



Students' and Lecturers' Perceptions toward Interactive Multimedia in Teaching Academic Writing

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ABSTRAK

Kemampuan menulis akademik diharapkan dapat dicapai oleh semua siswa karena sangat mempengaruhi kelangsungan keberhasilan akademik. Namun beberapa siswa memiliki kemampuan menulis yang kurang. Tujuan dari penelitian ini adalah menganalisis data persepsi mahasiswa dan dosen terhadap penggunaan media/multimedia dalam mengajarkan penulisan akademik untuk kursus bahasa Indonesia. Jenis penelitian ini yaitu pengembangan. Metode pengumpulan data dalam menganalisis situasi objektif adalah kuesioner, wawancara, dan focus group discussion (FGD). Instrument yang digunakan dalam mengumpulkan data yaitu kuesioner dan lembar wawancara. Teknik yang digunakan untuk menganalisis data yaitu analisis deskriptif kualitatif dan kuantitatif. Hasil penelitian yaitu mahasiswa maupun dosen merasa bahwa pengajaran dan pembelajaran penulisan akademik dalam mata kuliah bahasa Indonesia tidak menerapkan multimedia interaktif. Sebagian besar sesi pengajaran menggunakan slide presentasi PowerPoint dan buku kursus. Lebih lanjut, mereka berharap dosen dapat menggunakan multimedia interaktif dalam mengajarkan penulisan akademik sehingga sesi akan lebih menarik dan menarik, tidak membosankan, menggunakan animasi dan video, dan dapat diakses kapan saja di mana saja.

ABSTRACT

Writing ability is expected to be achieved by all students because it dramatically affects academic achievement. However, some students have poor writing skills. The purpose of this study was to analyze data on student and lecturer perceptions of the use of media/multimedia in academic writing for Indonesian language courses. This type of research is development. Data collection methods in analyzing objective situations are questionnaires, interviews, and focus group discussions (FGD). The instruments used in collecting data are questionnaires and interview sheets. The technique used to analyze the data is descriptive qualitative and quantitative analysis. The research results are that students and lecturers feel that teaching and learning academic writing in Indonesian language courses do not apply interactive multimedia. Most of the teaching sessions use PowerPoint presentation slides and course books. Furthermore, they hope to use interactive multimedia in academic learning so that the sessions will be more exciting and engaging, not dull, use animations and videos, and can be accessed anytime, anywhere.

1. INTRODUCTION

Industrial revolution 4.0 is the era when the information and technology become the basis of human life (Astuti et al., 2021; Devi et al., 2020). The great changes in storing and retrieving information through digital computer and technology have extensively shifted many aspects in education and teaching (Addimando et al., 2021; Dewanti et al., 2021; Henderson et al., 2017). One of them is the use of teaching media for education. In the development of technology in teaching, the use of multimedia can be innovative option (Hamidi, 2018; Nugroho & Surjono, 2019; Rajendra & Sudana, 2017; Suryani, 2018). Interactive multimedia is a tool or medium that presents, delivers messages, and attracts the students' desire and motivation to learn by combining and integrating several elements, such as text, graphic, photo, video, animation, music, and narration that are connected each other so that the users can interact and communicate in one application (Adeniya et al., 2016; Admadja & Marpanaji, 2016; Warsita, 2008). Along with the interactive multimedia, it can activate and motivate students to learn because of their interest on the attractive and innovative multimedia system.

One of the teaching that needs interactive multimedia is academic writing for Indonesian courses. During this Indonesian course, it focuses on academic writing. This kind of writing refers to the writing activity in the classroom in certain institution that aims at communicating one discipline and field with applying linear framework of thinking and reasoning scientifically and using scientific style and scientific

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requirement (Adas & Bakir, 2013; Oshima & Hogue., 2007; Sadiku, 2015). Academic writing ability is expected to be achieved by all students because it highly influences the continuity of academic success (Elyana & Rini, 2021; Ratnasari et al., 2017; Yoandita, 2019). It is widely known that writing activity becomes unseparated part of the overall learning process experienced by the students during their university lives.

It is in line with previous study that state writing has a significant role to gain academic success (De Silva, 2015). The similar point was also mentioned by previous researcher that said that writing for intellectuals in higher education is a main activity to do regularly to keep their career development (Akhadiyah, 2015). The use of technology in teaching is an innovative way in order to improve the students' academic writing ability in Sriwijaya University. A lot of studies have been extensively conducted to prove that technology is able to enhance academic writing ability (Adas & Bakir, 2013; Anggraeni et al., 2019; Chan et al., 2012; Majelan, 2014). Therefore, the development of interactive multimedia for teaching academic writing is necessary particularly for Indonesian courses.

The process and outcomes of Indonesian courses was not as expected in improving academic writing ability (Ratnasari et al., 2017). However, at the first position, the objective situation of the existing media/multimedia in academic writing for Indonesian courses needs to be revealed. It covers the students' and lecturers' perceptions towards the use of media/multimedia. It helps in the process of development of interactive multimedia. The information gathered from participants is very crucial in designing multimedia that meets their needs. Based on the explanation above, this article tries to figure out the students' and lecturers' perception toward the use of media/multimedia on teaching academic writing for Indonesian courses in Sriwijaya university.

2. METHODS

This current research was a part of research and development. Method used on the research was survey method. The techniques for collecting data in analyzing objective situation were questionnaire, interview, and focus group discussion (FGD). The questionnaire was distributed to the students on second semester that registered in the subject of Indonesian language courses. The population on this preliminary study to analyze the needs was 2.424 students on second semester that entered the Indonesian course subject in UPT Mata Kuliah Pengembangan Kepribadian Universitas (Subjects for Personality Development). The samples were taken 10—15 % out of the population. Then, the samples were 242 students. The interview was conducted to three lecturers who taught the courses. Meanwhile, FGD was held to five students from five faculties in Sriwijaya University. The gathered data on this research were quantitative data (questionnaire) and qualitative data (interview). The latter was descriptively analyzed; on the other hand, the former was quantitatively analyzed in the form of percentage. The criteria are displayed in Table 1.

Table 1. The Criteria for Perception

Average Percentage	Categories
1.00—1.72	Need improvement/Not suitable/never
1.73—2.48	Fairly good/somewhat suitable/seldom
2.49—3.24	Good/suitable/usually
3.25—4.00	Very good/very suitable/always

3. RESULT AND DISCUSSION

Results

Based on the research results, it shows the perceptions from the lecturers and the students toward teaching academic writing on Indonesian courses in Sriwijaya University through questionnaire, interview and FGD.

Data from the Questionnaire

The questionnaire given to the students and the lecturers is consisting of 37 items to figure out the objective situation about the type of media/multimedia (1 item), the content (11 item), organization (2 item), language (4 item), layout (17 item), and supporting feature (2 item) that used on teaching academic writing on Indonesian courses in Sriwijaya university. The type of Media/Multimedia used by the lecturers is show in Figure 1.

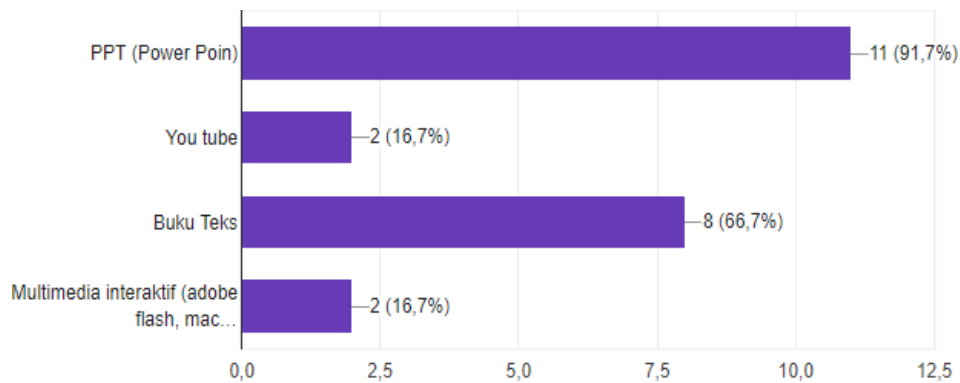


Figure 1. The Type of Media/Multimedia used by the Lecturers

Based on [Figure 1](#) the students and lecturers are provided by 1 item question. The results show that the majority of the lecturers yields that they only use PowerPoint presentation (91.7%) and coursebooks (66.7%). Meanwhile, the use of YouTube and interactive multimedia gains only 16.7%. The similar results is also revealed on the students' perception about type of Media/Multimedia used by the students as show in [Figure 2](#).

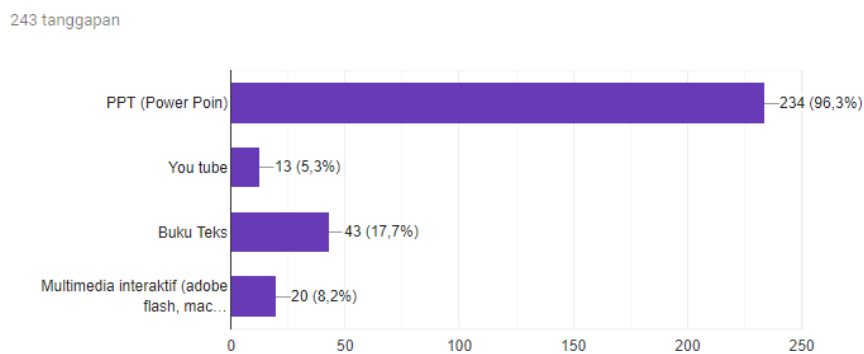


Figure 2. The Type of Media/Multimedia used by the Students

Based on [Figure 2](#) the most dominantly media used in the course were PowerPoint presentation for 96.3%, and less dominantly used is coursebook (17.7%); meanwhile YouTube and interactive media are 5.3% and 8.2% respectively. Then from both results, it is known that the lecturer's perception is just as same as the students have. The objective situation presents that teaching Indonesian courses dominantly uses PowerPoint presentation as perceived by students (91.7%) and lecturers (96.3). In contrast, interactive multimedia is not dominantly applied on teaching sessions. Then for the content of the media or multimedia, five item questions were delivered to the students and the lecturers as show in [Table 2](#).

Table 2. The Content of Media or Multimedia

No.	Statements (Content)	Responses			
		Students		Lecturer	
1.	Materials in the teaching media/multimedia are appropriate to the teaching learning goals (CPL dan CPMK).	4.02	A	4.25	SA
2.	Materials in the teaching media/multimedia meet the students' needs.	3.95	A	4.00	A
3.	The existing media/multimedia provides sample texts of academic writing that are easy to understand	4.02	A	4.25	SA
4.	The presentation of materials in the teachingmedia/multimedia considers theories and practices/samples in balance portion.	4.19	A	4.08	A
5.	The media/multimedia is presented at each material/topic	4.19	SA	4.08	A
6.	There are task activities and/or assignment.	3.84	A	4.08	A
7.	The task and/or assignment given enables students to cooperate in groups.	4.06	A	4.17	A

No.	Statements (Content)	Responses			
		Students		Lecturer	
8.	The task and/or assignment given enables students to learn independently.	3.98	A	4.25	A
9.	Multimedia is completed by evaluation in the form of multiple choices.	3.67	A	3.83	A
10.	Multimedia with evaluation in the form of essay	3.66	A	4.17	A
Average		3.99	A	4.10	A

Based on Table 2, it show that both students and lecturers prefer *strongly agree* (VA) and *agree* (A) on the provided items. The average scores were 3.99 (lecturers) and 4.10 (students). From the average scores, the lecturers' perception is not different from the students' ones. They perceived that the content of existing media/multimedia used is sufficient and suitable. It can be seen from the score difference (0.11). Then in the component of organization of media or multimedia, both lecturers and students responded to two question items. The Organization of Media or Multimedia can be seen in Table 3.

Table 3. The Organization of Media or Multimedia

No.	The Organization of Media/Multimedia	Responses			
		Students		Lecturer	
1.	The sequence of materials is based on the proper level of difficulty.	3.95	A	3.92	A
2.	The content materials inter-units on the multimedia consider balance.	3.85	A	3.75	A
Average		3.9	A	3.9	A

Based on Table 3 the results showed both students and lecturers strongly agreed (VA) and agreed (A) with the provided items. The average score for the students and lecturers is 3.9. Based on the average score, the lecturer's perception is similar to the students have. They think that the existing media/multimedia is suitable and appropriate enough. In addition, there is no difference score between the two parties. In the component of language of media or multimedia, the researchers asked the students and lecturers to answer four question items. The language of media or multimedia is show in Table 4.

Table 4. The Language of Media or Multimedia

No.	Language	Responses			
		Students		Lecturer	
1.	Accurate grammar	4.26	SA	4.17	A
2.	Appropriate punctuation	4.20	SA	4.08	A
3.	Appropriate vocabulary selection	4.19	A	4.25	A
4.	Correct spelling	4.18	A	4.17	A
Average		4.20	SA	4.16	A

Based on Table 4 showed the students strongly agreed, SA; while the lecturers agreed, A, with the items. The average scores are 4.20 and 4.16 for students and lecturers. From the average scores, the students' perceptions are not the same as the perception the students have. The students think that the language of media/multimedia is *very suitable* while the lecturers respond *suitable*. Moreover, the scores between them are slightly similar. In the component of layout of media or multimedia is show in Table 5. The researchers invited the students and lecturers to answer six question items.

Table 5. The Layout of the Coursebook

No.	The Layout	Responses			
		Students		Lecturer	
1.	Proper tables, graphs, and diagrams.	3.55	A	4.00	A
2.	Proper paragraph structure.	4.14	A	4.33	A
3.	Correct font type	4.15	A	4.08	A
4.	Correct font size	4.11	A	4.08	A
5.	Appropriate text visualization	3.85	A	4.08	A

6.	Good quality of layout	3.89	A	3.83	A
7.	Media/multimedia completed by attractive images/pictures	3.67	A	4.00	A
8.	Media/multimedia completed by navigation	3.73	A	4.00	A
9.	Media/multimedia completed by reading texts	4.21	SA	4.17	A
10.	Media/multimedia completed with informative links	3.86	A	4.08	A
11.	Media/multimedia in the form of tutorial	3.58	A	4.08	A
12.	Media/multimedia using animation	3.57	A	3.67	A
13.	Media/multimedia using graphic	3.24	FA	3.67	A
14.	Media/multimedia using audio	3.35	FA	3.83	A
15.	Media/multimedia using video	3.70	A	3.25	A
16.	Media/multimedia completed by games	3.54	A	3.25	A
Average		3.53	A	3.72	A

Based on Table 5 the results showed the students strongly agreed, agreed, and fairly agreed with the media. On the other hand, the lecturers agreed with the items. The average scores are 3.52 and 3.72 for students and lecturers respectively. From the average score, the lecturers' score is not different from the students have. They think that the layout of the existing media/multimedia is appropriate enough. The difference is only 0.19. And for the last is in the component of Supporting Features of Media or Multimedia, the researchers invited the students and lecturers to answer, it is show in Table 6.

Table 6. The Supporting Features of Media or Multimedia

No.	Supporting Features of Media/Multimedia	Responses			
		Students		Lecturer	
1.	Media/multimedia completed by a guide in the form of video	3.53	A	3.83	A
2.	Media/multimedia completed by a guide in the form of texts.	3.88	A	3.92	A
Average		3.70	A	3.87	A

Based on Table 6. showed the students and lecturers agreed with the items. The average scores are 2.7 and 3.87 for lecturers and the students respectively. For the component of supporting features, the students' perception is just as same as the lecturers' perception. They find supporting features appropriate enough. It can be seen on the difference on the score is slightly small, 0.17. Not only questionnaire on Likert scale, the open-ended questionnaire revealed the information about the objective situation on the use of media/multimedia for teaching academic writing for Indonesian courses in Sriwijaya university. The results are various. Firstly, the majority of the lecturers uses only PowerPoint presentation and coursebook. The second result is that materials on PowerPoint are quite unattractive so that the students find them boredem. At third result, the students expect that the lecturers apply multimedia that includes animation, video, and audio to keep pace with the novelty and newness. At last, the students expect that the designed multimedia can be accessible for anyone in anytime anywhere. To optimize the information, FGD was conducted along with the students. The participants on this activity were five students from five faculties in Sriwijaya university, namely Faculty of MIFA, Faculty of Agriculture, Faculty of Social Science and Politics, Faculty of Public Health, and Faculty of Teacher Training and Education. The focus on FGD is students' perceptions toward teaching academic writing. Based on FGD, some information is gathered. At first, interactive multimedia is not used on teaching academic writing for Indonesian courses in Sriwijaya university. Second result is that the lecturers are only used PowerPoint presentation and coursebook. The third result shows that the students want their lecturers apply interactive multimedia that contains animation, video, and audio as well as motivates them to learn. At last, they also expect that the lecturers use an interactive multimedia tool that is accessible anytime anywhere.

Discussion

Interview is for collecting information related to the lecturers' perceptions toward media/multimedia in the existing teaching sessions. The interviews were conducted three times to the lecturers who teach Indonesian language course subject in Sriwijaya university. The first result shows that they do not use interactive multimedia. They only apply PowerPoint presentation and coursebook. At second, they do not have enough knowledge about interactive multimedia and are not able to design it. At last, most of them do not use e-learning MOODLE. Based on the research results about the students' and lecturers' perceptions toward the use of interactive multimedia on teaching academic writing for Indonesian courses in Sriwijaya university, there are any differences and similarity on their both perceptions. From questionnaire, both the students and the lecturers have similar views on the use of

PowerPoint presentation dominantly for teaching; meanwhile, teaching using interactive multimedia is less dominantly used on the academic writing classes.

From the questionnaire distributed the students and the lecturers, they reveal positive results. They perceive that the existing media is quite suitable and very suitable to the needs and able to improve the students' academic writing ability. This proves that the existing situation has been quite good and attractive. It is in line with previous study that state writing posits the significant roles to gain academic success (Akhadiah, 2015; Hidayat et al., 2019; Somdee & Suppasetserree, 2013).

However, from the short question on interview and FGD, the students are not quite satisfied with the existing media used in the class. They have desire to use media that integrates video, animation and audio in one application as well as accessible anytime anywhere. It can be called as interactive multimedia (Baquier Orozco et al., 2020; Davis et al., 2018; Untari et al., 2020; Vagg et al., 2020). In line with previous research that found the use of multimedia motivates them to learn and enable them to write academic writings better. Related to this, some research have proved its effectiveness particularly for teaching academic writing (Praheto et al., 2020; Saputri et al., 2018).

It is in line with previous research that conduct a investigation into students' attitudes toward interactive multimedia in EFL context (Akbarov et al., 2018). There were 162 students who participated in this study. The result of study revealed that students prefer to multimedia that commonly used. For example students prefer to take English exams in paper-and-pencil form, rather than in digital form. Apart from that, there are previous studies that evaluated student learning in three different collaborative learning environments using interactive multimedia (Heflin et al., 2017). The results indicate that interactive multimedia is associated with positive student perceptions of collaborative learning but with increased disengagement by students during class. In addition, the level of students' critical thinking was more closely associated with the tools used to construct written responses than with the collaborative learning environment style. Students constructing paragraph responses on a mobile device demonstrated significantly less critical thinking than those who used a computer keyboard or wrote responses by hand.

The different results are from the lecturers' interview. They feel that the existing media they use is quite motivated and engaging the students in the class. They admitted that the use of interactive multimedia is very good in improving the students' academic writing skill; nonetheless, lack of knowledge and skills in designing it becomes a constraint for them. What the students want results from the development of science and technology at recent years. They live in the digital era with digital characteristics. The generation that born in this digital era, known as digital native generation, is surrounded by digital tools, such as computer, video games, digital music player, video camera, cellular phone and other digital devices. As a result, it is so common to see that the students ask for interactive multimedia in their classes.

4. CONCLUSION

Based on the research results and discussion, the interactive multimedia was not applied in teaching academic writing for Indonesian language course subject. Most lecturers used PowerPoint and course books. Students have desire to use media that integrates video, animation and audio in one application as well as accessible anytime anywhere. It can be called as interactive multimedia the use of interactive multimedia is very good in improving the students' academic writing skill. Teacher also feel that the existing media they use is quite motivated and engaging the students in the class.

5. REFERENCES

- Adas, D., & Bakir, A. (2013). Writing difficulties and new solutions: Blended learning as an approach to improve writing abilities. *International Journal of Humanities and Social Science*, 3(9), 254–266. <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1041.9160&rep=rep1&type=pdf>.
- Addimando, L., Leder, D., & Zudini, V. (2021). Teaching and learning in the Covid-19 Era: The experience of an Italian primary school class. *TOJET: The Turkish Online Journal of Educational Technology*, 20(1), 60–67. <https://eric.ed.gov/?id=EJ1290853>.
- Adeniyi, O. F., Olowoyeye, A. C., & Onuoha, U. D. (2016). The Effect of Interactive Multimedia on English Language Pronunciation Performance of Pupils in the Nigerian Primary Schools. *Research on Humanities and Social Sciences*, 6, 71–78. <https://core.ac.uk/download/pdf/234675058.pdf>.
- Admadja, I. P., & Marpanaji, E. (2016). Pengembangan multimedia pembelajaran praktik individu instrumen pokok dasar siswa SMK di bidang keahlian karawitan. *Jurnal Pendidikan Vokasi*, 6(2), 173–183. <https://doi.org/10.21831/jpv.v6i2.8107>.
- Akbarov, A., Gönen, K., & Aydogan, H. (2018). Students' Attitudes toward Blended Learning in EFL Context. *Acta Didactica Napocensia*, 11(1), 61–68. <https://eric.ed.gov/?id=EJ1177040>.

- Akhadiah, S. (2015). *Bahasa Sebagai Sarana Komunikasi Ilmiah*. Paedea.
- Anggraeni, H., Fauziyah, Y., & Fahyuni, E. F. (2019). Penguatan Blended Learning Berbasis Literasi Digital Dalam Menghadapi Era Revolusi Industri 4.0. *Al-Idarah : Jurnal Kependidikan Islam*, 9(2), 190–203. <https://doi.org/10.24042/alidarah.v9i2.5168>.
- Astuti, M., Arifin, Z., Mutohhari, F., & Nurtanto, M. (2021). Competency of Digital Technology: The Maturity Levels of Teachers and Students in Vocational Education in Indonesia. *Journal of Education Technology*, 5(2), 254–262. <https://doi.org/10.23887/jet.v5i3.35108>.
- Baquier Orozco, R., Barraza Castillo, R. I., & Husted Ramos, S. (2020). Neoaltar: An interactive multimedia day of the dead experience. *Heliyon*. <https://doi.org/10.1016/j.heliyon.2020.e03339>.
- Chan, S. H., Pandian, A., Joseph, A. S., & Ghazali, A. H. (2012). Teaching business writing using Wiki: Online collaborative writing. *International Journal of Arts & Sciences*, 5(5), 405. <https://search.proquest.com/openview/2a0d649d433ce23684524670f17afb3/1?pq-origsite=gscholar&cbl=626342>.
- Davis, D., Chen, G., Hauff, C., & Houben, G. J. (2018). Activating learning at scale: A review of innovations in online learning strategies. *Computers and Education*, 125(June), 327–344. <https://doi.org/10.1016/j.compedu.2018.05.019>.
- De Silva, R. (2015). Writing strategy instruction: Its impact on writing in a second language for academic purposes. *Language Teaching Research*, 19(3), 301–323. <https://doi.org/10.1177/1362168814541738>.
- Devi, M., Annamalai, M. A. R., & Veeramuthu, S. P. (2020). Literature Education and Industrial Revolution 4.0. *Universal Journal of Educational Research*, 8(3), 1027–1036. <https://doi.org/10.13189/ujer.2020.080337>.
- Dewanti, P., Supuwingsih, N. N., & Saridewi, D. P. (2021). Utilizing Educational Technologies to Optimize Student and Teacher Learning at Dharma Laksana Mataram Orphanage. *Journal of Innovation and Community Engagement*, 2(1), 11–20. <https://doi.org/10.28932/jice.v2i1.3601>.
- Elyana, T., & Rini, S. (2021). Ability Using Word Wall For Improving Students' writing "What Are You Doing." *MIYAH: Jurnal Studi Islam*, 17(1), 16–38. <https://doi.org/10.33754/miyah.v17i01.319.g231>.
- Hamidi, N. (2018). Pengembangan Media Pembelajaran Interaktif Pendidikan Agama Islam Berbasis Adobe Flash Professional Cs6 Untuk Mendukung Implementasi Kurikulum 2013. *Jurnal Pendidikan Agama Islam*, 14(1), 109–130. <https://doi.org/10.14421/jpai.2017.141-07>.
- Heflin, H., Shewmaker, J., & Nguyen, J. (2017). Impact of mobile technology on student attitudes, engagement, and learning. *Computers & Education*, 107, 91–99. <https://doi.org/10.1016/j.compedu.2017.01.006>.
- Henderson, M., Selwyn, N., & Aston, R. (2017). What works and why? Student perceptions of 'useful' digital technology in university teaching and learning. *Studies in Higher Education*, 42(8), 1567–1579. <https://doi.org/10.1080/03075079.2015.1007946>.
- Hidayat, Z., Ratnawulan, & Gusnedi. (2019). Analysis of learning media in developing science textbooks with theme energy in life using integrated model for integrated 21st century learning. *Journal of Physics: Conference Series*, 1185(1). <https://doi.org/10.1088/1742-6596/1185/1/012070>.
- Majelan, M. T. (2014). Enhancing Content Knowledge in Essay Writing Classes: A Multimedia Package for Iranian EFL Learners. *Advances in Language and Literary Studies*, 5(2), 87–95. <http://journals.aiac.org.au/index.php/all/article/view/310>.
- Nugroho, I. A., & Surjono, H. D. (2019). Pengembangan multimedia pembelajaran interaktif berbasis video materi sikap cinta tanah air dan peduli lingkungan. *Jurnal Inovasi Teknologi Pendidikan*. <https://doi.org/10.21831/jitp.v6i1.15911>.
- Oshima, A., & Hogue, A. (2007). *Introduction to Academic Writing*. Pearson.
- Praheto, B. E., Andayani, Rohmadi, M., & Wardani, N. E. (2020). The effectiveness of interactive multimedia in learning Indonesian language skills in higher education. *Rupkatha Journal on Interdisciplinary Studies in Humanities*. <https://doi.org/10.21659/rupkatha.v12n1.34>.
- Rajendra, I. M., & Sudana, I. M. (2017). The Influence of Interactive Multimedia Technology to Enhance Achievement Students on Practice Skills in Mechanical Technology. *Journal of Physics*, 953, 1–5. <https://doi.org/10.1088/1742-6596/953/1/012104>.
- Ratnasari, D., Sukarmin, S., & Radiyono, Y. (2017). Implementasi Pendekatan Konstruktivisme melalui Model Pembelajaran CLIS (Children Learning In Science) dan Pengaruhnya terhadap Aktivitas Belajar dan Kemampuan Kognitif Siswa. *Jurnal Penelitian & Pengembangan Pendidikan Fisika*, 3(1), 111. <https://doi.org/10.21009/1.03115>.
- Sadiku, L. M. (2015). The Importance of Four Skills Reading, Speaking, Writing, Listening in a Lesson Hour. *European Journal of Language and Literature*, 1(1), 29. <https://doi.org/10.26417/ejls.v1i1.p29-31>.
- Saputri, D. Y., Rukayah, R., & Indriayu, M. (2018). Need Assessment of Interactive Multimedia Based on Game

- in Elementary School: A Challenge into Learning in 21st Century. *International Journal of Educational Research Review*, 3(3), 1–8. <https://doi.org/10.24331/ijere.411329>.
- Somdee, M., & Suppasetseree, S. (2013). Developing English speaking skills of thai undergraduate students by digital storytelling through websites. *The Foreign Language Learning and Teaching International Conference*, 166–176. <http://sutir.sut.ac.th:8080/jspui/handle/123456789/4169>.
- Suryani, N. (2018). Utilization of digital media to improve the quality and attractiveness of the teaching of history. *The 2nd International Conference On Teacher Training and Education*, 2(1), 131–144. <https://jurnal.uns.ac.id/ictte/article/view/8164>.
- Untari, R., Kamdi, W., Dardiri, A., Hadi, S., & Nurhadi, D. (2020). The Development and Application of Interactive Multimedia in Project-Based Learning to Enhance Students' Achievement for 2D Animation Making. *International Journal of Emerging Technologies in Learning (IJET)*, 15(16), 17–30. <https://www.learntechlib.org/p/217965/>.
- Vagg, T., Balta, J. Y., Bolger, A., & Lone, M. (2020). Multimedia in Education: What do the Students Think? *Health Professions Education*, 6(3), 325–333. <https://doi.org/doi.org/10.1016/j.hpe.2020.04.011>.
- Warsita, B. (2008). *Teknologi Pembelajaran dan Aplikasinya*. Renika Cipta.
- Yoandita, P. E. (2019). An Analysis of Students' Ability and Difficulties in Writing Descriptive Text. *Jurnal JOEPALLT (Journal of English Pedagogy, Linguistics, Literature, and Teaching)*, 7(1). <https://doi.org/10.35194/jj.v7i1.534>.