

Functions and Roles of Android Learning Media as an Effort Improving Students' Learning Abilities and Character

Suhari^{1*}, Akhmad Qomaru Zaman²

¹ Pancasila and Citizenship Education Study Program, Faculty of Teacher Training, PGRI Adi Buana University Surabaya

Received: September 4, 2024

Revised: October 7, 2024

Accepted: December 25, 2024

Published: December 31, 2024

Corresponding Author:

Suhari

suhari@unipasby.ac.id

DOI: [10.29303/jppipa.v10i12.9635](https://doi.org/10.29303/jppipa.v10i12.9635)

© 2024 The Authors. This open access article is distributed under a (CC-BY License)



Abstract: Character education has the task of developing students' potential to have good hearts and behavior. This study aims to improve the quality of students' character through interactive learning media based on android. The characters developed are discipline, honesty, mutual respect and appreciation. This study is a type of Classroom Action Research (CAR). The research design uses the Stringer action research model with core activities consisting of three stages. The stages consist of observation, data analysis, and action and evaluation. Data collection techniques are obtained through observation and questionnaires. The results of the study from each cycle I character on each score: discipline, never 3, rarely 19, often 22, and always 20. Honest aspect, never 0, rarely 19, often 24, always 21. Aspect of respect and respect, never 1, rarely 17, often 23, always 24. Cycle II, discipline aspect, never 1, rarely 14, often 27, always 24. The honest aspect is never 0, rarely 13, often 27, always 24. The respect and respect, never 0, rarely 12, often 25, always 27.

Keywords: Android; Ability; Character; Learning media

Introduction

In the digital era, the future of the country is influenced by the condition of the younger generation. The generation whose life is digital and instant is always connected to technology. Every day they always interact with smartphones, laptops, video games, and other technologies. Through interaction with technology, the younger generation becomes a generation that is vulnerable to the influence of culture and the development of the times. Through the increasingly rapid use of technology, it will have an impact on the way of thinking, behaving and the way of looking at life, the values and character of the nation's culture (Shrivastava, 2017).

Rusdiyani (2016) stated that the digital generation has been influenced by a hedonistic modern lifestyle.

Thus, they often abandon the nation's culture that values Pancasila. They often appear in a way that tends to contain elements of pornography and pornoaction on social media. The habit of playing social media also makes them vulnerable to bullying (Hidayat et al., 2022). In social media, they also often make prank or fraud videos with inappropriate and discriminatory scenes. The behavior of the younger generation has often been contrary to the character of the nation.

The role of the younger generation is very important for driving the progress of the nation (National Intelligence Council, 2012). Character formation for students is the capital of the nation's future. Preparing students who have character is the job of the state and teachers as educators. Character education is very necessary so that students have morals, tolerance, and noble character. The digital generation

How to Cite:

Suhari, & Zaman, A. Q. (2025). Functions and Roles of Android Learning Media as an Effort Improving Students' Learning Abilities and Character. *Jurnal Penelitian Pendidikan IPA*, 10(12), 11026–11035. <https://doi.org/10.29303/jppipa.v10i12.9635>

cannot live without technology. They will spend time exploring the limitless virtual world for hours. Their habit of surfing the virtual world has an impact on the behavior shown

Globalization has quite an influence on the formation of a new paradigm in school age or students. There are foreign cultures that are not in line with cultural values in Indonesia. This condition has a negative impact on students' behavior. Based on the facts, currently there are still many students who do not have good manners, do bullying, lack discipline, and do not have responsibility for the tasks given. The character that has been formed if left to live in society will make the child's character even worse.

Therefore, optimization of character education in elementary schools must be carried out in order to form and strengthen noble morals (Pangestu & Agustina, 2022; Sugiri, 2023; Suryaatmaja et al., 2023). Students must be equipped and made aware of the importance of good values through joint commitment and always apply them in everyday life. Optimization carried out in schools will help students sort and choose relationships, actions, and actions that are in accordance with applicable norms. This character education can be applied in teaching and learning activities through existing materials. Teachers must be able to insert character education from the material presented. Values such as religious, honest, mutual respect, discipline, independence, politeness, love of peace, care for the environment, and responsibility. Therefore, teachers need a media as a form of innovation to develop students' character (Amelia et al., 2022).

The government needs to pay attention to the degradation of the character of the current generation. The government must be able to appreciate the advantages of the current generation in terms of skills in technology. However, there must be rules so that the use of technology can be used wisely. The instillation of character education for the digital generation must be pursued as part of the success of national education. Law number 20 of 2003 stipulates that the education system must prioritize character education. In the National Development Plan

The 2005-2025 Long-Term National Education aims to build a strong, competitive, moral, ethical, and Pancasila-based national character. Instilling character education for the digital generation requires the right solution through appropriate learning media. Appropriate media are media that combine character education content with the character of the digital generation.

Achieving educational goals requires the right learning method to be effective. Instilling character education requires a method so that it can be understood by students. The methods of character education

according to Gunawan (2022) include conversation, stories, parables, role models, habits, promises, and threats. Based on this method, the story method will be used to help shape the character of students Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya. Character formation will be carried out in Indonesian language subjects through story material. The story method chosen will be assisted by Android-based media according to student interests. The characters that are expected to emerge include obedience to worship, helping each other, respecting each other, and compassion for others.

Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya. The school is located in a city area with people who generally work as workers. The school always realizes education in accordance with the independent curriculum, including instilling good character for students. In this digital era, schools fortify students' characters by adding religious activities. Memorization and murottal activities are expected to form disciplined behavior so that students come early, have responsibility, are polite, and increase religious knowledge. However, along with the development of technology, student behavior is still difficult to control. This condition is exacerbated by parents who cannot always accompany their children because they work. It is not uncommon for parents to work as migrant workers while children live with their families at home. Students who play more by using smartphones.

Students are less accustomed to learning independently, as evidenced by the rarely done homework. Other impacts of playing with smartphones include students becoming angry, undisciplined, swearing because they imitate the language they see and hear, and lacking in manners. Based on these conditions, efforts are needed to improve the quality of education that always instills character education. Character education is an educational effort in trying to form character in students who not only have knowledge but also a good personality (Gardner, 2021).

Based on the problems that have been explained, a study was conducted that utilized digital technology and character education. The study aims to improve the quality of students' characters through interactive learning media for character education based on android. The application of character learning media that will be applied at Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya pays attention to the characters of students who have a fairly high interest in games and animation.

Previous research that has been conducted related to the formation of character education by Nurhikmah et al. (2023) using the Educandy game. Based on the study, it is known that the Educandy game can increase and arouse students' enthusiasm for learning. Students

achieve meaningful learning and apply positive habits such as obeying rules, being on time, and being orderly. Another study was conducted by (Priatmojo et al., 2023) using the Electronic Wordless Picture Book. Through the help of books, students begin to get used to searching for and finding meaning from the stories they have read. Students also begin to get used to reading so that literacy will always be needed.

Based on the results of initial observations and problem analysis, an effort to improve character through android media containing stories was chosen. The subjects of classroom action research were 10th grade students in semester II. In the initial observation, it was concluded that students' attitudes and behaviors related to character values had decreased. This condition was evidenced by the actions of lying to teachers, disturbing friends, and being undisciplined.

Efforts made by utilizing android-based character building learning media in Indonesian language subjects. Through the media used, students are invited to play an active role in the learning process through small groups that have been formed. In the media, there is an Islamic story menu, students are invited to analyze the elements of the story they see. Students are invited to play an active role in small groups to measure the level of cooperation and mutual respect. Students are divided into groups with different academic abilities. The definition of media according to the National Educational Association (NEA) is all objects that can be manipulated, seen, heard, read, discussed, and the equipment used in the activity (Sapriyah, 2019). Learning media is used to help improve thinking power, feelings, the ability to pay attention to the teaching and learning process in the classroom. The purpose of using learning media is to make the teaching and learning process more effective and efficient and students can easily understand the material (Nurrita, 2018).

Media is called interactive if it is designed with the aim of involving active user responses (Wibawanto, 2017). Interactive media is used in the learning process to clarify material or concepts so that the abstract becomes real with various tools. Through interactive multimedia, users can describe the contents of the material so that they can understand parts of the learning that are difficult to understand through other media (Munir, 2012). Through interactive multimedia, difficult material can be understood and explained concretely through the display it has.

Through interactive media, it is expected that students' characters will be formed. Character is a personality that is a trait or characteristic, nature, style that a person has that comes from the formation of the environment, such as family and birth. According to (Nurjanah, 2020) character education is an effort to realize policies, namely human quality objectively, not

only for individuals but also for society as a whole.

Character education has the task of making students have character (Setiawati, 2017). Character education also has the function of developing basic potential to have a good heart, think well, and behave well according to the noble values of Pancasila. Through character education, a strong and competitive society will be formed and good morals with an orientation towards the development of science and technology. Through character education, it is hoped that it can improve students' behavior so that they are ethical and moral in community life (Mustoip et al., 2018). According to Rohman (2019) character refers to several attitudes consisting of attitudes, behavior (behavior), motivation, and skills.

Character education must be able to develop values derived from the outlook on life or ideology of the Indonesian nation, religion, culture formulated through national education goals. Values become a person's belief in how people are considered worthy or unworthy in carrying out something that is considered valuable and not valuable to achieve (Wahid, 2020). The Ministry of National Education formulates national character values consisting of 18 parts, namely religious, honest, tolerant, disciplined, hard work, creative, independent, democratic, curiosity, national spirit, love of the homeland, respect for achievement, communicative, love of peace, love of reading, care for the environment, care for social, and responsibility. Android is a program that allows users to carry out activities with mobile devices such as PDAs, cell phones, and cellphones. The use of Android applications will facilitate the completion of several activities such as entertainment, trading, education, office work, surfing the internet, and other activities (Dewi et al., 2018).

Method

This research is a classroom action research that aims to improve students' character by utilizing interactive educational learning media based on android. This research is an effort to improve character values through android-based media. The research design uses the action research model from (Stringer et al., 2009). The stages are as follows, LOOK acquire information, THINK reflect on the information, ACT use outcome of reflection and analysis. The core of this activity has three stages, namely observation (collecting data), processing describing information (analyzing), and carrying out actions (planning, implementing, and evaluating).

The activities carried out are collecting information in order to classify existing problems. In this activity, researchers act as research subjects in carrying out observations in order to identify student characters with

the help of learning media. Researchers carry out observations to find out the problems that exist in learning. Based on initial observations, it will be written in a detailed problem formulation. Through the problem formulation, how to fix the problem will be determined. The second stage is information processing (THINK). Through observations at the beginning of learning, grade X students found several problems as

The following are start from problems from students in the form of: deviations in student character, some students are not active in the learning process, students are bored with the learning system being implemented, students have difficulty receiving material given by the teacher. Then problems from teachers, namely: difficulty being a good example in implementing character values, limited use of teaching aids or media, giving assignments that are not balanced with students' ability to understand the material. The third stage is in the form of action (ACT). Through a description of the results of initial observations and problem analysis, actions will be determined so that students' character will improve.

This research was conducted in Grade X of Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya. The research aims to improve the quality of students' character in Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya. The research method used is Classroom Action Research (CAR). The research was conducted in 2 cycles. Activities in each cycle start from three stages, namely observation (collecting information), processing (analyzing information), and taking action. The stages in each cycle can be described as follows.

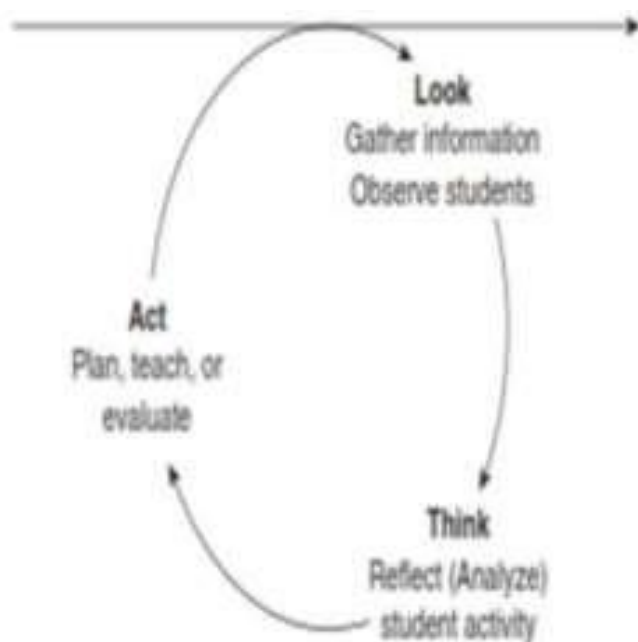


Figure 1. Action Research Cycle (Stringer et al., 2009)

The stages of classroom action research consist of several stages. First, conducting observations (LOOK). In this activity, researchers collect information in order to classify the problems faced. Researchers act as research subjects to identify student characters through Indonesian language learning based on student and teacher learning experiences in the learning process. Researchers conducted initial observations in class X Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya. Based on the results of the observations, children were given problem solving for subsequent Indonesian language learning.

Second, in the form of processing information (THINK). Problems that can be formulated based on observation results include: (1) poor student character, such as being undisciplined, liking to lie, and not respecting teachers and friends in the learning process; (2) less interesting learning for the rest. The teacher only uses textbooks and asks students to do practice questions. Third, take action (ACT). The researcher carries out actions according to the problems faced so that the problems can be solved. The researcher applies several things related to the formation of student character. The activities in each cycle include observation, processing information, taking action. Action activities consist of: preparing lesson plans, implementing learning through android media, evaluation, and reflection.

The subjects of this study were Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya. This study utilized android learning media containing stories to instill students' characters. The data in this study were qualitative data (experience) and quantitative data (amount/value). Data collection techniques were carried out by observation, character questionnaires.

The research instruments used were observation sheets and character assessment questionnaires. The data obtained were analyzed using Miles & Huberman's theory consisting of data collection, data reduction, data presentation, drawing conclusions and verification.

Results and Discussion

Pre-Cycle Learning Activities

Pre-cycle activities are activities carried out before the actual research is carried out. In this activity, researchers enter the class and observe the learning process and character of students when the Indonesian language subject is being taught. This activity aims to find out the problems and character of students (honest, respectful, and disciplined). Researchers also formulate students' interests and understanding in learning Indonesian. The percentage of student character is presented by Table 1.

Table 1. Percentage of the Character Aspect of “Discipline” of Students in the Pre-Cycle

Question	Score			
	1	2	3	4
I listen And follow every teacher's order	0	6	5	5
I do question after finished explanation from the teacher	2	3	5	5
I wrote down every important information explained by the teacher	5	4	4	3
I repeated the material that the teacher had explained.	6	5	2	3

Information: 1= never; 2= rarely; 3= often; 4= always

The results of pre-cycle observations on the discipline aspect of 16 students showed that students listened and followed teacher's instructions consistently as many as 5 students or 31.25%, students who often listened as many as 5 students (31.25%) and rarely followed teacher's instructions as many as 6 students (37.5%). The discipline of students in working on questions seemed varied, students who never worked on questions as many as 2 students (12.5%), rarely worked on questions as many as 3 students (18.75%), students who often worked on questions as many as 5 students (21.25%) and always worked on questions as many as 5 students (31.25%). Student discipline in recording important information that is classified as never taking notes as many as 5 students (31.25%), rarely taking notes as many as 4 students (25%), often taking notes as many as 4 students (25%) and always taking notes as many as 3 students (18.75%). In the disciplinary activity of repeating the material, 6 students (37.5%) never repeated it, 5 students (31.25%) rarely took notes, 2 students (12.5%) often took notes and 3 students (12.5%) always took notes students (18.75%).

Table 2. Percentage of Students' "Honest" Character Aspect in the Pre-Cycle

Question	Score			
	1	2	3	4
I listened to the teacher's explanation well and didn't talk to myself.	3	6	4	3
I listen Friend Which is having an opinion.	0	7	6	3
I don't bother friends who are doing their assignments.	1	5	5	5
I'm not angry if my answer is corrected by a friend	0	6	4	6

In the honesty character based on the table above, it can be explained that there are 3 students (18.75%) who listen to the teacher's explanation and do not talk to themselves. There are 6 students (37.5%) who sometimes listen to the teacher's explanation. Students who often listen to the teacher's explanation are 4 students (25%) and always listen to the teacher's explanation are 3

students (18.75%). Students who are sometimes willing to listen to friends' explanations are 7 students (43.75%), often listen to friends' opinions are 6 students (37.25%), and always listen to friends' explanations are 3 students (18.75%). In the aspect of not disturbing friends who are doing assignments, there are still students who always disturb friends doing assignments as many as 1 student (6.25%). Sometimes still like to disturb as many as 5 students (31.25%), often disturb friends when disturbing friends as many as 5 students (31.25%), and always disturb friends as many as 5 students (31.25%). The characteristics of students who get angry when their work is corrected by friends are sometimes angry as many as 6 students (37.5%), often angry as many as 4 students (25%) and always angry as many as 6 students (37.5%).

Table 3. Percentage of the Character Aspect of “Respecting and Appreciating Each Other” of Students in Pre-School

Question	Score			
	1	2	3	4
I got good grades because I did the questions well and studied without disturbing my friends.	1	5	5	5
I worked on the questions independently without looking at my friend's.	0	6	6	4
I dare to apologize if I disturb friends or make mistakes.	3	5	5	3
I ask for permission if I use the item.	2	5	5	4

The character of mutual respect and appreciation in the table above can be explained as follows. The character of students who never do the questions properly and correctly is 1 student (6.25%), students who rarely do the questions properly and correctly are 5 students (31.25%), often do the questions properly and correctly are 5 students (31.25%), and always do the questions properly and correctly are 5 students (31.25%). Students who rarely do the questions independently without looking at their friends' ones are 6 students (37.5%), often do the questions independently are 6 students (37.5%), and always do the questions independently are 4 students (25%). The character of students who never apologize if they disturb and make mistakes is 3 students (18.75%), students who rarely and often apologize if they disturb and make mistakes are 5 students (31.25%), and always apologize if they disturb friends are 3 students (18.75%). The character of students who never ask for permission when using their friends' belongings is 2 students (12.5%), rarely and often ask for permission when using their friends' belongings is 5 students (31.25%), and always ask for permission when using their friends' belongings is 4 students (25%).

The learning activities that will be carried out in

class X of Senior High School (SMA) of Intensif Taruna Pembangunan Surabaya are emphasized on character education by utilizing stories with religious nuances. The purpose of using religious stories is to realize the achievement of the expected Indonesian language learning objectives. The objective of Indonesian language learning is that students can understand and apply character values in everyday life.

Based on the results of the pre-cycle description, it can be seen that the percentage of negative character responses (never and rarely) is greater than positive responses (often and always). Through Indonesian language learning, meaningful learning is designed that is able to integrate students' attitudes. The steps that will be taken are as follows.

First, determine the story that will be used as a medium for character formation. Folk tales will be applied to take character values. Stories are chosen that have the character of discipline, honesty, and respect or honor.

Second, using story media so that it can be used to form character values. The use of Indonesian story media will be done by creating groups of 4 people. Each group will be given a color according to the fruit according to the group agreement. The teacher will provide various pictures of fruit that will be used as rewards.

Determination of group members is done by drawing lots to be fair and not noisy. Students will gather in groups and listen to the teacher's explanation for the next activity. The teacher explains the tasks that students must do in groups. The teacher will observe the activities carried out by students, both individually or in groups. The teacher evaluates the work results and concludes the material that has been studied. The teacher will prepare students to present the results of group work in turns.

Cycle I

Cycle I activities are carried out according to the learning plan, namely two meetings. The story that will be used is themed honesty. At the end of each meeting, an evaluation will be carried out to improve the action.

Next, The researcher acts as a teacher. The teacher focuses the learning activities on the students. Students are invited to read the story that has been given. The teacher explains the elements of the story that must be analyzed. Students discuss the elements of the story with their groups. The results of the group discussion are then presented in front of the other groups in turn.

The activities of cycle I are presented as follows. The learning outcomes at this meeting are the importance of honesty and behavior that reflects honesty. At the beginning of learning, the teacher provides motivation so that learning objectives are achieved. In the core

activity, the teacher explains the learning material delivered through android media. Android media that has been connected to the projector. Students are quite enthusiastic about listening to the teacher's explanation. The learning atmosphere is also under control. The group leader leads the discussion to determine the elements of the story. The elements analyzed include characters, characters/traits, setting and time, and themes. Each group will present the results of the analysis through class discussions. The teacher conveys what characters must be possessed in a society that has many differences. Students spontaneously answer the positive characters that must be possessed.

The next meeting began with ice breaking. The teacher reflected on the previous activity. The groups took turns presenting the results of the discussion. In this meeting, the story used was themed discipline. The learning atmosphere was quite lively with different opinions being expressed. They competed to complete the task well and correctly. During the presentation, the atmosphere was quite lively. There were groups that refuted and strengthened the opinions of other groups. Students began to dare to express their opinions. At the end of the presentation, the teacher gave a conclusion of the material studied. The teacher gave a conclusion at the end learning by providing a description of the disciplined character that has been learned. Students provide responses to the benefits of disciplined people in life (Gardner, 2021; Gootman, 2008).

Cycle I which has been completed, will be continued with the measurement of student character. The measurement is done using a character questionnaire (honesty, tolerance, and mutual respect). The discipline character aspect has increased compared to pre-cycle activities

Table 4. Percentage of the Character Aspect of "Discipline" of Students in Cycle I

Question	Score			
	1	2	3	4
I listen and follow every teacher's command	0	4	6	6
I do question after finished explanation from the teacher	0	3	7	6
I wrote down every important information explained by the teacher	1	6	5	4
I repeated the material that the teacher had explained.	2	6	4	4

In cycle I, the statement rarely listens and follows teacher's instructions increased (12.5%), Often and always listens increased (6.25%). The statement never does questions increased (12.5%), often does questions increased (12.5%), and always does questions increased (6.25%). The statement never notes explanations decreased (25%), rarely notes increased (12.5%), Often

and always notes increased (6.25%). The statement never repeats material that has been studied decreased (25%), rarely notes (6.25%), often notes increased (12.5%), and always notes increased (6.25%).

Table 5. Percentage of the Character Aspect of “Honest” of Students in Cycle I

Question	Score			
	1	2	3	4
I listened to the teacher's explanation well and didn't talk to myself.	0	7	5	4
I listen Friend Which is having an opinion.	0	5	7	4
I don't disturb friends who are talking	0	3	6	7
I'm not angry if my answer is corrected by a friend	0	4	6	6

In the honest character, the statement of never listening to the teacher's explanation increased (18.75%), rarely, often, and always listening increased by (6.25%). The statement of rarely listening to friends who have opinions (12.5%), often and always listening to friends (6.25%). The statement of not disturbing friends who are doing assignments, never increased (6.25%), rarely (12.25%), often (6.25%), and always (12.5%). The statement of rarely, often getting angry if the answer is corrected by friends was (12.5%), never getting angry remained the same.

Table 6. Percentage of the Character Aspect of “Respecting and Appreciating Each Other” of Students in Cycle I

Question	Score			
	1	2	3	4
I got good grades because I did the questions well and studied without interrupting.	0	4	6	6
I worked on the questions independently without looking at my friend's.	0	5	5	6
I dare to apologize if I disturb friends or make mistakes.	1	4	6	6
I ask permission if I use my friend's things (pencils, erasers, etc.)	0	4	6	6

The character of appreciating and respecting the aspect of getting good grades for doing the questions well and correctly, rarely (25%), often (37.5%), and always (37.5%). Student independence in working without looking at friends' belongings, rarely (31.25%). Often (31.25%), and always (37.5%). The courage to apologize when making a mistake, never (6.25%), rarely (25%), often (37.5%), and always (37.5%). The aspect of asking permission when using friends' belongings, rarely (25%), often (37.5%), and always (37.5%).

Cycle II

Cycle II activities begin with the planning stage. Cycle II actions will take the theme of gratitude. The

implementation of cycle II consists of three two meetings. Each cycle will be evaluated for the next action.

The implementation of cycle II consists of two meetings. The teacher acts as a classical teacher by focusing learning activities on students. Students are accustomed to discussing so that they dare to convey ideas and respect the opinions of others. The results of the discussion are presented in front of their friends. Based on the evaluation of cycle I activities, the teacher prepares a learning plan. The steps taken in cycle II consist of (a) preparing lesson plans; (b) preparing stories as teaching materials; (c) forming small group activities; (d) preparing evaluation tools. The cycle II character values of each character are presented as follows.

Table 7. Percentage of Students' Character Aspects of "Discipline" in Cycle II

Question	Score			
	1	2	3	4
I listen and follow every teacher's command	0	4	6	6
I do question after finished explanation from the teacher	0	3	7	6
I wrote down every important information explained by the teacher	1	6	5	4
I repeated the material that the teacher had explained.	2	6	4	4

Disciplined character, aspects of listening and following teacher explanations, rarely (12.5%), often (43.75%), and always (43.75%). Aspects of awareness of working on questions after being explained by the teacher, rarely (18.75%), often (50%), and always (43.75%). Taking notes on important information from the teacher, rarely (31.25%), often (37.5%), and always (31.25%). Willingness to repeat material that has been explained, never (6.25%), rarely (25%), often (37.5%), and always (31.25%).

Table 8. Percentage of the Character Aspect of “Honest” Students in Cycle II

Question	Score			
	1	2	3	4
I listened to the teacher's explanation well and didn't talk to myself.	0	4	6	6
I listen Friend Which currently have an opinion.	0	3	7	6
I don't bother friends who are doing their assignments.	1	6	5	4
I'm not angry if my answer is corrected by a friend	2	6	4	4

Honest character, awareness aspect to listen to teacher's explanation and not chat among themselves, rarely (18.75%), often (50%), and always (31.25%). The

habit of listening to friends who are giving their opinions, rarely (18.75%), often (50%), and always (31.25%). Awareness of not disturbing friends who are doing assignments, rarely (12.5%), often (43.75%), and always (43.75%). Awareness of not getting angry when answers are corrected by friends, rarely (18.75%), often (37.5%), and always (43.75%)

Table 9. Percentage of the Character Aspect of “Respecting and Appreciating Each Other” of Students in Cycle II

Question	Score			
	1	2	3	4
I got good grades because I did my homework.	0	2	7	7
questions well and study without disturbing friends.				
I worked on the questions independently without looking at my friend's.	0	3	6	7
I dare to apologize if I disturb friends or make mistakes.	0	4	6	6
I ask permission if I use my friend's things (pencils, erasers, etc.)	0	3	6	7

The character of appreciating and respecting others, getting good grades for doing the questions well and correctly, rarely (12.5%), often (43.75%), and always (43.75%). Awareness of doing questions independently, rarely (18.75%), often (37.5%), always (43.75%). The aspect of courage to apologize if you have disturbed a friend, rarely (25%), often (37.5%), always (37.5%). The character of asking permission to use a friend's belongings, rarely (18.75%), often (37.5%), and always (43.75%).

The implementation of learning activities from cycle I and cycle II can be seen in the Figure 2.

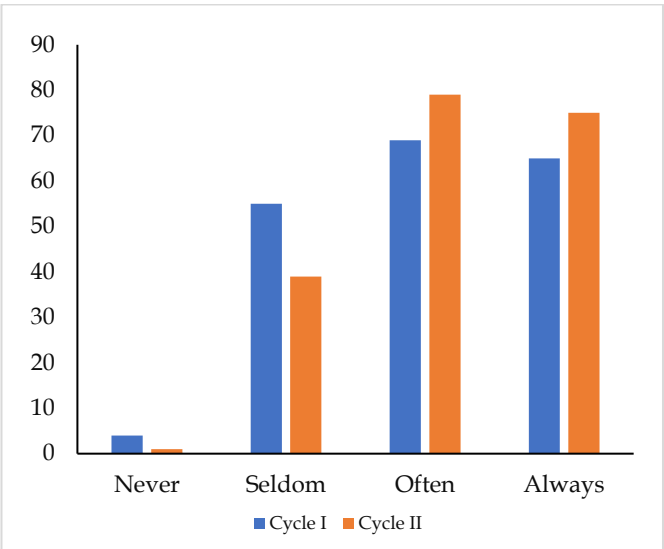


Figure 2. Comparison of positive and negative statements in cycles I and II

Based on the Figure 2, it can be seen that the negative statements continue to decrease in every cycle. The statement never in cycle I dropped from 4 to 1. Negative statements rarely dropped from 55 to 39. Positive statements often rose from 69 to 79. Positive statements always rose from 65 to 75.

The results of the reflection on the implementation of cycle II can be described as follows: (1) the teacher has been able to manage the class well during the learning process; (2) the teacher has succeeded in providing motivation to students so that students begin to dare to express their opinions; (3) students can understand the material well and character values can begin to be practiced in the learning process.

Based on the results of the reflection, the problems that emerged in cycle I can be resolved in cycle II. Students begin to get used to being disciplined, honest, and respectful of others. Therefore, cycle III does not need to be implemented. Through language learning, children will be taught many characters through figures, behavior, content, and meaning of the language being learned. Therefore, Indonesian language teachers must be able to change the mindset that has been attached. Students must be happy when learning Indonesian by utilizing existing media and methods.

Conclusion

Various problems faced in learning Indonesian, this study tries to apply learning media that are in accordance with the development of the times and are quite close to students. Android-based learning media is chosen to help shape students' character through learning Indonesian. Based on the results of the study, the use of interactive learning media for character education based on android can help improve the quality of students' character. The increase in character values can be seen from the aspects of discipline, honesty, and respect for others. Through the media used, it can attract students' attention and instill good character in students. Evidence of an increase in students' character values from the aspects of discipline, honesty, mutual respect and respect can be seen through student questionnaires in each cycle. In cycle 1, negative statements or answers (never and rarely) of 4 (2.1%) decrease to 1 (0.5%) and 55 (28.65%) to 39 (20.3%). Positive statements (often and always) 69 (35.9%) to 79 (41%) and 65 (33.8%) to 75 (39%).

Acknowledgments

Alhamdulillah, praise be to Allah SWT because with His abundant grace I can finish my article entitled “Improving the Quality of Student Character Through Android-Based Interactive Learning Media”. I also thank my parents who have

supported me every day, as well as my friends who have helped me in collecting data for my research.

Author contributions

Writing article, S; Data analysis and collect data, A.Q.Z

Funding

This research received no external funding.

Conflicts of Interest

The authors declare no conflict of interest.

References

- Amelia, W., Marini, A., & Nafiah, M. (2022). Pengelolaan Pendidikan Karakter Melalui Pembelajaran Matematika di Sekolah Dasar. *Jurnal Cakrawala Pendas*, 8(2), 520–531. <https://doi.org/10.31949/jcp.v8i2.2431>
- Dewi, N. K. C., Anandita, I. B. G., Atmaja, K. J., & Aditama, P. W. (2018). Design and Build Android-Based Siska Mobile Applications. *SINTECH JOURNAL, Ganesha University of Education*, p-ISSN, 2598–7305. <https://doi.org/10.31598/sintechjournal.v1i2.291>
- Gardner, H. (2021). *Disciplined mind: What all students should understand*. Simon & Schuster.
- Gootman, M. E. (2008). *The caring teacher's guide to discipline: helping students learn self-control, responsibility, and respect, K-6*. Corwin Press.
- Gunawan, H. (2022). *Pendidikan karakter: Konsep dan implementasi*. Bandung: Alfabeta.
- Hidayat, Z., Permatasari, C. B., & Mani, L. A. (2022). Cyber violence and bullying in online game addiction: a phenomenological study. *Journal of Theoretical and Applied Information Technology*, 100(5), 1428–1440. Retrieved from <https://www.jatit.org/volumes/Vol100No5/19V ol100No5.pdf>
- Munir, M. (2012). *Multimedia konsep & aplikasi dalam pendidikan*. Bandung: Alfabeta.
- Mustoip, S., Japar, M., & Zulela, M. S. (2018). *Implementasi pendidikan karakter*. Surabaya: Jakad Media Publishing.
- National Intelligence Council, U. (2012). *Global trends 2030: Alternative worlds: a publication of the National Intelligence Council*. USA: Government Printing Office.
- Nurhikmah, A., Madianti, H. P., Azzahra, P. A., & Marini, A. (2023). Pengembangan Media Pembelajaran Melalui Game Educandy Untuk Meningkatkan Karakter Belajar Siswa Di Sekolah Dasar. *Jurnal Pendidikan Dasar Dan Sosial Humaniora*, 2(3), 439–448. <https://doi.org/10.53625/jpdsh.v2i3.4472>
- Nurjanah, S. (2020). Metode Pbl (Problem Based Learning) Pada Pembelajaran IPS Terhadap Hasil Belajar Peserta Didik Di SMP N 1 Jetis Bantul. *PEDAGOGIKA: Jurnal Pedagogik Dan Dinamika Pendidikan*, 8(1), 81–92. Retrieved from <https://ojs3.unpatti.ac.id/index.php/pedagogika/article/download/2093/1729>
- Nurrita, T. (2018). Pengembangan media pembelajaran untuk meningkatkan hasil belajar siswa. *Jurnal Misykat*, 3(1), 171–187. Retrieved from <https://pps.iq.ac.id/jurnal/index.php/MISYKA T/article/view/52/37>
- Pangestu, W. T., & Agustina, D. A. (2022). Strengthening Character Education for Elementary School Students in School Settings. *Widyagogik: Jurnal Pendidikan Dan Pembelajaran Sekolah Dasar*, 9(2), 312–328. <https://doi.org/10.21107/widyagogik.v9i2.19383>
- Priatmojo, B., Wulandari, N. A., Herawati, T., & Marini, A. (2023). Media Pembelajaran Audio-Visual dalam Pendidikan Karakter untuk Siswa Sekolah Dasar. *Jurnal Pendidikan Dasar Dan Sosial Humaniora*, 2(8), 901–918. <https://doi.org/10.53625/jpdsh.v2i8.5746>
- Rohman, M. A. A. (2019). Pendidikan karakter di Sekolah menengah pertama (SMP): teori, metodologi dan implementasi. *Qalamuna: Jurnal Pendidikan, Sosial, Dan Agama*, 11(2), 265–286. <https://doi.org/10.5281/zenodo.3559290>
- Rusdiyani, I. (2016). The Effect of Learning Methodology and Personality Type on Cognitive Abilities. *Indonesian Journal of Early Childhood Education Studies*, 5(2), 89–95. <https://doi.org/10.15294/ijeces.v5i2.13919>
- Sapriyah. (2019). Peran Media Pembelajaran Dalam Proses Belajar Mengajar. *Prosiding Seminar Nasional Pendidikan FKIP*, 2(1), 470–477. <https://doi.org/10.35446/diklatreview.v3i1.349>
- Setiawati, N. A. (2017). Pendidikan Karakter Sebagai Pilar Pembentukan Karakter Bangsa. *Seminar Nasional Tahunan. Medan: Fakultas Ilmu Sosial, Universitas Negeri Medan*. Retrieved from <https://shorturl.asia/43i0S>
- Shrivastava, S. (2017). Digital disruption is redefining the customer experience: The digital transformation approach of the communications service providers. *Telecom Business Review*, 10(1), 41. Retrieved from <https://shorturl.asia/e65RE>
- Stringer, E. T., Christensen, L. M., & Baldwin, S. C. (2009). *Integrating teaching, learning, and action research: Enhancing instruction in the K-12 classroom*. Sage Publications.
- Sugiri, A. (2023). Character Education: Strengthening the Character of Elementary School Students based on Wayang Sukuraga through Practice of Noble Morals. *Jurnal Iqra': Kajian Ilmu Pendidikan*, 8(2), 340–359. <https://doi.org/10.25217/ji.v8i2.3943>

- Suryaatmaja, A., Wasliman, I., Koswara, N., & others. (2023). Management of Strengthening Character Education in Improving the Noble Character of Elementary School Students (Descriptive Study at SDN 1 Pacet Cianjur and SDN Cipanas Sukabumi). *History of Medicine*, 9(1), 145–156. Retrieved from <https://historymedjournal.com/HOM/uploads/paper/b093dc48dfed443f3ed255c4e03ca604.pdf>
- Wahid, A. (2020). Integrasi Nilai-Nilai Karakter dalam Pembelajaran IPS di Kelas IV SD Inpres Bertingkat Mamajang I Kota Makassar. *Prosiding Seminar Nasional Biologi VI*, 54–70. Retrieved from <https://ojs.unm.ac.id/semnasbio/article/viewFile/10480/6108>
- Wibawanto, W. (2017). *Desain dan pemrograman multimedia pembelajaran interaktif*. Jember: Cerdas Ulet Kreatif Publisher.