PAPER • OPEN ACCESS

Kahoot Application for Elementary School Students: Implementations of Learning Process from Distance during Pandemic period of COVID 19

To cite this article: Mahfira Djannah et al 2021 J. Phys.: Conf. Ser. 1783 012121

View the <u>article online</u> for updates and enhancements.

You may also like

- <u>Restricted Boltzmann machine: Recent</u> advances and mean-field theory Aurélien Decelle and Cyril Furtlehner
- Preserving the School Landscape and its Relationship with the Learning Process of Secondary School Students
 Salina Mohamed Ali, Abd Hair Awang, Faridatul Akma Abdul Latif et al.
- <u>Enhancing the generalizability of predictive</u> <u>models with synergy of data and physics</u> Yingjun Shen, Zhe Song and Andrew Kusiak

Journal of Physics: Conference Series

Kahoot Application for Elementary School **Students:** Implementations of Learning Process from Distance during Pandemic period of COVID 19

Mahfira Djannah^{1*}, Zulherman^{1,2}, Nurafni¹

¹University of Muhammadiyah Prof. Dr. Hamka, Jakarta, Indonesia ²Universiti Utara Malaysia, Kedah, Malaysia

*mahfiradjannah.ira@gmail.com

Abstract. Kahoot Applications has been one of the media of the learning process to be developed further. It can become media of the learning process as well as a tool for measuring/index of the target. These analyses observe the result of the learning process based on Kahoot Application towards the fifth grade of elementary students in the context of single and complexes theory. This kind of Media of learning process is more likely effective used in the argent situation of the Pandemic COVID 19 period that is inevitable for the mechanism of the learning process from home which should be supported by internet connection. This product is made by the learning development of ADDIE. The method of analysis used is the method of surveying. The Data taken from surveying uses a Likert scale from a score within 1 to 5. They are three expertise from material aspects and the media aspect, 5 teachers from the fifth grade of elementary from different schools, and is examined for 149 students from 5 different schools to examine the result. The result stated that Kahoot's application as the media of the learning process is efficient and proper being used as a learning and teaching process because Kahoot applications allow enhancing students' interest and motivations to be more likely focus to on learning process for the better result of learning mechanism.

1. Introduction

Every person has superiority with various abilities to receive and process information. As such every student has the advantage of what they are capable of comprehending and understanding in the context of the learning process. Some of them re better in cognitive thinking and some others are better in the affective aspect, while some others are better in psychomotor aspects. Those kinds of abilities are likely influential for the learning process as a result of learning and teaching activity in school. There must be a media to facilitate and to make the learning process easier to help students understand better in the terms of delivering some lessons from teachers to students (Wijayanti, Hasan, & Loganathan, 2018).

In terms of Educational aspects, it demands the learning process which can stimulate enthusiast and motivation for all students for the sake of achieving their goals and target in the learning process. IPTEK development hopefully can positively impact the terms of the learning process which is indicated by the endless sources and media of the learning process(Novianto, Degeng, & Wedi, 2018). The media of learning/tools can be an external factor that can be utilized to enhance the effectiveness of learning. (Asmara, 2015). In this analysis, we are likely to do the analyses with similar output above. this kind of analysis uses what Kahoot applications offer as one of the media of the learning process. Kahoot is an educational game made for attracting the enthusiast of students in comprehending and understanding

Content from this work may be used under the terms of the Creative Commons Attribution 3.0 licence. Any further distribution of this work must maintain attribution to the author(s) and the title of the work, journal citation and DOI. Published under licence by IOP Publishing Ltd 1

Annual Conference on Science and Technology	Research (ACOSTER) 2	020 IOP Publishing
Journal of Physics: Conference Series	1783 (2021) 012121	doi:10.1088/1742-6596/1783/1/012121

while they are playing, so it makes them feel that learning is something enjoyable, full of happiness, and not such a boring method (Hartini 2019).

With emerging of the Pandemic of COVID 19 all of a sudden, it is inevitable that the world of education especially in Indonesia needs to be flexible with the current situations, which can help the situation of education in school in an emergency way (Aji, 2020). By implementing the concept of learning from a distance in which utilizing some device such as laptop, computer or even gadget in which facilitated by internet connection, e-learning, google class, social media (WhatsApp) as a media of communication as well as zoom, youtube has become one favorite app to visit in learning process media (Pakpahan & Fitriani, 2020). Thus the writer uses Kahoot as a media of examining single or either complex theory as one of the utilization of media in the terms of the learning process.

2. Methodology

The research was using *Research and Development* (R&D) approach and the method in this research was using survey design research. The steps of framing and developing to the product that has been used based on the model od development of ADDIE, this kind of model uses 5 steps of development: a. *Analysis* b. *Design* c. *Development* d. *Implementation* e. *Evaluation* (evaluation / feed back) (Sari, 2017). The Model of ADDIE is a model with the simplest way ever and is one of the conclusions from the previous model. (Fitriani, Paristiowati, & Mukarromatunnisa, 2019). This model is well arranged and programmed with the steps of activity with good systematic in order (Prastya, Pudjawan, & Suartama, 2015).

3. Result and Discussion

The feasibility of products in the development of Kahoot learning media by experts.

1. Media assessment Kahoot by media expert. Based on the results validation test assessment by media expert get the following suggestions/input, using the learning video with a voice editor not only music, and expands the material discussion that is presented. Assessment by media expert score 90% in very valid categories and presented in Table 1.

No	Aspect	Indicator Question Number		Average Percentage	Category
		The matching of the background display	1		
		The combination of attracting color	2		
		Picture and animation adjustment setting	6		
1	Visual	The coherence of displayed picture to discussion	7	89%	Very Valid
		Animation text which is displayed obviously and interestingly	8		
		Understandable illustration and relation to daily activity indicator	9		
		The harmony of backs sound music with narration	3		Voru
2	Audio	the sounds are presented	4	93%	Very Valid
		The coherence between sound and animation	5	-	v allu

Table 1. Validation test assessment by media expert



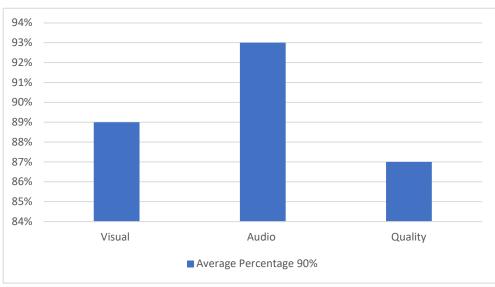


Figure 1. Diagram Results of the Validation Test Assessment by Media Expert

2. Media assessment Kahoot by the material expert. Based on the result of the validation test assessment by the materials expert obtained the following suggestions/input; the material videos are presented with a voice presentation not only of music and add the duration of the video and the problem duration for the learners to answer. The result of media worthiness based on the assessment of material experts score 87% in very valid categories and are presented in Table 2.

No	Aspect	Indicator	Question Number	Average Percentage	Category
		The coherence of content to target learning.	6 and 7		
1	Content Qualification	Specific material lesson.	2		
		An illustration that supports the explanation of the lesson.	5	88%	Very Valid
		Simple explanation and communicative	10 and 13		
		Stimulates curiosity	9		
	Presentation	Way of presentation.	4		Very
2	Qualification	Supporting tools of presentation.	1	88%	Valid

Table 2.	Validation	test assessment	bv a	material expert
1 4010 -	, and an on			material empert

Annua	al Conference on Science and Technology Research (ACOSTER) 2020			IOP Publishing			
Journa	al of I	Physics: Conference	ce Series	1783 (2021) 012	121 doi:10.10	88/1742-659	06/1783/1/012121
			Explanation of m	aterial lesson	3		
			Coherence and ste flow.	eps thinking	8		
	3	Contextuality	Essence of contex	ĸt	11 and 12	83%	Very Valid
			AVERAGE	E		87%	Very Valid

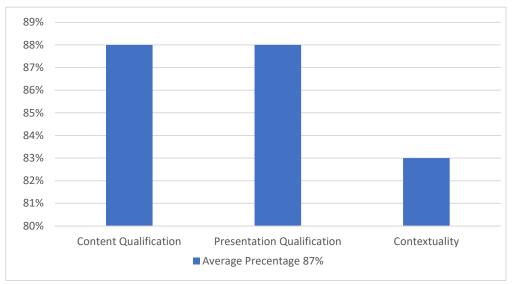


Figure 2. Diagram Results of the Validation Test Assessment by Material Expert

3. The feasibility test assessment by the teacher. Based on the results of the product worthiness test by the teacher gets the following suggestion/input; material discussion in the video enlarged and video presentation using a more attractive picture. The results of media worthiness by the teacher score 92% in very valid categories and are presented in Table 3.

No	Aspect	Indicator	Question Number	Average Percentage	Category
1	Visual	Animation (Attracting moving 12 picture) 12		Excellent	
		Colour of composition	13		
2	Audio	Using back sound	8	88%	Excellent
2	Audio	Contain music in the media	14	0070	Excellent
3	Content	The relevance of with the purpose of curriculum and target learning	1	93%	Excellent

	Table 3. Ass	sessment of me	edia qualifica	ations by t	eachers.
--	--------------	----------------	----------------	-------------	----------

Journal of Physics: Conference Series

		AVERAGE		92%	Excellent
4	and Writing	Clear Language articulation that can be understood	9	94%	Excellent
	Reading	Readable text	7		
		The video contains the explanation of science in real life	11		
		Video animation presented is more acceptable.	10		
		Understandable material lesson.	6		
		The clear way of explanation.	5		
		competency from goals The lesson presented matches best with the curriculum of the fifth grade of an elementary school in a science subject	4		
		school The lesson match best with the competence of basic and standard	3		
		The lesson presented matches best to the syllabus of the subject in science major in the fifth grade of elementary	2		







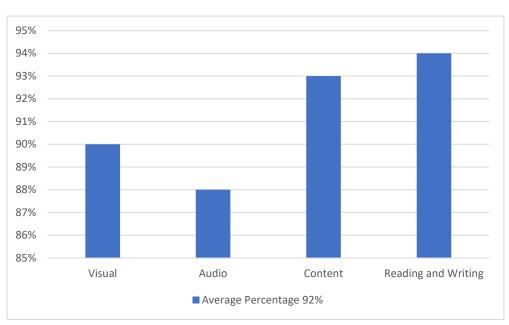


Figure 3. Diagram The Results of the Media Qualification Assessment by Teachers

4. Product test assessment by learners. Based on the results of a test assessment by 164 learners, overall media Kahoot score an 84% average in excellent categories and was presented in Table 4.

No	Aspect	Indicator	Question Number	Average Percentage	Category
1	Software	Media Attractiveness.	1 and 8	84%	Excellent
1	Software	User access	2 and 3	0470	LACCHER
2	Visual	Display and texts	4	920/	Excellent
2	Communication	Video and animation	5 and 6	83%	Excellent
3	Material	Language and target lesson.	7	84%	Excellent
		AVERAGE		84%	Excellent

Table 4. Product test assessment	by	learners
----------------------------------	----	----------

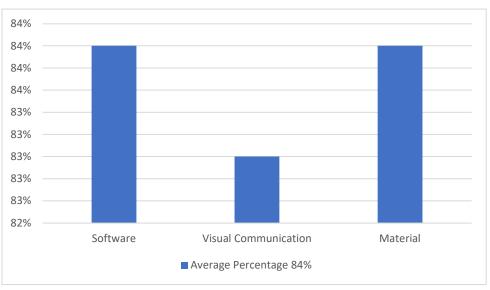


Figure 4. Diagram Results of Product Assessment by Learners

4. Conclusion

Based on the discussion and assessment generated by media experts, materials experts, teachers, and learners as users of this study may conclude that the Kahoot application's learning on a single substance and a five-grade of elementary school mix have such good worthiness that it is worthy of being used in teaching activities.

Acknowledgments

We are grateful for the cooperation of the institutions in the distribution of questionnaires by Elementary School Program Universitas Muhammadiyah Prof. Dr. Hamka. Thanks in particular to the editor and anonymous reviewers for their useful recommendations.

References

- 1. Aji, R. H. S. (2020). Dampak Covid-19 pada Pendidikan di Indonesia: Sekolah, Keterampilan, dan Proses Pembelajaran. *SALAM: Jurnal Sosial Dan Budaya Syar-I*, 7(5). https://doi.org/10.15408/sjsbs.v7i5.15314
- 2. Asmara, A. P. (2015). Pengembangan Media Pembelajaran Berbasis Audio Visual Tentang Pembuatan Koloid. *Jurnal Ilmiah Didaktika*, 15(2), 156. https://doi.org/10.22373/jid.v15i2.578
- 3. Fitriani, E., Paristiowati, M., & Mukarromatunnisa, B. (2019). Titration pre-lab demonstration videos in basic chemistry laboratory activity: Design and development Titration pre-lab demonstration videos in basic chemistry laboratory activity: Design and development. *Journal of Physics: Conference Series*, 1402(5). https://doi.org/10.1088/1742-6596/1402/5/055047
- 4. Hartanti, D. (2019). Meningkatkan Motivasi Belajar Siswa Dengan Media Pembelajaran Interaktif Game Kahoot Berbasis Hypermedia. *Prosiding Seminar Nasional PEP 2019*, 1(1), 78–85. Retrieved from https://jurnal.ustjogja.ac.id/index.php/snpep2019/article/view/5631
- Novianto, L. A., Degeng, I. N. S., & Wedi, A. (2018). Pengembangan Multimedia Interaktif Mata Pelajaran IPA Pokok Bahasan Sistem Peredaran Darah Manusia Untuk Kelas VIII SMP Wahid Hasyim Malang. *Jurnal Kurikulum Teknologi Pendidikan (JKTP) Universitas Negeri Malang*, 1(3), 257–263. Retrieved from http://journal2.um.ac.id/index.php/jktp/article/view/5770
- 6. Pakpahan, R., & Fitriani, Y. (2020). JISAMAR (Journal of Information System, Applied, Management, Accounting and Researh). 4(2), 30–36.
- Prastya, I. G. H., Pudjawan, K., & Suartama, I. K. (2015). Pengembangan Multimedia Pembelajaran Interaktif Mata Pelajaran Bahasa Indonesia dengan Model ADDIE untuk Siswa Kelas VII Semester Genap Tahun Ajaran 2014-2015 di SMP Negeri 1 Banjar. *E-Journal Edutech Universitas Pendidikan Ganesha Jurusan Teknologi Pendidikan*, 3(1), 1–11. Retrieved from https://ejournal.undiksha.ac.id/index.php/JEU/article/view/5605
- 8. Sari, B. K. (2017). Desain Pembelajaran Model ADDIE dan Impelentasinya dengan Teknik Jigsaw. *Prosiding Seminar Nasional Pendidikan : Tema "Desain Pembelajaran Di Era ASEAN Economic Community (AEC) Untuk Pendidikan Indonesia Berkemajuan ,"* 94–96, 87–102. Retrieved from http://eprints.umsida.ac.id/432/1/ARTIKEL Bintari Kartika Sari.pdf
- 9. Wijayanti, R., Hasan, B., & Loganathan, R. K. (2018). Media comic math berbasis whiteboard annimation dalam pelajaran matematika. *Jurnal Riset Pendidikan Matematika*, 5(1), 53. https://doi.org/10.21831/jrpm.v5i1.19207