



Development of E-Module Based on the Traditional Puyuh Game on the Cooperation Character and the Tolerance of Elementary School Students

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Abstract: Electronic modules provide convenience for teachers and students in learning activities. This study aims to determine the feasibility or validity of the electronic module based on the traditional game "Puyuh" in learning activities and to determine the effect of implementing the electronic module on the character of cooperation and tolerance in students. The type of research used is development with a development model, namely 4D (Define, Design, Develop, and Disseminate). The sample of this study amounted to 50 students consisting of two classes. The data collection instruments are questionnaires and interviews. The data analysis used is descriptive qualitative and quantitative. The research results obtained are the electronic module based on the traditional game "Puyuh" which is feasible or valid to be used in learning activities. Electronic modules are an alternative in learning activities for teachers and students. The implementation of the electronic module based on the traditional game "Puyuh" has an influence on the character of cooperation and tolerance in students, besides that it can also introduce technology and preserve local wisdom in students.

Keywords: e-module, local wisdom, cooperation character, tolerance character

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INTRODUCTION

Developed countries cannot be separated from the role of developing education, because it can create quality human resources. Without quality human resources, a country will be left behind because good and quality education is a benchmark for the quality of human resources (Krismiati, 2017; Djidu & Jailani, 2018). Education will run if there are educators and students (Baharun & Zulfaizah, 2018; Megasari, 2020). Quality education cannot be separated from the existence of a teacher who is able to take advantage of technological developments in learning activities (Syahrial et al., 2021; Kiska, 2022). Education by utilizing technological developments can have a positive impact on the creation of quality human resources who are guided by a creative teacher.

Teachers have an important role in the learning process to develop the abilities possessed by students. The teacher is one of the objects in learning that is required to be able and play an active role in the formation of student motivation (Sukitman, 2018; Sabil et al., 2021). In the learning process the teacher acts as a facilitator (Rahmawati & Suryadi, 2019; Jannah & Junaidi, 2020). Teacher creativity greatly influences the effectiveness of student learning, one of which is by teachers utilizing technological developments in learning activities (Abdullah, 2017; Salsabila et al., 2020). Based on this, teachers must prepare themselves in implementing learning to students in terms of developing times.

The development of the times at the present time affects all fields, one of which is in the field of education. Education that makes more use of technological developments in the process of learning activities is called education 4.0 (Walters, 2018; Wahyono, 2019). Education 4.0 really needs attention regarding the qualifications and competencies of quality teachers, learning media that support the learning process (Surani, 2019; Rahim et al., 2019). The application of education 4.0 brings changes in the way of learning, thinking patterns and ways of acting for educators and students who are more innovative and more creative (Lase, 2019; Afghani, 2021). The use of information and communication technology in learning activities has a very positive impact on the progress of existing education.

Teachers who are creative in integrating technological developments in learning activities are very helpful the effect of student success in learning. The use of technology in learning activities will make it easier for teachers to deliver the material provided (Perdana et al., 2017; Novianti et al., 2020). Utilization of technological developments for learning media in the form of teaching materials in the form of electronic

modules that can facilitate teachers and students in the learning process (Sugianto et al., 2013; Puspitasari, 2019). The application of electronic modules can improve understanding of the learning concepts delivered because they can display videos, texts, images and animations (Imansari & Sunaryantiningsih, 2017; Suyatna et al., 2018).

The culture that exists around students can be used by teachers in learning activities by adding learning materials with local wisdom. The local wisdom in question is the diversity of views and values of an area that has been passed down from generation to generation (Ufie, 2017; Supartinah et al., 2018). Learning by linking local wisdom is not only to find out the existence of existing local wisdom but can improve the character of students (Subali et al., 2015; Alqomay, 2018). The values contained in local wisdom are very universal which has a good impact on students to be developed (Kurniawan & Piyana, 2019).

Based on what happened in the field where teachers had difficulty in integrating learning related to the surrounding cultures in the learning process activities. Meanwhile, in schools, they have used the development of technology, information and communication in learning activities. Thus there is a need for developments in learning by utilizing technology such as electronic modules based on traditional quail games using 3D Pageflip Professional to be able to provide new things for teachers and students in delivering learning materials related to local wisdom. Electronic modules using the 3D Pageflip Professional application provide an attractive appearance so that learning is not boring. Fun learning gives students emotional expression intrinsically related to students' interest and motivation in learning (Trinova, 2012). The electronic module uses the 3D Pageflip Professional application, an electronic book form that can display text, images, animations, videos and music which can make both teachers and students interested in using it (Maison et al., 2020). Using this electronic module is more efficient and economical because it can overcome the problem of limited printed books (Mungmachon, 2012; Raihan et al., 2018).

Therefore, this researcher aims to develop learning media in the form of an integrated electronic module in the traditional Puyuh game with a display that is how the feasibility and validity of the electronic module for the traditional Puyuh game is, how is the cooperative character of students from the implementation of the electronic module based on traditional quail games, how is the character students' tolerance from the implementation of the traditional quail game-based electronic module and whether there is an effect of the traditional Puyuh game electronic module on the character of cooperation and tolerance in students.

METHODS

This research uses research and development research and development (R&D). Development research is a process of designing, developing and evaluating models, strategies that aim to improve learning activities (Haviz, 2016; Bariah, 2019). In this study using a development model, namely 4D (Define), Design (Planning), Develop (Development), and Disseminate (Deployment)). The advantage of this 4D development model is that it has a short procedure in the process of developing a product (Kosassy, 2019; Luthfya, 2020). The stages in the 4D development model are the defining stage, which is to determine and define the needs of teachers and students in development products (Rahmawati, 2019; Fatih, 2020). The second stage is design or design, which is to produce designs from the products developed (Kurniawan & Dewi, 2017; Nurafni et al., 2020). Then in the third stage, namely Develop, which is to produce learning tools in the form of electronic modules (Mulyatiningsih, 2016; Laili, 2019). Then the last stage is Disseminate which aims to promote product development so that it can be accepted by users (Herawati & Hamdu, 2014). In this study, product validation was carried out by experts in accordance with their fields consisting of media, practitioners, materials and language experts. Product validation can be seen from the suitability of the product with the curriculum (Kurniawan & Piyana, 2019). With valid assessment criteria as follows:

Table 1. Validation Criteria

Score Interval	Category
4.22 – 5.00	Very Valid
3.41 – 4.21	Valid
2.61 – 3.40	Quite Valid
1.80 – 2.60	Less Valid
0 – 1.79	Very Invalid

This research was conducted at SD Negeri 66/Iv Jambi City for the academic year 2021/2022, with the research subjects being all grades IV A and IV C, totaling 50 students. The instrument used in this research is using a questionnaire and interviews. There are 3 kinds of questionnaires used, namely the questionnaire on the feasibility and validity of the electronic module based on the traditional game "Quail", a

character questionnaire for cooperation and a student character questionnaire. The questionnaire uses a 5 (five) Likert scale, namely a score of 5 for the strongly agree category, a score of 4 for the agree category, a score of 3 for the moderate category, a score of 2 for the disagree category and a score of 1 for the strongly disagree category and reinforced by the results of teacher interviews and learners.

The data collection in this study was carried out by researchers by conducting expert validation to see whether the electronic module was feasible and valid for use or not. Furthermore, the distribution of a questionnaire on the feasibility and validity of the electronic module based on the traditional game "Puyuh", a cooperative character questionnaire and a student character questionnaire to see the implementation of the electronic module based on the traditional game "Quyuh" that has been made. The following is a grid of each instrument and questionnaire:

Table 2. Grid of Media Expert Validation Assessment Instruments

Variable	Instrument	Item No
Development of Traditional Game-Based Electronic Module "Quail" Using 3D Pageflip Professional Application	Clear and Neat	1, 2, 3, 4
	Clean and Attractive	5, 6, 7, 8
	Suitable for students	9, 10, 11, 12, 13
	Practical, Resistant and Flexible	14, 15, 16
	Good Quality	17
	Size according to the needs of students	18

(Adopted from [Asyhar, 2011](#))

Table 3. Material Expert Validation Assessment Instrument Grid

Variable	Instrument	Item No
Module development Electronic Based on Traditional Game "Quail" Using 3D Pageflip Professional Application	The suitability of the material with KI and KD	1, 2
	Material accuracy	3, 4
	Material update	5, 6, 7
	Suitability with the development of students	8, 9, 10, 11

(Adopted from BNSP 2016)

Table 4. Grid of Linguistic Expert Validation Assessment Instruments

Indicator	Assessment Aspect	No. Item
Straightforward	Correct sentence structure	1, 2
	Sentence effectiveness	3, 5
	Term standard	4, 6
Communicative	Understanding of messages or information	7, 8
Dialogic and Interactive	Willingness to motivate students	9
	Encourage critical thinking	10
Suitability with the development of students	Conformity with the level of intellectual development of students	11
	Conformity with the level of emotional development of students	12
	Grammatical accuracy	13
Conformity with Indonesian language rules	Spelling accuracy	14
	Consistency of use of terms	15
	Consistency in the use of symbols or icons	16

(Adopted from: BNSP 2016)

Table 5. Grid of Expert Practitioner Assessment Instruments

Indicator	Aspects of assessment	No. Item
Clear and Neat	The electronic module is clearly presented	1
	Electronic modules are neat in their arrangement and presentation	2
Clean and Attractive	Presentation of clean electronic modules and Proportional	3
	Electronic modules are able to attract students' learning interest	4
Suitable For Students	Electronic modules according to the characteristics of students	5
	Electronic modules according to the topics Taught	6
Practical, Flexible and Resistant	Easy-to-use electronic module	7
	Electronic modules can be carried anywhere easily	8
	Electronic modules can be used independently over and over again	9
Good quality According to the needs of students	The electronic module is of good quality	10
	Easy to carry and store	11

(Adopted from [Asyhar, 2011](#))

This study uses a qualitative descriptive data analysis technique that is used to describe the results of the implementation of the electronic module in the form of the mean, median, mode, maximum value and minimum value for each variable assisted by using the SPSS version 22 application.

RESULT AND DISCUSSION

This research is a development research that produces a product in the form of an electronic module based on the traditional game "Quail" using the 3D Pageflip Professional application. Learning activities using an electronic module based on the traditional game "Quail" gave a positive response for teachers and students. Students gave an enthusiastic response to learning activities by implementing an electronic module based on the traditional game "Quail". The development procedure starts from a needs analysis where the results of the interview show that the teacher has difficulties in learning activities that integrate local wisdom. Furthermore, at the design stage, namely the preparation of electronic module contents such as learning materials, stories and craft activities related to local wisdom, namely the traditional game "Quyuh". At the development stage where the design that has been designed is compiled and developed into a teaching material product in the form of an electronic module assisted by the 3D Pageflip Professional application to display an electronic module based on the traditional game "Puyuh". After carrying out the development, the researcher further validated by experts in accordance with their fields, the results obtained were as follows:

Table 6. Expert Validation Results

Aspect	Eligibility Level	Category
Theory	93%	Very Decent
Language	96%	
Media	93%	
Practitioner	80%	

Based on the table above, it shows that in the material aspect, 93% is included in the very feasible category, in the language aspect 96% is included in the very feasible category, in the media aspect it is included in the very feasible category and in the practitioner aspect 80% is included in the appropriate category for use in learning activities. Based on the results of the validation carried out, it can be concluded that the electronic module based on the traditional game "Puyuh" is feasible or valid to be developed and tested. The components contained in the electronic module are the title or cover page, basic competencies, content competencies, indicators, learning objectives, materials regarding local wisdom of traditional quail games that are integrated into class IV learning, theme IV, sub-theme I, learning I, evaluation and participant

crafts. educate. At the trial stage, which was carried out in the fourth grade of elementary school, which aimed to determine the effect of using electronic modules on work characteristics the same and tolerance of students, this trial was carried out in three classes, namely class IV A and class IV B SD Negeri 66/IV Jambi City. After conducting a trial in which students were asked to fill out a questionnaire on the character of cooperation, tolerance character and the character of the influence of the implementation of the electronic module on the character of cooperation and tolerance.

From descriptive data analysis where the influence of the implementation of the electronic module based on the traditional game "Quail" has an influence on the character of cooperation and tolerance in students, it is processed with SPSS 22. 3.44% (1 out of 25 students), students in the bad category 4.76% (3 out of 25 students), in the sufficient category that is 23.78% (6 out of 25 students), in the good category get 31.81% (9 out of 25 students) and very good category 23.78% (6 out of 25 students). And the results of data processing obtained an average value of 73.92, a maximum of 84.00, and a minimum value of 64.00. The following table shows the effect of the electronic module on the cooperative character of students:

Table 7. The effect of the electronic module on the cooperative character of students

Interval	Category	Amount	Mean	Median	Max	Min	%
20-36	Not very good	1					3.44%
37-52	Not good	3					4.76%
53-68	Enough	6					23.78%
69-84	Well	9	73.92	73.00	85	64	44.24%
85-100	Very good	6					23.78%
	Amount	25					100%

So it can be concluded that the electronic module has an influence on the work character the same for students. While the results of data processing research where the tolerance character of students in the very bad category is 3.44% (1 out of 25 students), students in the bad category 4.76% (3 out of 25 students), in the moderate category namely 23.78% (6 out of 25 students), in the good category it got 31.81% (9 out of 25 students) and in the very good category 23.78% (6 out of 25 students). And the results of data processing obtained an average value of 73.92, a maximum of 84.00, and a minimum value of 64.00.

Table 8. The effect of the electronic module on the tolerance character of students

Interval	Category	Amount	Mean	Median	Max	Min	%
20-36	Not very good	2					6.88%
37-52	Not good	2					6.88%
53-68	Enough	5					16.78%
69-84	Well	11	73.92	73.00	84	64	48.48%
85-100	Very good	7					20.53%
	Amount	25					100%

From the table above, it can be concluded that there is an influence on the use of electronic modules on the tolerance character of students who are included in the good category. Furthermore, processing the data obtained by the researcher, it is known that there is an influence from the use of electronic modules based on the traditional game "Quail" on the character of cooperation and the character of tolerance. The following is an explanation table regarding the effect on the two characters resulting from the implementation of the electronic module:

Table 9. The Effect of Electronic Module Implementation on the Character of Students' Cooperation and Tolerance Character

Coefficients^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	75.539	19,311		3.912	.001
1 Cooperation (X1)	-.137	.239	-.130	-.572	.573
Tolerance (X2)	-.091	.213	-.097	-.427	.673

a. Dependent Variable: E-module (Y)

From the table above, it is known the value of Sig. for the effect of X1 on Y or the effect of the character of cooperation on the electronic module that is equal to $0.573 > 0.05$ so that it can be concluded that basically there is an influence of the cooperative character of students on the electronic module. While in the table above, it is known the value of Sig. for variable X2 to Y or tolerance character to electronic module obtained that $0.673 > 0.05$, so it can be concluded that basically on X2 there is an influence on Y or the tolerance character of students has an influence on the electronic module. The following is an explanation table:

Table 10. Test the Effect of ELketronic Module Implementation

ANOVAa					
Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	22,644	2	11.322	235,383	.000b
Residual	620,690	21	29,557		
Total	643.333	23			

a. Dependent Variable: E-module (Y)

b. Predictors: (Constant), Tolerance (X2), Cooperation (X1)

In the table above, it can be seen that there is a significant value for the effect of the electronic module based on the traditional Puyuh game on the character of cooperation and tolerance in students, namely $0.000 < 0.05$ so that it can be concluded that there is an effect between X1, X2 simultaneously on Y.

Based on data analysis, where the electronic module based on the traditional game "Quail" that was developed can be applied in learning activities as a learning medium that utilizes technological developments in accordance with the 4.0 revolution period and can improve the character of students, especially in the character of cooperation and tolerance. To preserve local wisdom in the form of traditional games. This is because in the electronic module there is local wisdom that contains many good character values to be developed by students, namely in the traditional game "quail". It is necessary to increase the cooperative character of students (Rahayu et al., 2017). This is reinforced by the results of teacher interviews where by increasing the cooperative character of students, it can improve the social nature of students. Where in elementary school age it is very good to improve the character of cooperation in students because it has an influence on the level of trust of students and students will more easily adapt to the surrounding environment (Rukiyati et al., 2014; Woodin & Shaw, 2019). From the implementation of the traditional game-based electronic module "Quail" from data processing, it has an influence on the cooperative character of students while also having a positive impact on learning activities for students to be more focused and motivated in learning activities (Dumitrescu et al., 2014; Sadimin et al., 2017).

While the tolerance character where the results of data processing are included in the good category are the results of the implementation of the traditional game-based electronic module "Quail". The character of tolerance is very good to be developed in students. The character of tolerance creates harmony, peace, and creates a harmonious life (Komalasari & Saripudin, 2017; Isac et al., 2018). This is reinforced by the results of interviews with teachers where it is stated that with cultural diversity, tolerance is one of the things that can unite this diversity. With the application of the traditional game-based electronic module "Quail" can increase the character of tolerance in students. Character education in elementary schools is very important to change the way students think and behave (Hattingh & Downing, 2020; Cervera-Gasch et al., 2021). This is also reinforced from student interviews where the application of the traditional game-based electronic module "Quail" has an influence on students' attitudes, in learning it contains many positive character values. Electronic modules in learning activities have an influence on the character of students (Herawati & Muhtadi, 2018).

The character of cooperation in students has previously been studied by Yulianti et al. (2017), namely cooperation character education in learning elementary school students in the 2013 curriculum, while the character of tolerance in previous research has been measured by Purnamasari and Wuryandani (2019) namely Media folklore-based big book learning to improve the character of tolerance in early childhood, while the research conducted by the researcher is the implementation of an electronic module based on the traditional game "Puyuh" to improve the character of cooperation and the character of tolerance in elementary school students. The novelty in this research lies in the variables studied, namely work characteristics the same and tolerance character, namely to determine the effect of the implementation of the traditional game-based electronic module "Puyuh" on the variables in this study.

Based on the results of data processing and interviews where the traditional game-based electronic module "Quyu" is feasible or valid to be applied in learning activities. The limitation of this research is that the implementation of the electronic module is in the learning competencies, namely class IV and on theme IV "Various Jobs", Sub-theme I "Types of work", Learning I, which is based on the traditional game "Quail"

assisted by the 3D Pageflip Professional application. In this study, we really want to develop learning with Revolution 4.0 from the use of technology development into the field of education which at the same time can improve the character of students and preserve local wisdom of the surrounding area with a modern system.

CONCLUSION

Electronic modules in learning activities by utilizing local wisdom in the surrounding area, namely the traditional game "quail" is feasible or valid to be used in learning activities. The implementation of the traditional game-based electronic module "Quyuh" has an effect on improving the character of students, especially on the character of cooperation and tolerance. In addition, the application of this electronic module can introduce students to technology development while preserving local wisdom in the surrounding area. Therefore, the traditional game-based electronic module "Quail" in addition to providing convenience for teachers in teaching also has a positive impact on learning activities for students.

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