

PAPER

Design and Development of Android-Based E-Modul Application to Improve Prosocial Early Children by Family

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ABSTRACT

The aim of this research is to address the issue of low prosocial behavior in children, both at home and in public spaces. This was identified through observations and interviews with parents, who believe that the lack of their participation in their children's prosocial development is due to their limited understanding. To improve early childhood prosocial behavior, the research team developed an Android-based E-Module that is practical and user-friendly, as well as accessible to a wider audience. This type of research is referred to as development research. The study's objective is to design an Android-based E-Module application that can improve early childhood prosocial behavior within families. The ADDIE Model development method was utilized, with a survey conducted to assess the application's validity, which was further validated by multiple experts. The results showed that the Android-based E-Module application's validation test was deemed valid, and can be concluded that it is a useful tool to enhance early childhood prosocial behavior within families, specifically in the city of Padang.

KEYWORDS

E-Module, Android, prosocial, early childhood, family

1 INTRODUCTION

Careful behavior for others (prosocial) needs to be developed from an early age, considering that this behavior will affect the social life of children until adulthood. Jam that prosocial is very closely related to the nature of one's sympathy. Many crimes that occur both among children and adolescents today stem from the lack of prosocial cultivation of children from an early age by the family, which results in low empathy for children and at the same time causes children's low concern for others who are known to be anti-social.

Many things cause the low participation of parents in developing children's prosocial from an early age, including the lack of understanding of parents about

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prosocial and the importance of developing it from an early age. In addition to the limitations of reading materials, the busyness of parents sometimes causes parents to have low understanding of their child's prosocial development. In addition, from the results of observations carried out in the West Freshwater village of Padang City, especially in the Padang State University campus environment, it can be stated that it has not been seen that parents are really developing the prosocial development of their children at home or on the playground and in PAUD institutions. From the results of interviews with several people information obtained that there are still many parents who do not understand and understand about prosocial issues, besides that because they are also preoccupied with daily work, and there is no opportunity to find and read the reading materials needed.

The development of learning innovation based on the industrial revolution 4.0 provides a significant contribution to the development of learning media [1] [2]. Technology is here to facilitate the learning process, including learning media [3]. One of them is the development of modules, from which printed modules can use electronic modules such as Android-based E-Modules. Through this learning media, besides being easy and practical, it can be done and read over and over again by parents. Based on the background and problems as described previously, it is deemed necessary to create an Android-based E-Module in an effort to improve children's prosocial activities that are easy and practical and can be accessed every day by parents.

Several experts have conducted numerous studies emphasizing the significance of nurturing children's prosocial behavior from an early age. One such study was conducted by Mustika Sari et al. in 2018, focusing on enhancing children's prosocial behavior through storytelling activities involving dolls at Global Persada Mandiri Kindergarten, group A. The findings of this study revealed that storytelling with puppets had a positive impact on improving the social behavior of kindergarten children. Additionally, Arniansyah, Nadhilla, Permatasari, Milani, and Putri conducted research on empathy training and prosocial behavior among children aged 6 to 12 years at RPTRA Anggrek Bintaro. The results indicated notable differences in children's prosocial behavior and empathy following the training, with a majority of the children displaying improvements in their prosocial behavior compared to before the training took place [4]. Similar research was also conducted by Matondang on the development of AUD prosocial behavior through dual age grouping in Bandung International Kindergarten. The study showed that there was an increase in AUD prosocial behavior by means of multiple age groupings in the aspects of cooperative behavior, helping, friendship, caring, and sharing [5]. Another study was also conducted by Mayangsari regarding the improvement of prosocial behavior in children aged 4-5 years through the extraordinary fun relay activity at PGRI Langkap Burneh Kindergarten Bangkalan. The results showed that there was an increase in prosocial children from 31% to 86.20% [6].

Based on the investigations conducted by these specialists, it can be deduced that, overall, the research being conducted is at an elementary stage, and it generally involves placing children in a context where their group interactions are assessed.

Earlier, researchers tried to conduct research on the Development of Android-based E-Modules in the prosocial development of children by families. This is important, but apart from this research no one has conducted other studies. Also, the involvement of parents in prosocial development needs to be developed because, based on several studies that have been carried out by experts as described above, generally, the role of the family in the development of children's prosocial behavior is very important and decisive. In practice, this behavior has begun to thin out in society, including in the family. Parents have not fully implemented family education, especially those related to the prosocial development of AUD both at home and

in children's playgrounds. Some of the things that researchers can point out are events that occur in the arena of public facilities in the city of Padang, especially in the Singgalang Housing Complex, Koto Tengah District, Padang City, where children fight over toys, crying because they want to play with their friends but their friends don't want to. Temporarily, parents prefer to bring their children home in tears rather than letting their children wait patiently for their turn.

2 LITERATURE REVIEW

2.1 The nature of family education

Family education is the primary and most essential form of education for every child, as they spend a greater amount of time at home, especially during their early years, compared to outside environments. The purpose of family education is so that family members and children can become independent people in society, can develop and grow to the maximum according to their abilities, can become pious individuals in accordance with the teachings of their religion, can become productive individuals for themselves and their environment, and can develop into adults who understand their nation's cultural actions.

One of the most important educational factors is educators, because educators have the responsibility to shape the personality and guide their students. The role of educators in the family is carried out by parents, so that their daily actions and attitudes can provide stimulation for children's behavior. If parents are wrong in educating their children, the result is that children will not be able to become independent and have difficulty adapting to their environment. Through the family, children begin to get to know the surrounding community, get obstacles and stimulation in their development and growth, and learn various rules and norms in society. Children are not only familiar with, but also trained to follow and respect various social rules and norms through family life [7].

The family which is the smallest institution in society is expected to be able to prepare children's social abilities to face life in relation to other people in the future [8]. Parents should have provided education to their children as early as possible. Because to prepare a good generation is not an easy thing. Educators in the family environment, namely parents, must have knowledge of social, prosocial education, and ways of developing it, and parents must also understand the development of children and their characteristics and learning principles for AUD. Besides that, parents are also expected to know their obligations in educating children [9]. Lickona explains that the family is the foundation of children's moral and intellectual development [10].

Based on the definitions above, it can be concluded that the family is basically a place to shape the character of each member, especially children who are still the responsibility and need parental guidance. The development of children's behavior will be reflected in how their families treat them, as stated by Dimerman that the family is the first madrasa. In this family we learn everything and the family is the foundation of moral and social education [11].

2.2 The role and function of family education

The family plays a very important role in forming the foundation of the character, including in understanding and institutionalizing cultural values within individual.

Families who have a concern for cultural values and always make them a way of life will certainly be relatively successful in passing these values on to their children. On the other hand, for families whose lifestyle is far from noble cultural values, of course it will further distance their family members from the inheritance of these cultural values [12].

The six functions of family education institutions are as follows:

1. The family is the place where the child gets the first experience in his childhood and this experience is the most important factor for his further development, especially for his personal development. Family life will make further developments colorful.
2. Family education can guarantee the growth and development of children's moral and social life. Moral education will be formed in the family. Moral education of children in the family will be realized from the example of how parents speak and behave daily.
3. The attitude of help and tolerance will grow in the family. These attitudes foster a prosperous and peaceful family. The family will be a means to realize humans as social beings through the noble social attitudes shown by each family member.
4. Laying the foundations of religious education is also the role of the family as an educational institution. One of the efforts in shaping children as religious beings is to familiarize parents with bringing their children to the mosque.

In relation to the formation of prosocial behavior, the family becomes the first social forum for children to receive teaching and education on prosocial behavior [13]. Parents play a role by paying attention, guiding, supervising, educating, and nurturing as a form of example in the formation of prosocial behavior. The same thing was also expressed by other experts, that parents are one of the factors that influence prosocial behavior. Parents provide education to their children in the formation of good social behavior with supervision, guidance and exemplifying the right behavior [14].

So, the parenting style that parents adopt in nurturing and educating their children greatly affects their lives in the future. Along with some of these opinions, the results of their research concludes that education in the family contributes significantly to children's prosocial behavior in everyday life at school [15]. Similar research was also carried out by other experts. In the prosocial development of children, it would be better if children were directly involved with social situations that occurred in their environment [16].

Parents with good parenting and education patterns provide explanations about the good and bad effects of their actions to the children, do not demand too much from children, and listen to the, allowing children to have opinions. Such a parenting approach makes children independent and the harmonious relationship between children and parents can lead to prosocial behavior [17].

3 METHODOLOGY/MATERIAL

This research falls into the category of developmental research. The outcomes derived from this endeavor encompass the creation of various products: (1) Android-based E-Modules are designed to enhance the prosocial behavior of young children within the family during early childhood, (2) Some teaching materials that will be

used by students as early references, (3) Books of research results with ISBN, in connection with this. Development research model and development (R&D) was chosen.

3.1 Research stages

Analysis stage. The implementation of prosocial development of children by parents so far, using instrumentation, observation, and interviews with parenting parents, especially prosocial early childhood by the family, was analyzed in the Air Tawar village of Padang City, This activity aims to find out what problems exist in the development of early age prosocial in the family so far.

Design stage. At this stage, the researcher makes an E-Module design on prosocial based on the results of the needs analysis.

Development stage. The researcher realized the E-Module design, which was still in conceptual form, into a product through the validation of experts and field practitioners.

Implementation stage. At this stage, the design of the E-Module for the prosocial development of early childhood, which was developed in the third stage (develop), is implemented in the families that have been designated as research samples.

Evaluation stage

Practicality test. The practicality test was carried out in two (2) ways, namely: 1) filling out a practicality model questionnaire by parents and, 2) Observing the implementation of special character education learning in prosocial aspects in early childhood by parents in Air Tawar Barat Village, which was used as a sample.

Effectiveness test. At this phase, an evaluation is conducted to assess the quality of E-Modules in promoting prosocial development during early childhood. This evaluation encompasses examining both the process and learning outcomes, which involve observing changes in children's behavior. The objective is to determine whether the achieved results align with the initial expectations.

Product trial. The E-Module trial in the prosocial development of children by families in Air Tawar Barat Village, Padang City, was carried out twice. First, to try out this learning model for experts to see the validity of the instrument and product development.

3.2 Research location

This research is planned in Air Tawar Barat sub-district, North Padang sub-district, Padang city, precisely along the sea outskirts of Padang city, namely, for families with children aged 3-4 years, who have cellphones.

3.3 Sample and population

The population in this study is all families who have early childhood children aged 3–4 years who live in the Air Tawar Barat sub-district, Padang City. The sampling is done by using the “Purposive Sampling” technique, which is the purposed sample. In this regard, the selected families have met the requirements as samples according to the research objectives. This sample was obtained after the researchers conducted a preliminary study in the field. Samples taken for as many as 20 families.

3.4 Data collection techniques

The data collection techniques used were participatory observation, in-depth interviews for qualitative data (objectives 1 and 3) and questionnaires using instruments for development needs and instruments for testing the validity of the E-Module, practicality test instruments for experts and field practitioners and instruments for E-effectiveness testing. -Module to parents.

3.5 Data analysis techniques

The data analysis for this study involved the utilization of both qualitative and quantitative techniques. The qualitative analysis encompassed examining the outcomes of in-depth interviews regarding parental involvement in fostering children's prosocial development. These interviews aimed to understand the barriers and developmental requirements identified by parents, as well as the significance of implementing an Android-based E-Module for prosocial development. On the other hand, quantitative analysis was employed to assess the frequency of differences in parental capabilities following the utilization of E-Modules in enhancing children's prosocial behavior. Additionally, the quantitative analysis aimed to evaluate the validity, practicality, and effectiveness of the Android-based E-Modules, both from the perspective of parents and experts/field practitioners.

4 RESULTS AND FINDINGS

As explained in the methodology section, this research uses quantitative analysis techniques and qualitative analysis. For analyzing the E-module's impact on prosocial aspects of family education, the researcher employs a quantitative approach. On the other hand, to examine the description of family education in children's prosocial development prior to and following the use of the module, as well as the changes observed in children's prosocial behavior, a qualitative approach is utilized. Quantitative analysis is carried out on module development starting from needs analysis to module evaluation. This is explained as follows:

4.1 Needs analysis

Needs analysis is an activity carried out to determine the need for a development to be carried out. In this process, researchers conducted a needs analysis and identified various problems that exist in family education, especially in the prosocial development of early childhood. To obtain this data, interviews were conducted with several parents in West Freshwater, Padang City. In addition, the data was obtained through observations on the playground in the city of Padang, especially in the complex and also by distributing questionnaires about the importance of E-Module in the prosocial development of AUD by families. The needs analysis focuses on the implementation of family education to foster children's prosocial development within the family, both in the home environment and during playtime. Data for the analysis was collected by distributing a questionnaire to 20 parents. The objective of the analysis is to assess the utilization and effectiveness of family education in promoting children's prosocial development.

The data for the needs analysis on the implementation of family education in children's prosocial development has been gathered from the questionnaire administered to the parents. The findings of this analysis are available in Table 1, providing further insights and details.

Table 1. Frequency distribution of needs analysis

No	Analisis Kebutuhan	Frekuensi	Persentase
1	Very Needed	5	14.29
2	Needed	4	11.43
3	Enough Needed	16	45.71
4	Less Needed	10	28.57
5	Not Needed	0	0.00
Overall		35	100.00

Based on the frequency distribution Table 2 provided for the needs analysis, it is evident that the "very needed" category represents 14.29% of the responses, the "needed" category represents 11.43%, the "quite needed" category represents 45.71%, the "less needed" category represents 28.57%, and the "unneeded" category represents 0%. These results indicate that the "quite needed" category has the highest percentage compared to the other categories. Therefore, it can be concluded that there is a familial demand for an Android-based E-Module in family education, specifically for fostering prosocial development during early childhood using these modules. In addition to the quantitative data above, qualitative data such as those described above were obtained through in-depth interviews with parents or caregivers who accompanied their children to the playground.

The conclusion that can be drawn from in-depth interviews with them is, they generally do not understand about the family as the main educator, they also lack understanding about the characteristics of AUD and about the prosocial development of their children. In addition, after the researchers tried to ask about the creation of an Android-based E-Module about family education in the prosocial development of early childhood, children either at home or on the playground, in general were very happy and very hopeful soon after, considering that getting books to read was very difficult. Besides that, their willingness to find books and read them was also not there.

Based on the data and information above, it is necessary to create an E-Module by developing a learning design that is appropriate and needed by parents in the prosocial development of children. Hopefully by using this module parents know and realize their role in the family. This E-Module is designed as easy and attractive as possible, so that parents can easily understand it and it is interesting for parents to read on their cellphones, so that they can improve their skills in developing their children's prosocial skills.

4.2 E-Module learning design

After analyzing the needs and identifying the problem, the family education E-Module was designed for the prosocial development of AUD by parents. The module in question is a comprehensive learning package comprising a carefully

structured and planned sequence of learning experiences aimed at assisting students in attaining their educational objectives. In this study, Mulyasa has specifically designed an Android-based E-Module that parents can access and read through their mobile phones [18]. The composition of the E-module for family education in the prosocial development of AUD consists of:

1. Instructions for using the module contain a description of the contents of the module for the parents.
2. Concept map of the material discussed in the module. This concept map was made in order to get an overview of the material to be studied, in addition to being able to help and build a conceptual framework in their minds.
3. Learning activities that contain learning indicators and material descriptions.
4. Before the description of the material, a story about family education for AUD related to the material being discussed is presented as an ingredient in the implementation of the discussion. Furthermore, instructions for the activities they must do are made and end with a description of the material.
5. Worksheet/evaluation, which is an exercise to answer questions about the material that has been studied.

The module that the researcher made contains several materials regarding the introduction of (1) The family as the first school and the role of parents as educators in the family (2) AUD and its characteristics. (3) Prosocial values and their development. (4) Practice of the five Ss (smiles, greetings, greetings, manners and manners in an effort to develop AUD prosocial in the playground. In detail, it can be stated as follows:

Discussion: The family as a school is elaborated. The main objectives to be achieved in this subject are: it is hoped that parents can understand the basic concepts of family education, the purpose of family education and the role and function of parents in family education. The steps and learning strategies are made as easy as possible so that parents do not feel burdened in reading this module, and the presentation of teaching materials is complemented by interesting pictures and conclusions from the subject matter of the material. Then at the end of the lesson, an evaluation sheet is provided to be answered by the parents in order to measure their understanding.

The subject of AUD and its characteristics: The aim is for parents to understand that AUD is: happy to explore, unique, distinctive individual, has a great sense of desire, likes to play, egocentric, absorbs quickly and is at a golden age. It is hoped that parents, by knowing the characteristics of this AUD, can realize that children are not small adults who can be treated at will, but they are children who have certain distinctive characteristics that must be considered in their development efforts. The materials discussed in this module are: (1) The basic concept of AUD and its characteristics. (2) Principles of development (3) Matters that must be considered in development.

The main objective in developing material on the subject of prosocial values and their development is that parents are aware and able to understand the meaning and types of prosocial, the importance of prosocial development from an early age, and the role of parents in its development.

The last topic discussed: The practice of the five (5) S in the playground of public play facilities in an effort to develop prosocial behavior of AUD. The main objective of this discussion is for parents to practice “smiles, greetings, and manners” in the

playing arena with their children. As discussed in the literature review, prosocial behavior is closely related to a person's sense of empathy and concern for others. It is hoped that this can be achieved.

Once the conceptual design of the E-Module for family education in AUD prosocial development was finalized, the researchers proceeded to create an evaluation tool to assess the quality of the developed products. The assessment instruments encompassed evaluating the validity, practicality, and effectiveness of the E-family education module in fostering AUD prosocial development by parents, both within the home environment and in the playground. These assessment instruments are elaborated in Chapter III of the development methodology.

4.3 Module development

As explained in the methodology section, ready-made E-Modules need to be developed. In this stage, the steps that the researcher took were: (a) performing formative evaluation and (b) making revisions to the prototype. These actions are undertaken to ensure the continuous improvement and refinement of the project.

Formative evaluation result. The validation results of the development product's validity in quantitative data obtained from the validators will be discussed in the Testing Data Presentation and Data Analysis sections. Table 2 provides information on the validation results by experts and practitioners.

Table 2. Conclusions on the validation of family education E-Modules in early childhood prosocial development

No	Rated Aspect	Mean	Category
1	Aim	4.44	Very good
2	Instructions for use	4.44	Very good
3	Material Description	4.42	Very good
4	Module Characteristics	4.44	Very good
5	Physical appearance	4.44	Very good
6	Language	4.17	Well
Mean		4.39	Very good

From the aforementioned Table 2, it can be deduced that the Android-based E-Modules for AUD prosocial development by parents received an average rating of 4.39, indicating they fall within the "very good" category based on the validation conducted by experts and practitioners. The expert validation results suggest that the module's purpose, instructions for use, material description, module characteristics, physical appearance, and language used in the family education module book for AUD prosocial development are considered to be in the "very valid" category. All validators unanimously agreed that the E-Module was viable for use with minor revisions, signifying that all evaluated aspects met the acceptable criteria and major revisions or re-validation were unnecessary.

After the product is validated by practitioners/experts, there are several suggestions and improvements provided by the validator as shown in the Table 3 below.

Table 3. Product improvement recommendations for android-based E-Module development in early childhood prosocial development both at home and on the playground

E-Module
Correct misspellings. The appearance of the module is even more attractive. Improve the use of color in the module.
The symbols in the module must match their meanings. Customized paper size
Lots of inappropriate use of language.
The learning objectives and indicators must be made specifically. The pictures/photos in the module should use pictures that are appropriate to the research context and as much as possible in the local area.

Based on input from experts, practitioners and parties related to the product of this research, it will be a revision of the family education E-module in the prosocial development of AUD.

Revision result. Based on the recommendations provided by the validators, practitioners, and experts, revisions were implemented for the family education E-Module focusing on early childhood prosocial development. The outcomes of these revisions are summarized in the following Table 4. The revised version of the module, referred to as Prototype II, was deemed valid, paving the way for further progress in limited trials.

After the validator assesses the development product, improvements are made to the development product according to the input or suggestions from the validator. The input given by the validator for the development product can be seen in the following Table 4:

Table 4. Inputs from validators on module products

No	Advice	Follow-Up
1	Correct misspellings.	Already repaired
2	The appearance of the module is even more interesting	Fixed and added
3	Fix the use of color in the module.	Already repaired
4	The symbols in the module must match their meaning	Fixed and added
5	Customized paper size	Already repaired
6	The use of language must be improved	Already repaired
7	Objectives, indicators must be clearly explained	Already repaired
8	Images/photos in pictures must be contextual	Already repaired

4.4 The utilization of the family education module to enhance the prosocial behavior of children with AUD in public facility playgrounds

As stated in the methodology section, the modules that are ready to be tested are limited to parents. The results of the limited trial can be stated as follows (see Table 5):

Table 5. Limited module trial results

No	Respondent	Amount	Mean	Category
1	Resp1	163	4.66	Very good
2	Resp2	153	4.37	Very good
3	Resp3	155	4.43	Very good
4	Resp4	144	4.11	Well
5	Resp5	159	4.54	Very good
6	Resp6	155	4.43	Very good
7	Resp7	156	4.46	Very good
8	Resp8	141	4.03	Well
9	Resp9	144	4.11	Well
10	Resp10	162	4.63	Very good
11	Resp11	214	6.11	Very good
12	Resp12	134	3.83	Well
13	Resp13	161	4.60	Very good
14	Resp14	155	4.43	Very good
15	Resp15	149	4.26	Very good
Overall		2345		
Overall Average		4.47		
Category		Very good		

Based on the results of trials that have been carried out in the Air Tawar Barat Village, Padang City, it was found that learning with Android-based E-Modules in the prosocial development of AUD obtained an average of 4.47 or in the very good category. In conclusion, the E-Module is suitable for families to utilize as they strive to foster prosocial behavior during early childhood.

Evaluation. As delineated in the methodology section, evaluation serves as the final stage in the development process of the family education E-Module for AUD prosocial development. Following the ADDIE framework, evaluation is not solely conducted for the implementation of the model but is also performed at each stage throughout the model's development.

During the design stage, researchers assess different issues within family education for AUD by conducting a needs analysis. This analysis serves as the foundation for identifying problem-solving solutions. Additionally, evaluation is conducted during the design stage to verify and ensure that the developed design aligns with the identified problems.

At the development stage, researchers evaluate: 1) the suitability of the model development with the design, and 2) the validity of the model development. The evaluation is carried out by researchers who will then make improvements to the product developed. The entire evaluation process carried out at the analysis, design, and development stages is called formative evaluation.

Besides conducting formative evaluation, the researcher also performed summative evaluation, specifically on the implementation of the family education E-Module

for AUD. This evaluation encompassed assessing the prosocial development of AUD. The aim of the process evaluation was to examine the practicality of the model, while the evaluation of family education aimed to determine the effectiveness of the model. In this instance, an Android-based E-Module is proposed.

Practicality test. As detailed in the methodology section, a practicality test is conducted during the implementation stage to assess the practicality of the developed product. In the case of the family education E-module for AUD, a practical evaluation is administered to parents. The practical assessment encompasses various aspects, including: 1) content aspects, which involve the objectives and indicators of family education for AUD, module structure (syntax), material for family education for AUD, strategies and methods, and time allocation; 2) technical aspects, encompassing module instructions and packaging; and 3) language aspects.

The objective of evaluating the practicality of the family education module for AUD is to assess its practical usability based on the following evaluation criteria:

1. Strongly Disagree
2. Disagree
3. Fairly Agree
4. Agree
5. Strongly Agree

The data regarding the practicality of the module is collected through a questionnaire administered to three expert validators in their respective domains. Further details regarding their responses can be found in the Table 6 below:

Table 6. Practicality of family education E-Modules in AUD prosocial development by experts

No	Assessment Aspect	Validator			Rating Result		
		Validator 1	Validator 2	Validator 3	Mean	TCR	Category
1	Goals and Indicators	4	5	4	4.33	86.67	Very Practical
2	Learning Stages	4	5	3	4.00	80.00	Practical
3	Learning materials	5	5	3	4.33	86.67	Very
4	Strategy and	4	5	4	4.33	86.67	Practical
5	Learning methods	4	4	3	3.67	73.33	Very Practical
6	Time Allocation	4	5	3	4.00	80.00	Practical
7	Instruction	4	5	4	4.33	86.67	Practical
8	Packaging	4	5	3	4.00	80.00	Very Practical
Overall Mean					4.13	82.50	Praktis

According to the presented Table 6, it can be concluded that experts perceive the practicality of Android-based E-modules in AUD prosocial development based on the assessment of each item. Specifically, item 1 is regarded as highly practical, item 2 as practical, item 3 as highly practical, item 4 as highly practical, item 5 as practical, item 6 as practical, item 7 as highly practical, and item 8 as practical.

Based on the presented Table 6, it can be inferred that the average score for all indicators in the assessment aspect is 4.13, indicating the practical category.

Therefore, it can be concluded that the E-modules for AUD prosocial development are practical and suitable for use. For more detailed information, please refer to the Figure 1 below:

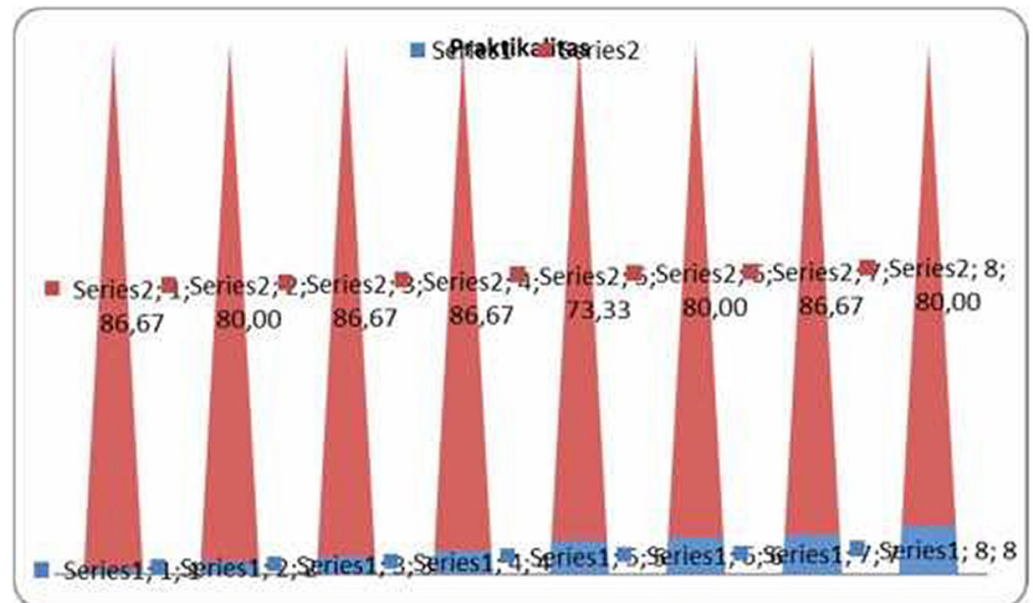


Fig. 1. Practicality of Android-Based E-Modules in the development of prosocial AUD behavior by parents

From the Figure 1 above, it can be seen that the items that get the lowest average are item 5 (Time Allocation) and the highest average is item 1 (Goals and Indicators), item 3 (Learning Materials), and item 4 (Learning Strategies and Methods), and point 7 (Packaging) as in the following Table 7.

Table 7. Distribution of E-Module practicality frequency in AUD prosocial development by experts

No	Interval Class	Frequency	Percentage	Category
1	>4.2	4	50.00	Very Practical
2	3,40–4,1	4	50.00	Practical
3	2,60–3,39	0	0.00	Practical enough
4	1,81–2,59	0	0.00	Not Practical
5	<1.80	0	0.00	Very Impractical
Overall		8	100.00	

The Table 7 provided displays the frequency distribution of scores, indicating theoretical ratings ranging from less than 0.00 in the very impractical category to a maximum score of 4.2 in the very practical and practical categories. Upon analyzing the data, it is evident that the very practical category constitutes 50% with a frequency of 4, while the practical category also constitutes 50% with a frequency of 4. Considering the practicality data presented in the Table 7, it can be concluded that the experts deem the E-Modules in Android-based development for AUD prosocial development to be highly practical and suitable for use.

Furthermore, the E-Module practicality data was obtained from a questionnaire given to parents. The data on the practicality assessment of the family education module by parents can be seen in the Table 8 below:

Table 8. Practicality of E-Modules in AUD prosocial development by parents

No	Assessment Aspect	Respondent										Research Result		
		1	2	3	4	5	6	7	8	9	10	Mean	TCR	Category
1	Goals and Indicators	4	5	4	4	3	4	5	4	5	5	4.3	86	Very Practical
2	Learning Stages	4	5	3	3	4	5	4	4	5	3	4	80	Practical
3	Learning materials	5	5	3	5	5	5	4	5	5	3	4.5	90	Very Practical
4	Strategy and Method	4	5	4	4	3	4	5	4	5	4	4.2	84	Very Practical
5	Time Allocation	4	4	3	3	4	4	5	4	4	3	3.8	76	Practical
6	Instruction	4	5	3	3	4	5	4	4	5	3	4	80	Practical
7	Packaging	4	5	4	3	4	5	5	4	5	4	4.3	86	Very Practical
8	Language	4	5	3	4	5	5	5	4	5	3	4.3	86	Very Practical
Overall Mean											4.18	83.5	Praktis	

From the provided Table 8, it is evident that the practicality of the E-module in AUD prosocial development by parents can be assessed based on the practicality of each item in the evaluation aspects. Item 1 is considered very practical, item 2 is practical, item 3 is very practical, item 4 is very practical, item 5 is practical, item 6 is practical, item 7 is very practical, and item 8 is very practical. Thus, it can be concluded that considering all the indicators in the evaluation aspect, the average score obtained is 4.18, falling within the practical category. Consequently, the practicality of the E-modules in AUD prosocial development by families is confirmed as practical and suitable for use. For more details, see the Figure 2 below:

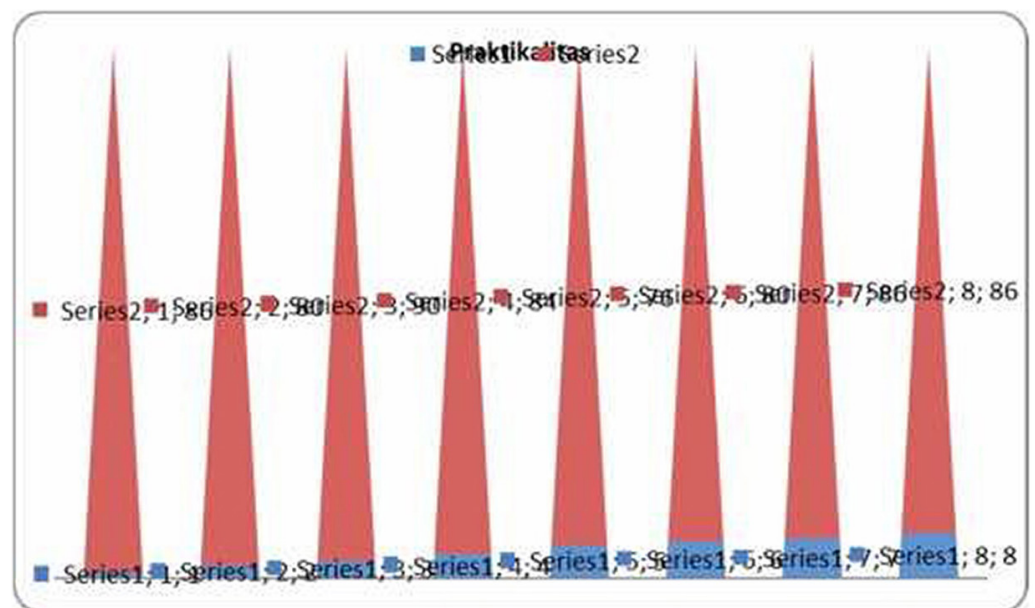


Fig. 2. Practicality of E-Modules in AUD prosocial development by parents

From the Figure 2 above, it can be seen that the items that get the lowest average are item 2 (Learning Stages), item 6 (Hints) and the highest average is item 3 which is about learning materials. So, the conclusion that can be drawn is that the materials contained in the module are easy and practical to learn and understand.

Furthermore, to see the practicality of the E-Module in the prosocial development of children, it is also given to parents who have used the module. For this purpose, the researcher took as many as 20 parents who are believed to have read the module and have practiced it in the playground of public facilities. The following will explain the frequency distribution of the practicality of the family education module by experts, which can be seen in the following Table 9:

Table 9. Frequency distribution of family education module book Practices in the development of AUD prosocial behavior in playground public facilities by parents

No	Kelas Interval	Frekuensi	Persentase	Kategori
1	>4.2	5	62.50	Very Practical
2	3,40–4,1	3	37.50	Practical
3	2,60–3,39	0	0	Practical enough
4	1,81–2,59	0	0	Not Practical
5	<1.80	0	0	Very Impractical
Overall		8	100.00	

The provided Table 9 indicates that in theory, the frequency is 8, ranging from a minimum score below 0.00 in the very impractical category to a maximum score of 4.2 in the very practical category. After analyzing the data, it can be observed that the very practical category constitutes 62.50% with a frequency of 5, while the practical category represents 37.50% with a frequency of 3. Considering the practicality data from the table, it can be concluded that the experts consider the E-modules in AUD prosocial development to be highly practical and worthwhile to utilize.

5 CONCLUSION

The outcomes of the validity and practicality assessment for the Android-based e-module application demonstrate its classification as valid and highly practical, making it a viable tool for enhancing early childhood prosocial activities within families. The research on designing Android-based E-Module applications brings forth several contributions, such as expanding the repertoire of knowledge concerning Android applications to promote prosocial behavior in early childhood and diversifying the media used for active engagement of Early Childhood Education (AUD) in the learning process.

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