course Taking and High School Student Performance. *AERA Open*, 5(1), 233285841983285. <https://doi.org/10.1177/2332858419832852>
- [29] Hassan et al. (2020). Students' Perceptions of Using Zoom Meet Webinar During Covid-19 StudeUnstsin' gPeZrocoemptiMoWneesebtOinfar During Covid-19 Pandemic In. *Journal of Critical Reviews*.
- [30] Ilham, Rico Nur. *et all* (2019). Comparative of the Supply Chain and Block Chains to Increase the Country Revenues via Virtual Tax Transactions and Replacing Future of Money. *International Journal of Suplly Management*. Volume 8 No.5 August 2019.
- [31] _____. *et all* (2019). Investigation of the Bitcoin Effects on the Country Revenues via Virtual Tax Transactions for Purchasing Management. *International Journal of Suplly Management*. Volume 8 No.6 December 2019.
- [32] Improving online video lectures: learning challenges created by media. *International Journal of Educational Technology in Higher Education*, 17(1). <https://doi.org/10.1186/s41239-020-00190-6>.
- [33] Indriantoro, Nur, and BS (1999). *Research Methodology and. Business*. BPFE Yogyakarta.
- Joshi, D., Gokhale, VA, & Acharya, A. (2012). Student's ResponsBeehaanvdior in the Classroom Environment University of Bhopal, University of Pune. *International Journal for Cross- Disciplinary Subjects in Education*, 2(1), 926–934.
- [34] Karkar-Esperat, TM (2018). International graduate students' challenges and learning experiences in online classes. *Journal of International Students*, 8(4), 1722–1735. <https://doi.orgz/1e0n.o5d2o8.11/46>.
- [35] Kirkpatrick, AJ, & Waring Tiedeman, S. (2019). *The Impact Student Behavior has on Learning The Impact Student Behavior has on Learning*. <https://nwcommons.nwciowa.edu/e>.
- [36] Kusuma, W. (2011). *Classroom action research*. PT. Index. Lange, C., & Costley, J. (2020).
- [37] Lasta Irawan, A. ., Briggs, D. ., Muhammad Azami, T. ., & Nurfaliza, N. (2021). The Effect of Position Promotion on Employee Satisfaction With Compensation As Intervening Variables: (Case Study on Harvesting Employees of PT. Karya Hevea Indonesia).

- International Journal of Social Science, Educational, Economics, Agriculture Research, and Technology (IJSET), 1(1), 11–20. <https://doi.org/10.54443/ijset.v1i1.2>.
- [38] Liang, K., Zhang, Y., He, Y., Zhou, Y., Tan, W., & Li, X. (2017). Online Behavior Analysis-Based Student Profile for Intelligent E-Learning. *Journal of Electrical and Computer Engineering*, 2017. <https://doi.org/10.1155/2017/97203>.
- [39] Likdanawati, likdanawati, Yanita, Y., Hamdiah, H., Nur Ilham, R., & Sinta, I. (2022). Effect of Organizational Commitment, Work Motivation And Leadership Style on Employee Performance of Pt. Aceh Distribus Indo Raya. *International Journal of Social Science, Educational, Economics, Agriculture Research, and Technology (IJSET)*, 1(8), 377–382. <https://doi.org/10.54443/ijset.v1i8.41>.
- [40] Lin, MH, Chen, HC, & Liu, KS (2017). A study of the effects of digital learning on learning motivation and learning outcomes. *Eurasia Journal of Mathematics, Science and Technology*, 1(1), 1–12. <https://doi.org/10.12973/eurasia.20.1.1>.
- [41] Majied Sumatrani Saragih, M. ., Hikmah Saragih, U. ., & Nur Ilham, R. . (2021). Relationship Between Motivation And Extrinsic Motivation to Increasing Entrepreneurship Implementation From Spp Al-Falah Group At Blok 10 Village Dolok Masihul. *Morfai Journal*, 1(1), 1–12. <https://doi.org/10.54443/morfai.v1i1.11>.
- [42] Masrom, MB, Busalim, AH, Abuhassna, H., & Mahmood, NH N. (2021). Understanding students' behavior in online social networks: a systematic literature review. *International Journal of Educational Technology in Higher Education*, 18(1). <https://doi.org/10.1186/s41239-021-00240-7>.
- [43] Muttarak, R., & Pothisiri, W. (2017). *The Role of Education on Disaster Preparedness : Case Study of 2012 Indian Ocean Earthquakes on Thailand's Andaman Coast*. *Ecology & Society*, 18, 18 (4).
- [44] Ng, HZ, & Baharom, SS (2018). An analysis on adult learners' satisfaction in online education programmes. *International Journal of Interactive Mobile Technology*, 11(1), 1–12. <https://doi.org/10.1186/s41239-021-00240-7>.
- [45] Nguyen, T. (2015). The Effectiveness of Online Learning: Beyond No Significant Difference and Future Horizons. *MERLOT Journal of Online Learning and Teaching*, 11(2), 309–319.
- [46] Nur Ilham, R. ., Arliansyah, A., Juanda, R., Multazam, M. ., & Saifanur, A. . (2021). Relationship Between Money Velocity and Inflation To Increasing Stock Investment Return: Effective Strategic By Jakarta Automated Trading System Next Generation (Jats-Ng) Platform. *International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration (IJEBA)*, 1(1), 87–92. <https://doi.org/10.54443/ijevas.v1i1.27>.
- [47] ———, Heikal, M. ., Khaddafi, M. ., F, F., Ichsan, I., F, F., Abbas, D. ., Fauzul Hakim Hasibuan, A. ., Munandar, M., & Chalirafi, C. (2021). Survey of Leading Commodities of Aceh Province As Academic Effort to Join and Build The Country. *Irpitage Journal*, 1(1), 13–18. <https://doi.org/10.54443/irpitage.v1i1.19>.
- [48] ———, Likdanawati, L., Hamdiah, H., Adnan, A., & Sinta, I. . (2022). Community Service Activities “Socialization Avoid Study Investment” to The Student Bond of Serdang Bedagai. *Irpitage Journal*, 2(2), 61–64. <https://doi.org/10.54443/irpitage.v2i2.312>.
- [49] Palvia, S., Aeron, P., Gupta, P., Mahapatra, D., Parida, R., Rosner, R., & Sindhi, S. (2018). Online Education: Worldwide Status, Challenges, Trends, and Implications. *Journal of Information Management*, 21(4), 233–241. <https://doi.org/10.1080/1097198X.2018.1511111>.
- [50] Patricia Aguilera-Hermida, A. (2020). College students' use and acceptance of emergency online learning due to COVID-19. *International Journal of Educational Research Open*, 1(August), 100011. <https://doi.org/10.1016/j.ijedro.2020.100011>.
- [51] Pramana. (2011). *The Effect of Learning Effectiveness on Learning Achievement of Student*

Gasoline Fuel System Maintenance and Service Class XI Automotive Mechanic Expertise Program at SMK Piri 1 Yogyakarta Academic Year 2009/2010 (rjtuallysitsasteue). University.

- [52] Rahmani, R., Subhan, S., Saharuddin, S., Nur Ilham, R., & Anwar, K. (2022). The Influence of Entrepreneurship Aspects on The Success of The Chips Industry In Matang Glumpang Dua and Panton Labu. *International Journal of Social Science, Educational, Economics, Agriculture Research, and Technology (IJSET)*, 1(7), 337–348. <https://doi.org/10.54443/ijset.v1i7.36>.
- [53] Sadikin, A., & Hamidah, A. (2020). Online Learning in the Midst of the Covid-19 Outbreak. *BIODIK: Scientific Journal of Biology Education*, 6 (02), 21. <https://doi.org/10.22437/bio.v6i2.9759>.
- [54] Sandi, H., Afni Yunita, N., Heikal, M., Nur Ilham, R., & Sinta, I. (2021). Relationship Between Budget Participation, Job Characteristics, Emotional Intelligence and Work Motivation As Mediator Variables to Strengthening User Power Performance: An Empirical Evidence From Indonesia Government. *Morfai Journal*, 1(1), 36–48. <https://doi.org/10.54443/morfai.v1i1.14>.
- [55] Sinta, I., Nur Ilham, R., Kumala Sari, D., M, M., Khaidir, K., & Ekamaida, E. (2021). Training The Processing of Tomato Sauce For A Home-Based Business The Scale of SMES. *Irpitage Journal*, 1(1), 26–28. <https://doi.org/10.54443/irpitage.v1i1.24>.
- [56] Sinurat, M., Heikal, M., Simanjuntak, A., Siahaan, R., & Nur Ilham, R. (2021). Product Quality On Consumer Purchase Interest With Customer Satisfaction As A Variable Intervening In Black Online Store High Click Market: Case Study on Customers of the Tebing Tinggi Black Market Online Store. *Morfai Journal*, 1(1), 13–21. <https://doi.org/10.54443/morfai.v1i1.12>.
- [57] Soffer, T., Kahan, T., & Nachmias, R. (2019). Patterns of students' utilization of flexibility in online academic courses and their relation achievement. To *Review of cRoeusresearch in OpInetnerannaditional Distance Learning*, 20(3), 202–220. <https://doi.org/10.19173/irrodl.v20i>.
- [58] Sudjana, N. (1990). *Learning Theories For Teaching*. Faculty. UI Economics.
- [59] Sugiyono. (2017). *Quantitative, Qualitative, and R&D Research Methods*. Alfabeta, CV.
- [60] Suh, H. (2011). Collaborative Learning Models and Support Technologies in the Future Classroom *International Journal*, 5(1), 50–61. <http://jaems.jp/contents/iconej/vol5/IJEMT5.50-61.pdf>
- [61] Sun, A., & Chen, X. (2016). Online education and its effective practice: A research review. *Journal of Information Technology Education: Research*, 15(2016), 1–5. <https://doi.org/10.28945/3502>
- [62] Surakhmad, W. (1980). *Introduction to Teaching- Learning Interaction Basic Fundamentals and Techniques of Teaching Methodology*. Tarsito.
- [63] Tamrin, M., Azkiya, H., & Sari, SG (2017). Problems Faced by the Teacher in Maximizing the Use of Learning Media in Padang. *Al-Ta Lim Journal*, 24(1), 60– 66. <https://doi.org/10.15548/jt.v24i1.262>.
- [64] Tuti, T. (2019). Method and Media Used in Teaching Vocabulary At Taman Indria Ibu Pawiyatan Academic Year 2012-2013 Yogyakarta. *Journal of EnglishStEudycational (JEES)*, 2(2), 113–121. <https://doi.org/10.31932/jees.v2i2.532>
- [65] V. Wiratna. (2018). *Research Methodology– Business & Economics*. New Press Library.
- [66] Van Wart, M., Ni, A., Medina, P., Canelon, J., Kordrostami, M., Zhang, J., & Liu, Y. (2020). Integrating students' perspectives about online learning: a hierarchy of factors. *International Journal of Educational Technology in Higher Education*, 17(1). <https://doi.org/10.1186/s41239-020-00229-8>.
- [67] Wen, CP et al. (2011). Minimum amount of physical activity for reduced mortality and extended life expectancy: a prospective cohort study. *The Lancet*, Volume 378.

- [68] Wibowo, AE (2012). *Practical Applications of SPSS in Research*. Gava Media.
- [69] William. (2010). *Multivariate Data Analysis A Global Perspective*. Seventh Edition. Pearson.
- [70] Yang, D. (2017). Instructional strategies and course design for teaching statistics online: perspectives from online students. *International Journal of STEM Education*, 4(1). <https://doi.org/10.1186/s40594-017-0096-x>.
- [71] Yusuf Iis, E., Wahyuddin, W., Thoyib, A., Nur Ilham, R., & Sinta, I. (2022). The Effect of Career Development And Work Environment On Employee Performance With Work Motivation As Intervening Variable At The Office Of Agriculture And Livestock In Aceh. *International Journal of Economic, Business, Accounting, Agriculture Management and Sharia Administration (IJEBAAS)*, 2(2), 227–236. <https://doi.org/10.54443/ijebas.v2i2.191>.
- [72] Zakaria, Harapan, E., & Puspita, Y. (2020). The Influence of Learning Facilities and Motivation On Student's Achievement. *International Journal of Progressive Sciences and Techno2lo0g(2ie)s*, 2(18/4P–S2A9T0),