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Strengthening Character Education of Students Through Civics Caring Apps Based on M-Learning During the Covid-19 Pandemic

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A B S T R A C T

The purpose of this study was to increase the effectiveness and efficiency of character education for students using M-Learning-based media containing content and display according to the needs and interests of students at the elementary school level. The method used is the Design and Development research method, with data collection carried out including literature studies, interviews, validation with experts, and questionnaires. The final results of this study are user tasks, evidence of student character changes, prototype designs, and mobile applications in providing an understanding of character values with a good user experience and displaying content that is in accordance with the needs and interests of students so that they are motivated to implement every positive character value they learn. This is because Civics Caring Apps provides customized types of text, graphics, audio, video, quizzes, animations, and interactivity to allow everyone to access various forms of media to create more meaningful programs for users. Based on the research that has been done, the online learning process (on the network) has hampered the process of internalizing character education in students. The presence of Civics Caring Apps has been proven to increase the effectiveness and efficiency of the character-building process of students during the Covid-19 pandemic.

A R T I C L E   I N F O

1. INTRODUCTION

Character education is very crucial in preventing deviant behavior. Educational institutions, educators, and educational curricula have been designed in such a way that the character values of students can be internalized properly. The internalization process can be embedded in learning materials as well as in teaching and learning activities and processes in the classroom. Since the emergence of the Covid-19 pandemic, the process of internalizing character values in students has experienced obstacles. This is due to the limited interaction and intensity of meetings between teachers and students. Thus, teachers experience difficulties in monitoring and supervising the formation of the character of students (Lestari, 2018).

Mobile learning (m-learning) is a learning model that adopts the development of cellular technology and mobile devices (HP) which are used as learning media. M-learning is an alternative learning model that has characteristics that do not depend on place and time. The potential and prospects for developing mobile learning in the future are very wide open considering the tendency of an increasingly dynamic and mobile society as well as the demands for quality and diverse educational needs. The learning concept is expected to encourage the realization of an effective and innovative learning atmosphere so that it can motivate the learning spirit of students and teachers (Warsita, 2018).

Today, many teenagers have delinquency levels beyond the threshold, this is evidenced by the increasing number of crimes and violations committed by children in their teens. Therefore, there is a need for learning that is directly related to the growth of children's character (Ridwan, 2016). Based on this, the researchers took several focus issues, including related steps that can be taken by teachers in shaping the character of students during the Covid-19 pandemic and related to the design of Civics Caring Apps that can be used as a medium to increase the effectiveness and efficiency of forming the character of students during the Covid-19 pandemic.

Previous research that has similarities with the topic of this research is a study conducted by Warsita, (2018), the subject of this research is teenagers in the age range of 11-19 years. Second, research conducted by Bahri & Wahdian (2021), this research was carried out at Batulih Timur 1 Elementary School and Bates 1 Elementary School. Another research conducted by Angga (2020), which discusses the preparation of online learning which will later provide an overview of the measurement effectiveness of using technology in various online learning methods.

The results of the East Java IPNU (Nahdlatul Ulama Student Association) Survey in April 2020 revealed that the online learning system currently being implemented for students was deemed less effective, as many as 92.29% of East Java students wanted a learning method, especially in this online situation. more creative and innovative. This is supported by 88.75% of respondents who consider the current learning process to be boring, boring, and stressful (Shidiq & Raharjo, 2018). Based on these studies, it can be seen that the character building of students at the elementary school level has become the concern of various parties. Based on several findings from previous researchers, our team is interested in conducting research on the development of interactive media that is relevant and needed for character building during online learning.

The purpose of this research is to increase the effectiveness and efficiency of teachers in instilling character values in students during the Covid-19 pandemic after the implementation of the Civics Caring Application for students at the elementary school level. The method used is a descriptive qualitative research method, with data collection carried out including

literature studies, interviews, and questionnaires. In contrast to previous research, there is a novelty in this research, namely the Civics Caring application that can establish integrity between teachers and parents to form the character of students, and the features presented in this Civics Caring application apart from being in the form of games, there is also a monitoring feature from the teacher for students, so that character education continues through online learning during the Covid-19 pandemic.

2. METHOD

We used a mixed-method approach, with a Design and Development (D&D) model, which we focus on in three stages, namely the analysis and planning stage, the design stage, and the evaluation stage. The research procedures are generally carried out in accordance with the direction of the health protocol that has been set by the government and related parties, the research stages include, the pre-research stage (the pre-research stage includes activities carried out by the researcher before conducting the research), the implementation stage (at the implementation stage, the researcher carries out the research). research using approaches, methods, and data collection techniques that have been planned in research), data processing, and analysis stages (data processing and analysis stages are processes in processing data and facts that have been obtained in the process of conducting research).

Participants in this study were selected based on the researcher's considerations (judgment sampling or purposive sampling), to analyze user needs, there were 5 elementary school teachers and 28 students, who were the academic community of 189 Neglasari Elementary School, Bandung City. The experts in this study are needed to test the effectiveness of Civics Caring Apps, so that two people are selected as material experts, namely from the field of Psychology and Citizenship Education, and one person as a media expert from the field of Computer Science. These experts are lecturers at the Indonesian Education University.

Data collection techniques in this study to obtain data as expected, the authors use several kinds of data collection techniques which include literature studies, interviews, and questionnaires. The data obtained in the questionnaire method on experts and media users used descriptive statistical analysis to process qualitative and quantitative data, on a Likert scale measurement formula using five scoring points. Then the final revision and create the final design of the product in the form of Prototype Civics Caring Apps.

3. RESULTS AND DISCUSSION
3.1. Learning Media Design Civics Caring Apps

To find out the right design for Civics Caring Apps learning media for students at the elementary school level, namely by applying the steps of the ADDIE media development model, which can be divided into two domains, including analysis and design (Agustien *et al.,* 2018).

The analysis phase includes:

(i)   Material Coverage Analysis. In implementing the scope of this material, interviews were conducted with teachers of the 189 Neglasari Elementary School to ascertain the need/importance of learning media. As a result of the interview, the teacher felt the need to develop learning media based on android games. One of them is expected that this media can be a solution in monitoring the character of students amid the limitations of teachers in the implementation of online learning (Angga, 2020).

(ii) Analysis of user characteristics. The target of using learning media is elementary school students who feel more interested in learning using android games when implementing

online learning at home. this is evidenced by the results of the questionnaire distributed to 28 students at 189 Neglasari Elementary School as shown in **Figure 1**.
Figure 1 describes students' interest in educational games.
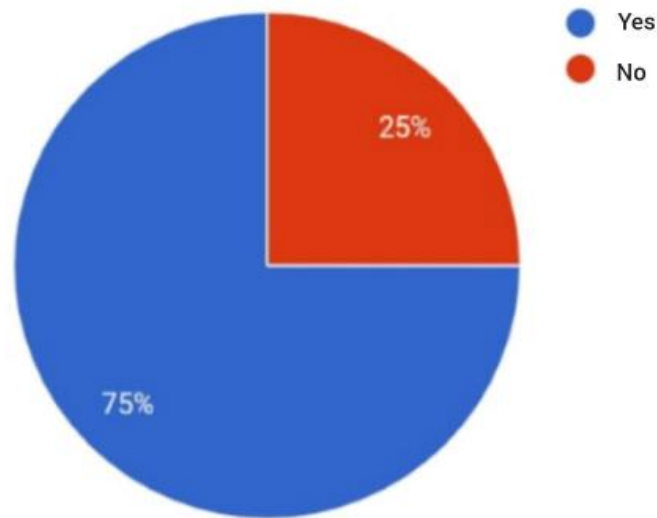

Figure 1. The results of the user characteristics questionnaire.

Based on the results of the questionnaire data, 75% of students agree that online educational games are more fun than learning material through books. This situation is supported because learning has been carried out at home since the emergence of the Covid-19 pandemic, so students find it more difficult to concentrate when online learning is taking place. Based on the answers from respondents, a learning innovation is needed so that students can be motivated to learn.

The results of the analysis are then used as the basis for making Civics Caring Apps learning media which is then made into the following documents (Komalasari , 2019) :
(i) Flowcharts, is a set of symbols that have a certain meaning and are arranged into a chart form. Flowchart serves as a description of the relationship between processes (instructions) one another process sequentially in the application.
(ii) Storyboards, is a detailed description of application content arranged into three rows of columns, including a description column, a visual column, and an audio column. The storyboard has a function to detail the content details in the application.
(iii) Lesson plan. Made to consider the materials contained in the Civics Caring Apps in accordance with the lesson plans at the elementary school level.
(iv) 2D visual design assets. Prepare 2D visual design assets as material for the next stage, including application logos, buttons, backgrounds, and animation supporting materials.
(v) Audio assets. Set up audio assets for application needs. Audio includes background music and music that appears on each scanned marker.

3.2. Development of Media Civics Caring Apps

In the design of this application, it will develop learning media based on character education with technology. The idea that the researcher adopts as a novelty in this research is to apply Civics Caring (Character Building) Apps as a digital character education-based learning media that combines the Value Clarification Technique (VCT) learning model with games-based learning methods, with this application a solution. that we offer to increase the effectiveness and efficiency of monitoring character formation for students in online learning by adjusting to technological advances and student interests (Agustin & Hamid, 2017).

The Civics Caring application is an idea in the form of an application intended for students and educators to carry out teaching and learning activities about the character in elementary school children. Civics Caring Apps are in the form of media games where the goal is to provide a means of developing student character values with interesting and not boring media. Games used in learning in the form of games will provide a stimulus so that students can be active directly in learning (Kartikaningtyas *et al.*, 2014).

The presence of this application can be a solution in the formation and improvement of the positive character of students, through understanding the use of information technology wisely (Agustien *et al.*, 2018). So that its use will increase the effectiveness and efficiency as a medium in the process of forming the character of students. This application scheme has a feature for monitoring the character formation of students, the menu contained in **Figure 2**. **Figure 2** is an illustration of the various features of Civics Caring Apps.

(i) Berly (Learning with Carly) where this feature contains materials that explain the ideal values and character of students.

(ii) Cerly (Stories from Carly), Cerly contains various fairy tales and stories that contain moral messages that can be used as examples in life.

(iii) Vidly (Video from Carly), Vidly features video clips about tolerance and national life that can be used as examples by students.

(iv) Tesly (Test from Carly), Tesly contains test features that must be done by students in the form of games so that students do not get bored.

(v) Monte (Monitoring for friends), contains a monitoring feature on what students have done to improve good character.

(vi) Testimonials from Father and Mother, which contain forms for parents to fill out on the development of students.

Figure 2. Civics caring apps menu.

3.3. Experts Feedback

The Civics Caring Apps learning media product can then enter the next stage, which is reviewed by experts for further testing to users. Aspects of the Civics Caring Apps assessment can be seen from 2 categories, namely in terms of content/material and also in terms of design appearance. Through a questionnaire given to media experts and 2 material experts, the results of the assessments from the experts were found in **Table 1**.

Table 1 describes the results of the questionnaire from the responses of experts regarding the effectiveness of Civics Caring Apps as a learning medium to shape students' character.

Table 1. Questionnaire results expert responses.

No.	Reviewer	Content	Design	Average	Rating Category
1.	Material Expert	4.50	4.30	4.40	Very Good
2.	Media Expert	3.80	3.40	3.60	Good
	Average			**4.00**	**Good**

Based on the results of the questionnaire responses from the experts contained in **Table 1**, it can be concluded that the material experts and media experts stated that the Civics Caring Apps learning media was feasible to be tested on student learning at the elementary school level. Overall, Civics Caring Apps has a "Good" rating from the experts, but to create a learning portal that is worthy of use, some inputs and corrections, especially those given by experts, are very valuable in product improvement (Saffudin, 2013).

3.4. User Feedback

After the first revision was carried out according to the advice of the experts, then the Civics Caring Apps learning media product was tested to find out the response from the user. (Rachmawati *et al.,* 2017). The test results on Civics Caring Apps are based on the 12 aspects listed in **Table 2**.

Table 2 explained about the Civics Caring Apps assessment that was piloted to 28 users as students at 189 Neglasari Elementary School. Based on **Table 2**, the Civics Caring Apps trial data in the field involving 28 students and 12 indicators has a total number of assessments of 1387 and the average assessment result based on the test results is 4.12. So it can be concluded that Civics Caring Apps according to student responses are rated "Good". Through the features provided in Civics Caring Apps, it is possible for each student to maximize their study time and student learning time can be designed flexibly so that learning (Murafer *et al.,* 2021). The results of the evaluation above can provide an overview of what needs to be improved on the Prototype Civics Caring Apps, apart from that knowing the existing shortcomings are expected to bring up new ideas and ideas in the development of an application-based innovation.

Table 2. Civics caring trial results.

No.	Rated Aspect	Score	Average	Category
1.	Clarity of study instructions	118	4.21	Very good
2.	Clariity of material description	116	4.14	Good
3.	Providing opportunities for students to practice on their	114	4.07	Good
4.	Languange clarity	123	4.39	Very good
5.	Suitability of the picture to clarify video	116	4.14	Good
6.	The suitability of the video to clarify content	118	4.21	Very good
7.	Suitability of animation to clarify content	117	4.17	Good
8.	Freedom of choice menu	109	3.89	Good
9.	Music support	107	3.82	Good
10.	The accuracy of the selection of background and writing	112	4.00	Good
11.	Determination of choosing the type	117	4.17	Good
12.	Display Animation Presented	120	4.28	Very good
	Total	**1387**	**49.49**	
	Average		**4.12**	**Good**

3.5. Analysis of the Urgency of Character Education at an Early Age

Character education is the main thing as the results of an interview with one of the teachers at the 189 Neglasari Elementary School, Bandung City, namely the importance of character education for students and now character education has been included in the curriculum, the purpose of education is not only to change children from not understanding to understanding but more than that. This character education is part of the process of forming the morals of the nation's children which is the foundation for increasing the dignity of the Indonesian nation, with good character education, a person can live independently and have the principle of truth that can be accounted for, the most important thing for youth is character building. Therefore, educating that character should endeavor in earnest (Hasibuan, 2014).

In the process, in line with what is explained by expert researchers, namely in inculcating character values, there needs to be habituation and cannot directly and spirituality is the basis for intelligence that makes unity between thought, mind, and behavior. This is influenced by several factors, one of which is the environment has a large enough role, for example, schools and communities must have discipline and habituation regarding the character to be formed (Hasibuan, 2014).

Currently, Indonesia is experiencing a youth crisis as evidenced by the lack of state development and the increasing rate of juvenile delinquency, problems regarding social deviations that occur among adolescents and minors such as getting to know drugs, promiscuity, fights between students, theft, and being involved in many actions. other crimes that deviate from the norms prevailing in society (Shidiq & Raharjo, 2018). Judging from this, character education is very important both to create a quality generation and to improve deviant behavior by teenagers because character education can filter out bad information.

3.6. Analysis of the Benefits of Civics Caring Apps as M-Learning

Online learning has an impact in a process of forming the character of students which decreases effectiveness in controlling the formation of the character of students. Lack of effective interaction and lack of organization is one of the obstacles when learning online (Patonah & Muasomah, 2020). This is in line with the results of our interview with one of the teachers at the 189 Neglasari Elementary School in Bandung City that during online learning it is difficult to supervise the child's character because they cannot see the child's behavior directly and intensively, so they feel less than optimal in carrying out their activities. supervision and character building of students.

In forming the character of students during the Covid-19 period, it cannot be separated from the supporting factors and inhibiting factors, for the supporting factors, namely the advancement of technology that can help students in the process of forming their respective characters, students can explore their development, but on the other hand, the inhibiting factor is the lack of supervision and guidance on the character development of students, therefore communication is needed between children, teachers, and parents, to overcome this (Shidiq & Raharjo, 2018).

In the process of forming the character of students, there are several steps taken by the teacher to educate the character of students during the Covid-19 pandemic, namely the existence of planning, implementation, and evaluation. First, planning a teacher needs to make a learning design in which there is a habit of good character formation, then second, namely the implementation in this case it is necessary to have online character-building planning support facilities, namely the existence of an application and communication media

and the last evaluation, namely to reflect, analyze, and follow up on the formation of the character of students.

Based on the data and facts above, the researchers made a comparison with previous research which is also the basis for this research. First, research was conducted by (Shidiq & Raharjo, 2018). The subjects of the study were adolescents aged 11-19 years. This study discusses alternative solutions that can be chosen in developing characters, namely by using Android-based visual novel games. The design of this character-building application was produced to create a visual novel educational game that can help the development of the character of the younger generation at the age of 16 to 19 years in a positive direction.

The research conducted by us through Civics Caring Apps is aimed at elementary school students as an online learning medium, by incorporating various values from character education, especially values that are often encountered in everyday life, for example, honesty, fairness, helpfulness, and so forth (Bahri & Wahdian, 2021). The novelty of the application that we offer is that there are features that can make it easier for teachers to monitor students in the implementation of online learning during the Covid-19 period.

Second, research conducted by (Angga, 2020), entitled The Relationship of Technology Selection and Competency Achievement in Online Learning Methods. This study discusses the preparation of online learning which will provide an overview of measuring the effectiveness of using technology in various online learning methods. This study obtained data by conducting a sampling survey which was distributed to students who were doing online learning.

The Civics Caring application can assist teachers in supporting controlling and monitoring the formation of the character of students. Then, it can assist students in understanding and instilling good characters that should be obtained by themselves (Bahri & Wahdian, 2021). Indeed, it is not only that parents can take part in the development of the character of their respective children. Thus, there is a synergy between teachers and parents in building character formation in children on an ongoing basis. This Civics Caring application is also an innovation in character-building learning based on educational games so that it can attract its users.

4. CONCLUSION

Based on research and the process of extracting information to the parties concerned, it is evident that the emergence of the Covid-19 pandemic has reduced the effectiveness and efficiency of teachers in character building for students. So, the presence of Civics Caring Apps has succeeded in answering this problem. Civics Caring Apps are presented with child-friendly visualizations and can be accessed anytime and anywhere, not limited by space and time. So that teachers and parents can synergize with each other to shape children's character even during the Covid-19 pandemic. In the future, the researcher hopes that Civics Caring Apps can continue to be upgraded both in terms of content, technicality, and the addition of partners who can support the optimization of the use of Civics Caring Apps so that the benefits can be felt by the wider community.

5. ACKNOWLEDGMENT

6. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors confirmed that the paper was free of plagiarism.

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