Kahoot App as a Digital Evaluation Alternative For Online Learning

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Abstract

The use of paper tests has created problems for evaluation such as demotivation, psychological burden, and lengthy scoring process and analysis of answers. Kahoot is an application that offers digital evaluation. Examining the effectiveness of its use is therefore necessary. This Research and Development (R&D) study adopts the ADDIE model (Analyze, Design, Development, Implementation, and Evaluation). The research instrument consists of test items and questionnaire sheets. The results of the validation of items in the category of "appropriate to use" include many revisions and recommendations. The results of the test items obtained as many as 46 questions in the valid category. The results of the practicality test in the "adequately practical" category show a score of 3.80. The effectiveness test results in two test classes were 0.068. The research indicates that this product is usable, but the effectiveness test data obtained show that there is no significant difference between digital evaluations using the Kahoot application. However, the norm reference value differs between the two classes. This means that a visually appealing digital evaluation can increase a student's enthusiasm for learning.

Keywords: Digital Evaluation, Online Learning, "Kahoot!"

Abstrak

Penggunaan paper test telah memberikan kesan membosankan, beban psikologis, proses skoring yang lama serta analisis jawaban pada soal essay merupakan permasalahan evaluasi. Pleh sebab itu, pengembangan evaluasi digital dengan menggunakan Kahoot dan melihat keefektifan pengembangan kedalam penggunaannya sangat dibutuhkan. Penelitian pengembangan ini dengan mengadobsi model ADDIE (Analyze, Design, Development, Implementation, and Evaluation). Instrumen penelitian meliputi butir tes dan lembaran angket. Analisis data yaitu data kuantitatif dan kualitatif. Hasil data kualitatif dari validator tentang butir soal serta produk berisi saran dan masukan. Hasil validasi butir soal kategori layak digunakan dengan banyak revisi, hasil uji coba butir soal diperoleh sebanyak 46 soal dalam kategori valid. Hasil uji kepraktisan kategori cukup praktis dengan skor 3.80. Hasil uji efektifitas pada 2 kelas ujicoba, didapat sebesar 0,068. Berdasarkan hasil pengembangan, maka produk ini terkategori layak untuk digunakan, namun dari hasil uji efektifitas didapat data bahwa tidak ada perbedaan yang signifikan antara evaluasi digital menggunakan aplikasi Kahoot. Hal ini memberikan makna bahwa evaluasi digital yang menarik mampu merubah semangat belajar mahasiswa. Kendala lain juga difaktori oleh kekuatan provider yang digunakan, sehingga kualitas kecepatan dan kepuasan usebilitas tidak terpenuhi.

Kata Kunci : *Evaluasi Digital, Pembelajaran Daring, "Kahoot!"*

Introduction

Online learning has been chosen as an alternative in the school system during the Covid-19 pandemic, which, by the time of this writing, has entered the third trimester of education. Almost all educational units conduct online learning in various forms. However, not all of them can be categorized as appropriate learning, because not all educational units have designed online learning adequately. There are many options for online learning that a student can take advantage of[1], either through the Learning Management

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[1] Calvin E J Mamahit, 'The Effect of The Blended Learning Model on Student Learning Outcomes and Perceptions', *Polyglot*, 4.1 (2021), 6.

System (asynchronous), online learning (synchronous), blended learning, and mixed models [2].

In addition to utilizing various online learning models, social media is frequently used as an alternative in implementing fast and flexible learning. Youtube, Whatsapp, podcasts, Facebook, email, Google Meet, and Zoom are some of the most dominant polatforms used in learning. The dominant e-resources that were chosen, materials other than videos developed by educators in explaining the material, are e-modules, e-books, YouTube, and reference websites that offer supporting material.[3] All digital platforms are used as a medium to convey learning, but not as an evaluation of learning and an assessment instrument, regardless of whether the learning is successful or not.

Learning evaluation is a planned process and action to collect information about the progress, growth, and development of students so that an assessment can be used as a basis for making decisions.[4]

The evaluation instrument must meet academic standards in order to serve as a measuring and data collection tool for the learning process. In learning, the evaluation instrument is used to assess learning achievements. Factors that contribute to learning achievement, the development of learning outcomes, the success of the learning process, and the achievement of a particular program, are some reasons why evaluations are conducted. Learning evaluation is a systematic, continuous and comprehensive activity in controlling, guaranteeing, and determining the quality of learning. Evaluation is carried out by educators on all learning components as part of their responsibility in carrying out the learning process[5].

So far, the implementation of exams in online lectures is still using paper-based tests. This is done for practical reasons, although the Learning Management System offers an evaluation feature. The use of this paper-based test has caused undue psychological pressure on students, including the feelings of fear ans insecurity. As a result, they tend to be careless in completing the exam. Examinations should create a pleasant situation for students, allowing them to work without pressure or fear.

Based on previous research at the Educational Technology Study Program, Faculty of Education, State University of Padang, the development of a digital evaluation instrument, or more commonly referred to as computer-based testing (CBT) was developed to overcome learning problems during the learning evaluation process. Digital evaluation products include packaging questions with more visually attractive graphics because they are displayed with multimedia, minimizing paper and pencil, reducing costs, making it easier to calculate scores, allowing for more time for decision-making rather than for evaluation [6]. In testing the effectiveness of using digital evaluations, it was found that there was no difference in the use of digital evaluations, both with online systems, systems

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[2] Novrianti, 'Reconstruction of Adaptive and Responsive Educators Levels in Utilizing E-Resource Digital Literacy in the Era of the Indonesian', *Advances in Social Science, Education and Humanities Research, International Conference on Education Technology (ICoET 2019) International Conference on Education Technology (ICoET 2019)*, 372.ICoET (2019), 161–64.

[3] Novrianti, 'Reconstruction of Adaptive and Responsive Educators Levels in Utilizing E-Resource Digital Literacy in the Era of the Indonesian'.

[4] Sawaluddin Sawaluddin, 'Konsep Evaluasi Dalam Pembelajaran Pendidikan Islam', *Jurnal Pendidikan Agama Islam Al-Thariqah*, 3.1 (2018), 39–52 <https://doi.org/10.25299/althariqah.2018.vol3(1).1775>.

[5] Dave Guyadeen and Mark Seasons, 'Evaluation Theory and Practice: Comparing Program Evaluation and Evaluation in Planning', *Journal of Planning Education and Research*, 2018 <https://doi.org/10.1177/0739456X16675930>.

[6] novrianti Syafril, 'pengembangan dan efektifitas penggunaan computer based testing pada matakuliah evaluasi pembelajaran pada program studi teknologi pendidikan', *journal educative*, 2.2 (2017).

with standalone applications, or without networks, as well as evaluations with manual techniques. Implementation of the evaluation with a computer does not have a psychological impact on the test takers. This is due to the digital evaluation developed, which uses software that does not provide ease of use. However, digital evaluation helps lecturers in making test corrections quickly in order to save time[7].

Referring to the results of research on product development of Computer-Based Testing, this study aims to provide a solution by making an evaluation instrument that is more pleasant through the use of an evaluation application. The use of innovative evaluation instruments during this exam allows the student to recognize that evaluation is not only done with paper-based tests but also with applications; this will make students feel relaxed when doing evaluations. The use of this digital evaluation will minimize cheating and plagiarism. "Kahoot!"[8] is an educational website that can be used in evaluation activities such as pre-test, post-test, practice questions, material strengthening, remedial, enrichment, and others. "Kahoot!" has four features, namely games, quizzes, discussions, and surveys.

In the game features of this application, the answer can be pre-determined, and a set time is given to answer the question. The answers will be represented by pictures and colors. Participants are required to be careful in clicking the answer to avoid mistakes. This is because it can make it easier for lecturers to evaluate. It will also make it easier for students to find out the final results of the test.

Knowing the results quickly will give a motivational boost in themselves to study harder.

Several studies in developing the Kahoot application showed an increase in the enthusiasm of test takers in carrying out the digital evaluation[9]. Students are very interested and enthusiastic in the learning process. Learning outcomes have increased when using Kahoot!. The application has proven effective in the learning process and can significantly improve student learning outcomes[10].

The Kahoot! application makes the atmosphere during the test more fun, because students are more enthusiastic in answering questions. The use of this application makes students more motivated to study seriously before the test begins because when the evaluation is complete, students immediately know the results of the evaluation and know who got the title of champion. The problem in using the Kahoot! application as a learning outcome test is that it is rarely used at the higher education level. Most lecturers choose e-learning applications or choose a description test in the form of a paper test[11].

Quotes and Reference

Evaluation is a stage of describing, collecting, and presenting information for consideration in decision making. Learning evaluation is intended as a source of information to find out the level of progress, development, and learning achievement, as well as the level of learning effectiveness.

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[7] Syafril dan Novrianti, 'Pengembangan Dan Efektifitas Penggunaan Computer Based Testing Pada Mata Kuliah Evaluasi Pembelajaran Pada Program Studi Teknologi Pendidikan', *Jurnal Educative*, 2.2 (2017), 155–64.

[8] Bayram Gokbulut and Eregli Education Faculty, 'World Journal on Educational Technology : Current Issues', *World Journal on Educational Technology: Current Issues*, 12.2 (2020), 107–16.

[9] Fita Mustafida Syafiatul Mafruhah, iIka Ratih Sulistiani, 'Vicratina : Jurnal Pendidikan Islam Volume 4 Nomor 7 Tahun 2019 e-ISSN: ---- - ------', *Jurnal Pendidikan Islam*, 4 (2019), 23–29.

[10] Irwan Irwan, Zaky Farid Luthfi, and Atri Waldi, 'Efektifitas Penggunaan Kahoot ! Untuk Meningkatkan Hasil Belajar Siswa [Effectiveness of Using Kahoot ! To Improve Student Learning Outcomes]', 8.1 (2019), 95–104 <https://doi.org/10.21070/pedagogia.v8i1.1866>.

[11] Santi Maudiarti, "Penerapan E-Learning di Perguruan Tinggi Sekolah Tinggi Pariwisata Trisakti," *Perspektif Ilmu Pendidikan*, 32.1 (2018), 53–68.

Outcome evaluation is an assessment carried out to see the achievement/success of a program in achieving predetermined goals. It is at this evaluation stage that an evaluator can determine or provide recommendations to the evaluator whether a program can be continued, developed/modified, or even discontinued.[12]

The National Education Standards Agency (BSNP) describes evaluation as a procedure to obtain information related to student achievement or performance. The BSNP formulation on the principle of assessment includes educating, being open, comprehensive, integrated with learning, objectivity, systematic, sustainable, and fair[13].

The implementation of online learning requires the right digital learning design. However, digital-based evaluation is often the last target to be implemented in online learning. Computer-based testing is a form of test that utilizes a computer for control, both digital and analogue. Some of the advantages of computer-based testing include the involvement of various elements of multimedia, the many forms of question formats that can be made, reducing paper utilization and large costs, as well as a scoring system that greatly facilitates the processing of test results.[14]

Kahoot! is one of the interactive learning media that can be used to make the learning process fun for both students and teachers. This is because the application emphasizes a learning style that involves the active participation of students.[15]

Kahoot! is one of the online learning media that contains quizzes and games. It can also be categorized as an interactive learning media because it can be used in teaching and learning activities such as conducting pre-test, post-test, practice questions, material strengthening, remedial, enrichment, and so on. One of the requirements to create a Kahoot! account is to have a Gmail account or other email services. Kahoot! has four features: games, quizzes, discussions, and surveys. For games, the user can create the type of question and determine the answer and the time it should take to answer the question. Uniquely, the answers will be represented by pictures and colors. Participants are asked to choose a color or picture that represents the correct answer[16].

Research Methods

The method used in this research is Research and Development (R&D). The R&D method is a method consisting of research and development activities[17]. To implement this method, the model used is ADDIE Models, using five stages of development, namely: Analysis, Design, Development, Implementation, and Evaluation. Analyze, is the stage of analyzing problems that arise during the lecture and focusing on one main problem that is intended to carry out development activities. Design is the stage of determining a design based on the focus of the problem found in the analysis. Development is the third stage in the ADDIE model; it emphasizes the product development process followed by several activities, namely validation by experts, in this case, experts of the study material and experts of learning evaluation.

[12] Sri Lastuti dan Amat Jaedun, 'Evaluasi Pelaksanaan Program S1 PGSD di Unit Program Belajar Jarak Jauh UT DIY', *Jurnal Pendidikan*, 44.1 (2014), 39–50.

[13] Umi Salamah, 'Penjaminan Mutu, Penilaian Pendidikan', *Evaluasi. Vol.2, No. 1, Maret 2018*, 2.1 (2018), 274–93.

[14] Richard M Luecht and Stephen G Sireci, *A Review of Models for Computer-Based Testing*, 2011.

[15] Lutfi Lutfi and others, 'Evaluasi Penggunaan Aplikasi Kahoot Pada Pembelajaran Di Sekolah Dasar (Sd) Pada Guru', *International Journal of Community Service Learning*, 4.3 (2020), 186–91 <https://doi.org/10.23887/ijcsl.v4i3.27999>.

[16] Herwina Bahar and others, 'Efektifitas Kahoot Bagi Guru Dalam Pembelajaran Di Sekolah Dasar', *Kacanegara Jurnal Pengabdian Pada Masyarakat*, 3.2 (2020), 155–62 <https://doi.org/10.28989/kacanegara.v3i2.677>.

[17] P.R Brondon and A.L Sam, *Program Evaluation In The Oxford Handbook of Qualitative Research* (USA, 2021).

From the input of the validator, the product revision process is carried out until it reaches the level of feasibility of the developed test instrument. Implementation is the stage where the developed product enters the trial stage in the learning process. The evaluation stage is the stage of conducting the process of evaluating the product based on the results of the implementation. Included in this stage is seeing whether there are other effects encountered from the application of the product.

The instruments used in this study were tests and questionnaires. Test Instruments uses an instrument grid developed from the learning evaluation syllabus. Questionnaire is used as a research instrument in the form of a product validation sheet to see the user's response to the use of the application with a Likert measurement scale.

The analysis used for data processing is quantitative and qualitative. Qualitative data takes the form of validator input at the validation stage in the development stage, input from question validators, media experts, and student responses to questionnaires. Quantitative data describes the validation results from developing a digital evaluation using the Kahoot application. For the assessment of the quality of the questions, validation includes the suitability of the material with learning outcomes, question construction, and language. Meanwhile, product assessment includes visual graphics, program quality, and visual literacy.

The data obtained are based on student response to the questionnaire. The use of the Kahoot! application refers to five studies of standardization of assessment instruments, including very poor, below average, average, above average, and very good [18].

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[18] Novrianti, 'Teknik Pengembangan Dan Evaluasi Program Pembelajaran Berbasisi Multimedia Interaktif', *Jurnal Educative*, 1.1 (2016), 45–60.

Results and Discussion
Analyze

Based on the results of an analysis of the problems that arise in the online lecture process for nearly three semesters, we found that many lecturers of the Education Technology Study Program still use paper-based tests that are send in PDF format as the evaluation processes. During the online learning period, the digital evaluation used essay test techniques. On the one hand, the use of digital evaluation with applications available in the Learning Management System has many consequences, including the opportunity for students to continue to plagiarize, cheat, and even answer with the assistance of a paid friend. Furthermore, the motivation to attend lectures decreases because they do not receive feedback from lecturers' evaluations in person. As a consequence, students do not know their level of mastery of the material.

Design

At this design stage, three activities were carried out, namely designing questions, making validator questionnaires, and making test effectiveness questionnaires for students. Starting from planning, the number of questions are determined by looking at the weight of each material on the syllabus. The design starts from a grid of test questions and is developed into questions of 100 test items. The questions are developed from the cognitive domain of C3 to the cognitive domain of C6 because the research subjects are students. The statement lattice for the validation questionnaire consists of 21 statements for the expert validator and 17 statement lattices for student responses to be used when conducting the effectiveness test.

Development

The development includes activities to develop 100 questions and a validation process that is carried out by material experts, in this

case by lecturers in charge of the evaluation of courses. The results of the assessment of the validation of the question instruments include: (1) the suitability of the material with learning outcomes, (2) the construction of the questions that is not feasible, with the note that there are still double negative main formulations, and (3) linguistic categories that are not feasible because there are many sentences. The results of this analysis can be seen in the following table:

Table 1. Results of Question Validation Assessment

Aspect	Percentage	Category
Visual Graphics	4.85%	Very good
Program Quality	5%	Excellent
Literacy	4,52%	Good

Based on the results of the feasibility test analysis, the validator provides conclusions on the questions developed with the category "Appropriate to use with many revisions".

The next step is to test questions for students using the Google Form platform. This is intended to test the validity and reliability as well as other test requirements. After conducting the trial, the test questions were examined from 100 items. However, only 46 questions were valid and can be categorized as eligible to be used in developing digital evaluations using the Kahoot! application. with the level of difficulty of the questions consisting of 30 moderate questions, 14 difficult questions, and two very difficult questions. The results of the analysis of this item also have a test reliability value = 0.57 which means "Medium reliability."

The second development, namely entering the product development stage, is using Kahoot! application as a means of digital evaluation. In the development, a product validation process was carried out which included (1) visual graphics, (2) program quality, and (3) visual literacy. Based on the results of the product validation analysis, the development of a digital evaluation with the Kahoot! it is in the category of fit for use without revision. These results can be seen in table 2.

Table 2. Results of Kahoot! Application-based Product Assessment

	Evaluation Learning Result
Mann-Whitney U	388,000
Wilcoxon W	884,000
Z	-1,827
Asymp. Sig. (2-tailed)	,068

Implementation

The process of implementing the digital evaluation using the Kahoot! application was carried out in learning evaluation lectures carried out in two classes, one class using the application, and another class using the Google Form platform for 2018 students. At this implementation stage, a practical assessment was carried out from the student's point of view with indicators (1) layout, (2) content quality, (3) language. The results of this practicality test can be seen in Table 3.

Table 3. Practicality Assessment Results

Rate aspect	Average	Description
Layout	1.4%	Less Practical
Content Quality	1.0%	Less Practical
Language	1.2%	Less Practical

Evaluation

Based on the overall results of the study, the level of practicality testing on students, the development of learning outcomes tests using the Kahoot! application is included in the "relatively practical" criteria with an average score of 3.8. From the distribution of the questionnaires, students have difficulties in foreign languages, so they are expected to use a language that is easier to understand, besides that time accuracy and signal strength from a strong provider are very much needed.

Table 4. Results of the Mann-Whitney Test

Aspect	Percentage	Category
Suitability of Learning Outcomes	3.88%	Relatively appropriate
Questions Contraction	2,40%	Inappropriate
Language and literacy	2,2%	Inappropriate

The results of the Mann Whitney Test concluded that in terms of using the Kahoot! application, there was no effect between classes using this application for digital evaluations with those that use Google Forms. However, a very different score is obtained between digital evaluations using the Kahoot! application and those using Google Forms. This is due to the motivation that arises in students to compete with each other because the scores from the exams can be seen directly.

Discussion

The development of science and technology has been very rapid. One of the fields of science and technology that is currently developing is Information and Communication Technology (ICT). This progress is in line with the current needs and is relevant to the development of learning in higher education, including in terms of evaluation.

Educators must take measurements when conducting academic evaluations. [19] The development of evaluations by utilizing the Kahoot application in lectures was chosen by the researcher because the use of digital evaluations has a more relaxed impact on students when doing tests. Digital evaluation can package questions more effectively, reduce paper costs, and is equipped with scoring facilities[20]. In addition, the advantages of this Kahoot application are that the results of descriptive analysis data can be exported, and educators can also download the results of quizzes done by students in the form of excel files so that educators can easily process the results to be further analyzed. The learning atmosphere is also more fun. Students are trained to operate Kahoot! as a digital-based evaluation. In psychology, the use of the application can motivate participants to better prepare themselves before the test and to increase the value in the learning evaluation course. This is because with the use of Kahoot! the rate of cheating is reduced. Thus, students have no choice but to prepare themselves better.

This research and development was conducted to see the practical and effective use of the Kahoot application as an innovation in conducting fun tests. For this reason, a feasibility test is carried out which serves to determine the feasibility of the Kahoot! application, used as a medium in conducting learning outcomes tests by involving validators and student responses.

Based on the analysis of student response questionnaires in terms of practicality, a feasibility value was obtained with the criteria of "Adequately Practical." This is evident from the results of research conducted by Gres Dyah Kusuma Ningrum [21], which indicates that the implementation of Kahoot! as a media can accelerate students' understanding of the material, because it provides direct feedback. Based on the effectiveness test, there is no difference between the digital evaluation based on the Kahoot! application or using Google Form. This is factored in by the problems found during implementation, which is constrained by limitations to access network resources due to the development of Computer-Based Testing. In other words,

[19] Sukardi, *Evaluasi Pendidikan Prinsip Dan Operasional* (Jakarta: Bumi Aksara, 2008).

[20] Novrianti, 'Pengembangan *Computer Based Testing* (CBT) Sebagai Sebagai Alternatif Penilaian Hasil Belajar', *Lentera Pendidikan*, 17.1 (2014), 34–42.

[21] Gres Dyah Kusuma Ningrum, 'Studi Penerapan Media Kuis Interaktif Berbasis Game Edukasi Kahoot! Terhadap Hasil Belajar Mahasiswa', *Vox Edukasi Jurnal Ilmiah Ilmu Pendidikan*, 9.1 (2018), 22–28.

learning to use online is very dependent on access to resources. However, from the scoring results obtained by students in the evaluation in the two classes, there are differences in scores between the groups. This illustrates that the use of Kahoot! as an evaluation tool is quite effective because it can increase the spirit of competition in evaluating students[22].

In addition, the development of information technology and learning allows a very fast shift in learning. This is in line with the evaluation of learning. The development of mobile applications has resulted in educators having the ability to master their use. On the other hand, students can take advantage of this application in building their knowledge of the required material. Besides, learning by using mobile learning results in changes to the educators and students' way of thinking, namely in regard to how to work, their level of mastery of existing technology, and their ability to adapt and survive in new circumstances and environment[23].

The development of software technology and applications on smartphones has made it easier to organize the learning process in the classroom[24]. Learning is carried out anytime and anywhere with the presence of communication technology in the current era of the industrial revolution 4.0. Software and mobile applications are currently being developed to integrate the needs of teacher and student interaction patterns and to integrate curriculum and learning resources according to the wishes and needs of the current learning process. Some are built based on social media, such as Edmodo; others are game-based learning, such as Kahoot.[25]

The readiness of human resources as well as adequate facilities and infrastructure are essential to realize learning through technological and digital advances. Supporting facilities and infrastructure, as well as the ability of qualified human resources, will be able to take advantage of these developments for the benefit of the student and teacher[26].

One of the steps in using network technology and information technology for the development of learning systems in universities is the inter-university online lecture system [27]. The choice of learning model in this network must of course be in line with the learning evaluation model, in order to be fully synchronized and relevant to the expected final goal. The suitability of the application for the evaluation purpose will greatly affect the expected results[28].

Kahoot! is used as a medium in teaching and learning activities because students need learning that is not monotonous. Furthermore, teachers are more capable of using Kahoot! media to support learning in the classroom. As a result, students are more motivated in

[22] Nurcihan Yürük, 'Edutainment: Using Kahoot! As A Review Activity in Foreign Language Classrooms', 2.2 (2019) <https://doi.org/10.31681/jetol.557518>.

[23] Liza Efriyanti and Firdaus Annas, 'Aplikasi Mobile Learning Sebagai Sarana Pembelajaran Abad 21 Bagi Pendidik Dan Peserta Didik Di Era Revolusi Industri 4.0', *Journal Educative: Journal of Educational Studies*, 5.1 (2020), 29 <https://doi.org/10.30983/educative.v5i1.3132>.

[24] Rozmita Dewi Yuniarti, 'Potensi E-Learning Melalui Sistem Kuliah On-Line Dalam Meningkatkan Kualitas Pembelajaran Di Prodi Tata Niaga Jurusan PEndidikan Ekonomi FPEB-UPI', *Manajerial*, 8.16 (2010), 66–77.

[25] Aprilia Riyana Putri and Muhammad Alie Muzakki, 'Implemetasi Kahoot Sebagai Media Pembelajaran Berbasis Digital Game Based Learning Dalam Mengahadapi Era Revolusi Industri 4.0', *Prosiding Seminar Nasional "Penguatan Muatan Lokal Bahasa Daerah Sebagai Pondasi Pendidikan Karakter Generasi Milenial*, 2019.

[26] Novi Hendri Zulfani Sesmiarni, Ridha ahida, 'Information Technology Services in Preparing for Industrial Era 4 . 0', *International Journal of Advanced Science and Technology*, 29.5 (2020), 845–51.

[27] Muhammad Chdzirin dan Lina Sayekti Mokhamad Iklil Mustofa, 'Formulasi Model Perkuliahan Daring Sebagai Upaya Menekan Disparitas Kualitas Perguruan Tinggi', *Walisongo Journal of Infrmation Technology*, 1.2 (2019), 151–60.

[28] Warsun Najib, Universitas Gadjah Mada, and Elearning Model, 'Analisis Penerapan Pembelajaran Daring Pada Mata Kuliah Jaringan Komputer Dengan Metode Massive Open Online Course (MOOC)', November 2017, 2018.

learning and feel happy when the teaching and learning process is in progress.[29]

The advantages of this online learning model encourage educators to search for the best forms of e-learning implementation through various studies. However, evaluation of the implementation of e-learning is still rarely carried out; as a result, the effectiveness of e-learning is not acknowledged[30].

Our study encourages further research to obtain the best form of implementation of learning evaluation. Learning evaluation is the effort to measure the achievement of learning objectives [31]. The use of the Kahoot! application in learning is one way to keep students interested and to be interactive in their learning [32].

From the research and development findings that have been described, it turns out that advances in digital technology will be very useful in learning if students can take advantage of the available features. However, to be able to master it, educators must be able to improve the their ability to master the technology.

Conclusion

Based on the results of the development of this digital evaluation, four stages of the assessment process have been carried out: (1) Assessment of the quality of the questions with validation results was feasible, though many revisions are still required, according to the validator's notes. (2) Product Assessment in the form of digital evaluation with the Kahoot!

Application: its use is suitable, and no revision is necessary. (3) The practical value of this digital evaluation is deemed to be relatively practical. (4) From the effectiveness test carried out, we found that the digital evaluation product with the Kahoot! application did not provide a significant difference; however, from the questionnaire distributed at the practical stage, this caused by providers who did not have adequate grasp of foreign languages in understanding instructions.

Nevertheless, the difference in learning outcomes for each class illustrates that digital evaluation is at least able to motivate students to improve their learning by competing with other students. On the one hand, in terms of usability, the development process is very easy, allowing it to be developed at various levels of educational units.

References

Books

Sukardi, *Evaluasi Pendidikan Prinsip dan Operasional* (Jakarta: Bumi Aksara, 2008)

Luecht, Richard M, and Stephen G Sireci, *A Review of Models for Computer-Based Testing*, 2011

Journal

Bahar, Herwina, Dewi Setiyaningsih, Laily Nurmalia, and Linda Astriani, 'Efektifitas Kahoot Bagi Guru Dalam Pembelajaran Di Sekolah Dasar', *Kacanegara Jurnal Pengabdian Pada Masyarakat*, 3.2 (2020), 155–62 <https://doi.org/10.28989/kacanegara.v3i2.677>

Bunyamin, Cucu Aceng, Dewi Rika Juita, and Noer Syalsiah, 'Penggunaan Kahoot Sebagai Media Pembelajaran Berbasis Permaianan Sebagai Bentuk Variasi Pembelajaran', *Gunahumas Jurnal Kehumasan*, 3.1 (2020), 43–50

Efriyanti, Liza, and Firdaus Annas, 'Aplikasi Mobile Learning Sebagai Sarana Pembelajaran Abad 21 Bagi Pendidik

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[29] Cucu Aceng Bunyamin, Dewi Rika Juita, and Noer Syalsiah, 'Penggunaan Kahoot Sebagai Media Pembelajaran Berbasis Permaianan Sebagai Bentuk Variasi Pembelajaran', *Gunahumas Jurnal Kehumasan*, 3.1 (2020), 43–50.

[30] Yuniarti.

[31] Sawaluddin.

[32] Nurul Fazriyah and others, 'Penggunaan Aplikasi Kahoot Pada Pembelajaran Media Dan Sumber Pembelajaran Sd', *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, 6.1 (2020), 139–47 <https://doi.org/10.36989/didaktik.v6i1.119>.

Dan Peserta Didik Di Era Revolusi Industri 4.0', *Journal Educative : Journal of Educational Studies*, 5.1 (2020), 29 <https://doi.org/10.30983/educative.v5i1.3132>

Fazriyah, Nurul, Aas Saraswati, Jaka Permana, and Rina Indriani, 'Penggunaan Aplikasi Kahoot Pada Pembelajaran Media Dan Sumber Pembelajaran Sd', *Didaktik : Jurnal Ilmiah PGSD STKIP Subang*, 6.1 (2020), 139–47 <https://doi.org/10.36989/didaktik.v6i1.119>

Gokbulut, Bayram, and Eregli Education Faculty, 'World Journal on Educational Technology : Current Issues', *World Journal on Educational Technology: Current Issues*, 12.2 (2020), 107–16

Guyadeen, Dave, and Mark Seasons, 'Evaluation Theory and Practice: Comparing Program Evaluation and Evaluation in Planning', *Journal of Planning Education and Research*, 2018 <https://doi.org/10.1177/0739456X16675930>

Irwan, Irwan, Zaky Farid Luthfi, and Atri Waldi, 'Efektifitas Penggunaan Kahoot! Untuk Meningkatkan Hasil Belajar Siswa [Effectiveness of Using Kahoot! To Improve Student Learning Outcomes]', 8.1 (2019), 95–104 <https://doi.org/10.21070/pedagogia.v8i1.1866>

Jaedun, Sri Lastuti dan Amat, 'Evaluasi Pelaksanaan Program S1 PGSD Di Unit Program Belajar Jarak Jauh UT DIY', *Jurnal Pendidikan*, 44.1 (2014), 39–50

Lutfi, Lutfi, Siska Kusumawardani, Sri Imawati, and Misriandi Misriandi, 'Evaluasi Penggunaan Aplikasi Kahoot Pada Pembelajaran Di Sekolah Dasar (Sd) Pada Guru', *International Journal of Community Service Learning*, 4.3 (2020), 186–91 <https://doi.org/10.23887/ijcsl.v4i3.27999>

Mamahit, Calvin E J, 'The Effect of The Blended Learning Model on Student Learning Outcomes and Perceptions', *Polyglot*, 4.1 (2021), 6

Maudiarti, Santi, 'Penerapan E-Learning di Perguruan Tinggi Santi Maudiarti Sekolah Tinggi Pariwisata Trisakti', *PERSPEKTIF Ilmu Pendidikan*, 32.1 (2018), 53–68

Mokhamad Iklil Mustofa, Muhammad Chdzirin dan Lina Sayekti, 'Formulasi Model Perkuliahan Daring Sebagai Upaya Menekan Disparitas Kualitas Perguruan Tinggi', *Walisongo Journal of Infrmation Technology*, 1.2 (2019), 151–60

Najib, Warsun, Universitas Gadjah Mada, and Elearning Model, 'Analisis Penerapan Pembelajaran Daring Pada Mata Kuliah Jaringan Komputer Dengan Metode Massive Open Online Course (MOOC)', November 2017, 2018

Ningrum, Gres Dyah Kusuma, 'Studi Penerapan Media Kuis Interaktif berbasis Game Edukasi Kahoot! terhadap Hasil Belajar Mahasiswa', *Vox Edukasi Jurnal Ilmiah Ilmu Pendidikan*, 9.1 (2018), 22–28

Novrianti, 'Pengembangan Computer Based Testing (CBT) Sebagai Sebagai Alternatif Penilaian Hasil Belajar', *Lentera Pendidikan*, 17.1 (2014), 34–42

———, 'Reconstruction of Adaptive and Responsive Educators Levels in Utilizing E-Resource Digital Literacy in the Era of the Indonesian', *Advances in Social Science, Education and Humanities Research, International Conference on Education Technology (ICoET 2019) International Conference on Education Technology (ICoET 2019)*, 372.ICoET (2019), 161–64

———, 'Teknik Pengembangan Dan Evaluasi Program Pembelajaran Berbasisi Multimedia Interaktif', *Jurnal Educative*, 1.1 (2016), 45–60

Novrianti, Syafril dan, 'Pengembangan Dan Efektifitas Penggunaan Computer Based Testing Pada Mata Kuliah Evaluasi Pembelajaran Pada Program Studi Teknologi Pendidikan', *Jurnal Educative*, 2.2 (2017), 155–64

Putri, Aprilia Riyana, and Muhammad Alie Muzakki, 'Implemetasi Kahoot Sebagai Media Pembelajaran Berbasis Digital Game Based Learning Dalam

Mengahadapi Era Revolusi Industri 4.0', *Prosiding Seminar Nasional "Penguatan Muatan Lokal Bahasa Daerah Sebagai Pondasi Pendidikan Karakter Generasi Milenial*, 2019

Sam, P.R Brondon and A.L, *Program Evaluation In The Oxford Handbook of Qualitative Research* (USA, 2021)

Sawaluddin, Sawaluddin, 'Konsep Evaluasi dalam Pembelajaran Pendidikan Islam', *Jurnal Pendidikan Agama Islam Al-Thariqah*, 3.1 (2018), 39–52 <https://doi.org/10.25299/althariqah.2 018.vol3(1).1775>

Syafiatul Mafruhah, iIka Ratih Sulistiani, Fita Mustafida, 'Vicratina : Jurnal Pendidikan Islam Volume 4 Nomor 7 Tahun 2019 e-ISSN: ---- - ------', *Jurnal Pendidikan Islam*, 4 (2019), 23–29

Syafril, novrianti, 'Pengembangan Dan Efektifitas Penggunaan Computer Based Testing Pada Matakuliah Evaluasi Pembelajaran Pada Program Studi

Teknologi Pendidikan', *Journal Educative*, 2.2 (2017)

Umi Salamah, 'Penjaminan Mutu, Penilaian Pendidikan', *Evaluasi. Vol.2, No. 1, Maret 2018*, 2.1 (2018), 274–93

Yuniarti, Rozmita Dewi, 'Potensi E-Learning Melalui Sistem Kuliah On-Line Dalam Meningkatkan Kualitas Pembelajaran Di Prodi Tata Niaga Jurusan PEndidikan Ekonomi FPEB-UPI', *Manajerial*, 8.16 (2010), 66–77

Yürük, Nurcihan, 'Edutainment : Using Kahoot ! As A Review Activity in Foreign Language Classrooms', 2.2 (2019) <https://doi.org/10.31681/jetol.55751 8>

Zulfani Sesmiarni, Ridha ahida, Novi Hendri, 'Information Technology Services in Preparing for Industrial Era 4 . 0', *International Journal of Advenced Science and Technology*, 29.5 (2020), 845–51