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Exploring Moral Development in Early Childhood: Integrating Piaget, Kohlberg, Hoffman, and Haidt Perspectives through Local Wisdom Project-Based Learning

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ABSTRACT

This study aims to explore moral development in early childhood by integrating perspectives from Jean Piaget, Lawrence Kohlberg, Martin Hoffman, and Jonathan Haidt through project-based learning. Using a quantitative approach, the study involved questionnaires completed by 28 early childhood education teachers regarding children's religious and moral values in daily activities. The results of data analysis showed that project-based learning significantly improved children's understanding of morality and religious values. Teachers reported improvements in moral aspects, such as empathy, justice and social responsibility, which are in line with Piaget's theory of moral development, Kohlberg's stages of moral development, Hoffman's empathy and Haidt's moral intuition. The study concludes that the integration of moral development theories in a project-based curriculum can enrich early childhood moral education, facilitating the internalisation of values through practical experience and social interaction. Recommendations for further research include the development of more comprehensive measurement instruments and the application of similar approaches across different cultural contexts.

Keywords: moral development, project-based learning, religious values

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INTRODUCTION

Morality and religious values play an important role in individual development from an early age. As an integral part of character formation, understanding morality in childhood influences future behaviour, social interactions and decision-making. Investigating moral development in early childhood is an important endeavour in understanding this complex process (Afiah & Haramain, 2022).

In recent decades, scholars have paid attention to and investigated various theories on moral development. Among them, theories from Jean Piaget, Lawrence Kohlberg, Hoffman, and Jonathan Haidt have been important cornerstones in understanding how morality develops from childhood to adulthood. (Ibda, 2023). Each theory provides a different perspective on key aspects of this process, highlighting the role of cognition, social experience, and emotional intuition.

However, in the context of early childhood education, moral development is not only about understanding the theories separately, but also about applying them holistically in a relevant and meaningful learning environment. A. Syamsudin emphasises the importance of moral

education from an early age as the basis for children's character building. The role of parents and teachers is crucial in teaching values such as honesty, responsibility, empathy and co-operation through effective methods and good role models. The integration of religious and moral education aims to create individuals of good character who can contribute positively to society. This education is a long-term investment to produce an ethical and responsible generation. (Syamsudin, 2012). This is where the project approach plays an important role. It offers a rich framework for investigating morality and religious values through hands-on experience, collaboration, and reflection in contexts that are meaningful to children. (Mustafa et al., 2020).

Previous research has also discussed the importance of moral development in early childhood, stating that there are various activities that can be used to stimulate children's religious and moral development. Some of them are storytelling, habituation, role-playing, and other activities. (Khaironi, 2017; Permataputri & Syamsudin, 2021).. In this article, we will explore moral development in early childhood by integrating the perspectives of Piaget, Kohlberg, Hoffman, and Haidt through a project approach. We will highlight the importance of integrating these theories in designing deep and meaningful learning experiences, as well as their implications in understanding and strengthening character formation in early childhood. As such, this article aims to present a solid foundation and best practices for educators and parents in supporting early childhood moral development through an integrated and contextualised approach to learning.

LITERATURE REVIEW

Development and Learning

The development of knowledge is a spontaneous process, linked to the entire process of embryogenesis. Embryogenesis concerns the development of the body, but it also concerns the development of the nervous system and the development of mental functions. In the case of knowledge development in children, embryogenesis only ends in adulthood. While learning is the process by which children acquire specific knowledge or skills through experience, education and practice. This process is more flexible and can vary depending on the context and methods used. Learning is often influenced by the environment, including interactions with adults and peers, as well as the teaching methods applied.

Moral Development according to Jean Piaget

Jean Piaget, a renowned psychologist, not only studied cognitive development, but also provided important insights into children's moral development. Piaget considered moral development as a process that is closely related to cognitive development. In the early stages, children have no understanding of social rules (asocial), then they begin to follow rules due to external authority (egocentric), and finally, they develop a deeper understanding of morality as a result of social co-operation and agreement (cooperative). (Piaget, 1964). This development shows a shift from a rigid and heteronomous understanding of morality towards a more flexible and autonomous understanding, along with children's ability to think more abstractly and consider the perspectives of others. Piaget identified three main stages in children's moral development: asocial, egocentric, and cooperative. Here is the explanation:

Asocial Stage

At this early stage, children are very young (usually under the age of 2) and have no understanding of social or moral rules. They are not yet involved in significant social interactions, so their behaviour is based on personal needs and desires. (Afnita & Latipah, 2021). At this stage, children do not yet understand the concept of right or wrong and do not yet understand that their actions can affect others. They have not yet demonstrated morality because they have not been exposed to social rules or norms.

Egocentric Stage

The egocentric stage usually occurs at around 2 to 7 years of age. In this stage, children begin to interact more with others, but they still tend to view the world from their own perspective (Arnianti, 2021; Novitasari & Prastyo, 2020).. Children at this stage understand rules, but they

often see them as something fixed and unchangeable. They obey rules because an authority (such as a parent or teacher) requires it, not because they understand or agree with the rules. Morality at this stage is often heteronomous, where children accept rules and norms from outside without understanding the reasoning behind them.

Co-operative Stage

The co-operative stage usually emerges around 7 to 12 years of age and continues to develop into adolescence. At this stage, children begin to understand that social rules and norms are the result of mutual agreement that can be negotiated and changed if necessary. They begin to develop autonomous morality, where they understand and accept rules because they agree with the principles behind them, such as fairness and co-operation. Children at this stage are also better able to see other people's perspectives and understand that their actions can affect others. They begin to appreciate the concept of fairness and tend to be more co-operative in their social interactions.

Moral Development according to Lawrence Kolhberg

Kohlberg's theory of moral development was developed by psychologist Lawrence Kohlberg. It is one of the most important theories in the psychology of moral development that divides the stages of human moral development into three levels, each consisting of two sub-levels, making a total of six stages (Kohlberg & Hersh, 1977). (Kohlberg & Hersh, 1977). Kohlberg states that individuals experience moral development through stages that are universal, although the speed and depth of that development can vary.

Pre-conventional Morality

Stage 1A: Punishment and Obedience Orientation: At this stage, individuals obey rules to avoid punishment. They view an action as bad if it can lead to punishment.

Stage 1B: Self-Benefit Orientation: At this stage, individuals take actions that are most beneficial to themselves. They base moral decisions on trade-offs and self-interest.

Conventional Morality

Stage 2A: Social Approval Orientation: At this stage, individuals begin to consider the views and expectations of society in making moral decisions. They want to be seen favourably by others and consider social norms.

Phase 2B: Law and Order Orientation: At this stage, individuals respect authority and obey laws, regulations and social obligations. They consider it important to maintain the social structure.

Pre-Conventional Morality

Stage 3A: Social Contract Orientation: At this stage, individuals begin to consider the diverse views and values of society in moral decision-making. They understand the importance of maintaining a just and democratic system.

Stage 3B: Universal Ethical Principle Orientation: At this stage, individuals have moral principles that are highly abstract thinking and based on universal principles such as justice, human rights, and individual dignity.

Moral development according to Martin. L. Hoffman

Moral development according to Hoffman involves the process of developing empathy and understanding the principles of morality. Hoffman argues that empathy is the main foundation of moral behaviour. His theory of moral development includes a schema that considers various factors, such as responses to people who are suffering, reactions to offences, and responses to virtual situations. (Martin, 1996). Hoffman divides 5 types of human moral behaviour.

Innocent bystander: A person sees someone in pain or distress (physical, emotional, financial). The moral issue is whether one is motivated to help the victim.

Transgression: One has harmed someone, or is considering acting in a way that could harm someone. The issue is whether one is motivated to avoid such harmful actions, and whether one feels guilty and acts constructively after the harm has occurred.

Multiple moral claimants: One has to choose between two or more moral claims, where choosing to help one of them may harm the other.

Caring versus justice: One must choose between caring, and more abstract issues such as rights, obligations, or justice.

Virtual transgression: A person is innocent but views themselves as the offender.

Moral Development according to Jonathan Haidt

Jonathan Haidt in his research on morality suggests three main principles that explain the development and function of morality in human life. These principles underline the role of intuition, the broad spectrum of morality, and the social effects of morality.

Intuition comes first, strategic reasoning comes second

Haidt emphasises that intuition plays a major role in moral judgement, where the first reaction to a moral situation is intuitive and emotional. Moral reasoning comes afterwards to justify the intuitive decision.

Morality is more than harm and justice

Haidt argues that morality is not just limited to the concepts of harm and justice. It encompasses six moral foundations: care, justice, loyalty, authority, chastity, and freedom, which reflect complex and diverse social values and norms.

Morality binds and blinds

Morality serves to bind individuals in cohesive social groups through shared values and norms, but it can also blind individuals to the perspectives and values of other groups, causing conflict and social division (Haidt, 2013).

Project Approach

Projects refer to in-depth investigative activities that engage students in the exploration and study of a particular topic. The project not only includes a research subject but also involves students in various processes of research, problem-solving, and seeking answers to questions that arise throughout the investigation. (G. Katz, Llilian, 2014).

The main feature of the project is that it interests students and has educational value for them. Projects often involve collaboration between students and teachers, with students working in small groups to explore a particular subtopic within a broader topic. (Noer Safitri & Darsinah, 2023).. Projects can cover a wide range of topics, depending on the age of the students and the environment they live in, and can focus on things such as building an object, visiting a specific place, or an in-depth study of a phenomenon. (M.Si et al., 2019).

Within the project approach, there are several key components that are essential for successful project-based learning. The following is an explanation of observation, fieldwork, representation and display in a project context:

Discussion

The discussion stage is the beginning of the Project Approach. Here, the project team or learners discuss to understand the project goals, divide roles and responsibilities, and plan the steps needed to achieve these goals. The discussion is also a platform to explore ideas, develop a work plan, and clarify mutual expectations.

Fieldwork

Fieldwork is an activity where students go outside the classroom to conduct hands-on research in an environment relevant to their project. It allows students to collect empirical data and gain a practical understanding of the project topic.

Representation

Representation is the way students express and communicate their findings from observations and fieldwork. It involves transforming the data and information that has been collected into a form that can be understood and analysed.

Display

Display is the stage where students present their work to an audience. This could be in the form of an exhibition, oral presentation, or digital

showcase. Display serves to celebrate students' work and provides an opportunity for them to share the knowledge they have gained.

Observation, fieldwork, representation and display are integral components in the project approach that help students to engage deeply in learning. Through observation and fieldwork, students collect real data. With representation, they organise and analyse information, and through display, they share their findings with a wider audience. All of this contributes to a rich and meaningful learning experience, enhancing students' understanding and skills in a variety of areas.

METHOD

This study uses a quantitative approach to formulate theoretical indicators of the development of religious and moral values in children aged 4-6 years based on relevant literature. The indicators were tested through observation of children's behaviour that reflects the development of religious and moral values. The test results validated some of the theoretical indicators with empirical data, but some did not receive support so they were removed from the NAM development factor group.

The research was conducted in the Yogyakarta City area, with a time span from April to May 2024. The method of data collection was through observation of children's behaviour related to religious and moral values during the learning process through *Project Approach* activities, starting from the arrival of children to school until they return home. The lattice of research instruments includes variables of religious and moral values development in early childhood. The aspects measured include habituation to prayer, personal hygiene, politeness in interactions during the learning process, as well as knowledge and worship skills that are in accordance with the stage of early childhood development. The instrument used was an observation sheet filled in by the researcher. The research subjects were children aged 4-6 years with a total of 284 children.

The research procedure is to conduct learning with the *Project Approach* which consists of 4 main components namely observation, fieldwork, representation and display. This project approach is carried out to observe children's religious and moral values from the beginning of arriving to leaving school. In addition, the research also involved the preparation of a conceptual framework, operational definitions, and formulation of indicators of the development of religious and moral values. After that, the validity of the instrument was tested by religious and moral values experts, data collection, tabulation, preanalysis, and data analysis.

The data collected is ratio data that highlights the development of religious and moral values in early childhood. The instrument used is a child development observation sheet, which consists of a score range of 1 to 10. Data collection techniques are carried out through filling out observation sheets containing indicators of the development of religious and moral values theoretically. The filler of the observation sheet consists of the researcher. For data analysis, descriptive statistics. The type of data collected is quantitative data that describes children's behaviour that reflects the development of religious and moral values in early childhood. The stages of analysis include tabulation of quantitative data, pre-analysis of data, application of CFA, and interpretation of data.

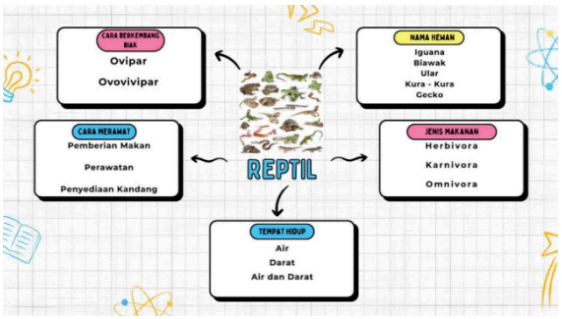

Figure 1. Religious and Moral Values Project Topic

In a research context, the Project Approach is used to explore a particular topic or problem in a more practical and involved approach. Learners or researchers can design and carry out their own research projects, which may involve data collection, analysis and presentation of results.

This approach allows researchers to gain a deeper understanding of the research topic through hands-on experience in carrying out the project. In addition, the project approach can

also improve practical skills, such as problem solving, critical thinking, and communication skills.

Figure 2. Project Approach stages

This study uses the Research and Development (R&D) method to develop a mobile application that supports character education based on local wisdom in East Java. The research method employed is the Research and Development (R&D) approach with the ADDIE model (Analyze, Design, Develop, Implement, Evaluate) (Sugiyono, 2020). The initial stage of the research involves literature review and needs analysis through interviews and questionnaires with teachers, students, and parents to understand their perceptions and needs in integrating local values into learning (Sugiyono, 2019). Additionally, Focus Group Discussions (FGD) with cultural and educational experts will be conducted to determine the key features that should be included in the application, such as interactive learning materials, educational quizzes, and local story-based games.

Next, the researchers will enter the application development stage by designing the user interface (UI/UX) and features based on the needs analysis results. The application will then undergo alpha testing by the development team and beta testing in several schools in East Java to evaluate its usability, effectiveness, and acceptance by students and teachers. Feedback from this limited trial will be used to refine the application before proceeding to a broader field trial. At this stage, pre-tests and post-tests will be conducted to measure the impact of the application on students' character development, particularly in understanding local wisdom values.

The results from the trials will be analyzed using statistical methods to assess significant changes in students' character formation. The refined application will then be distributed more widely to schools in East Java, accompanied by user guides and teacher training. With this approach, it is hoped that the developed mobile application will serve as an effective medium in strengthening students' cultural identity and enhancing character education amid the challenges of globalization.

RESULTS AND DISCUSSION

Result

The research data collection was carried out in the span of April-May 2024. The method of data collection, namely direct observation of the learning process through the *Project Approach*. The research subjects consisted of children age group: 5-6 years old. The total number of research participants was 284 children. The NAM development data processed included 239 children, while NAM development data on 25 children were not analysed due to several NAM indicators that had not yet appeared. The child development instrument consisted of 32 indicators of religious and moral values to be investigated.

The data, which initially totalled 284, was then filtered according to the outlier data using the *Z-Score* tool and went through the following stages:

Stage 1: 7 outlier data were found with respondent numbers 224, 223, 222, 221, 215, 79, and 28.

Stage 2: 14 outlier data were found with respondent numbers 259, 258, 255, 254, 251, 247, 246, 244, 241, 237, 220, 218, and 211.

Stage 3: 16 outlier data were found with respondent numbers 257, 256, 252, 250, 249, 248, 245, 243, 242, 240, 239, 238, 236, 235, 234, 233

Stage 4: 7 outlier data were found with respondent numbers 219, 216, 95, 84, 81, 75, and 42.

Stage 5: 1 outlier data was found with respondent number 146.

After filtering the data, the final data obtained was 239 respondents. Then the 239 respondents were grouped into 5 categories as follows:

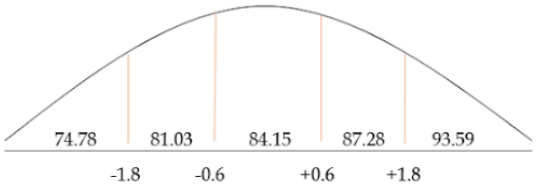

Table 1. *Observation of NAM development*
Frequency Distribution of AUD Religious and Moral Values

Statistics		
NAM		
N	Valid	239
	Missing	0
Mean		84.15
Mode		83
Std. Deviation		5.210
Variance		27.148
Skewness		-.059
Std. Error of Skewness		.157
Kurtosis		-.856
Std. Error of Kurtosis		.314

The frequency distribution table of religion and morals scores shows that of the 239 valid data analysed, the mean score is 84.15 with a mode of 83, which means this score occurs most frequently. The standard deviation of 5,210 indicates a relatively small variation in values from the mean, with a variance of 27,148 which is the square of the deviation.

Standard. The skewness of -0.059 indicates an almost symmetrical distribution of values with a slight skew to the left, while the kurtosis of -0.856 indicates a flatter distribution compared to the normal distribution. With a standard error of skewness of 0.157 and kurtosis of 0.314, this table concludes that religious and moral values are generally high with little variation and an almost symmetrical distribution.

Table 2. Category AUD NAM Ability

Class Division	**Z-Score**	**Value**	**Category**
1	74.79	<75	Very Underdeveloped
2	81.03	75< M < 81	Starting to Develop
3	84.15	84< M < 87	Developed
4	87.27	87< M < 94	Developing Very Well
5	93.51	> 94	Developing Very Well

Source: Observation results of NAM development by S2A PAUD UNY students

Table 2 presents the results of observations of the development of religious and moral values skills in early childhood (AUD) conducted by S2A PAUD students at Yogyakarta State University (UNY). These observations aim to categorise the level of development of religious and moral values skills in young children based on the scores obtained from the observations. Observation data was categorised into five ability categories based on the Z-Score values obtained. The following are details of the categorisation: (1) Very Underdeveloped (Z-Score: 74.79, Score: <75) - Children in this category showed very low development of religious and moral values skills.

They require intensive intervention and specialised support to improve their basic understanding of religion and morals. (2) Beginning to Develop (Z-Score: 81.03, Score: 75 < M < 81) - Children in this category are beginning to show signs of development in religious and moral values. They are in the early stages of development and require further reinforcement to reach the next stage. (3) Already Developed (Z-Score: 84.15, Score: 84 < M < 87) - Children in this category have developed their religious and moral values.

show significant development in religious and moral values. They have mastered some basic concepts and are on a good path to reach higher levels of development. (4) Very Well Developed (Z-Score: 87.27, Score: 87 < M < 94) - Children in this category show excellent development in religious and moral values. They have mastered many basic and intermediate concepts in religious and moral understanding. (5) Developing Very Well (Z-Score: 93.51, Score: > 94) - Children in this category show exceptional

development in religious and moral values skills. They have exceeded expectations in their mastery of religious values and are ready to take on more complex challenges.

Figure 3. NAM AUD development organization

After grouping the developmental levels of religious and moral values of young children, the percentages for each category were as follows: 17.8% of children are at the very underdeveloped level, indicating that a small number of children have not shown significant development in their religious and moral values. A total of 19.3% of children were at the beginning to develop level, meaning there were slightly more children who were beginning to show signs of development in religious and moral values. A total of 20% of children have shown good development in their religious and moral values, indicating that a group of children already understand and apply the values well. A total of 20.7% of children are at the very well-developed level, indicating that most children are showing very good development in their religious and moral values. A total of 22.2% of children were at the highest level of developing very well, indicating that most children had developed very well in their religious and moral values, setting a positive example for others. Thus, the percentages give an idea of how well developed religious and moral values are among young children, with the distribution showing that most children are at a good or better level of development.

The results of this observation provide an overview of the level of development of religious and moral values abilities in early childhood. By knowing the developmental categories of each child, educators can design more targeted interventions to help children who are in the "Very Underdeveloped" and "Beginning to Develop" categories. Meanwhile, children who are already in the "Developing Very Well" and "Developing Very Well" categories can be given more complex challenges to continue developing their abilities. This observation is important as a basis for formulating effective learning strategies that suit the developmental needs of each child.

Table 4. Moral and religious values

RELIGIOUS AND MORAL VALUES DATA AUD					
		Frequency	**Percent**	**Valid Percent**	**Cumulative Percent**
Valid	74	7	2.9	2.9	2.9
	75	8	3.3	3.3	6.3
	76	8	3.3	3.3	9.6
	77	3	1.3	1.3	10.9
	78	12	5.0	5.0	15.9
	79	8	3.3	3.3	19.2
	80	16	6.7	6.7	25.9
	81	13	5.4	5.4	31.4
	82	16	6.7	6.7	38.1
	83	22	9.2	9.2	47.3
	84	15	6.3	6.3	53.6
	85	20	8.4	8.4	61.9
	86	8	3.3	3.3	65.3
	87	12	5.0	5.0	70.3
	88	13	5.4	5.4	75.7
	89	9	3.8	3.8	79.5
	90	14	5.9	5.9	85.4
	91	13	5.4	5.4	90.8
	92	12	5.0	5.0	95.8
	93	7	2.9	2.9	98.7
	94	3	1.3	1.3	100.0
	Total	**239**	**100.0**	**100.0**	

Source: Observation Results of S2 PAUD UNY Students 2024

Discussion

Figure 1 describes the stages that are commonly used in the Project Approach. The Project Approach topic used is Reptiles.

Discussion: The analysis begins by evaluating the discussions that took place prior to project implementation. Focus on aspects such as clarity of project objectives, division of tasks, and agreed strategies.

Field Work: Field work in this context is a field activity that involves practitioners or members of the Oemah Ulo community coming to the school. In this practice, the community members may be involved in various activities, such as giving presentations, conducting demonstrations, or even organising workshops on topics relevant to the project or ongoing learning.

In a more specific context, the arrival of the Oemah Ulo community to the school can mean bringing special expertise or knowledge in the field of reptiles related to ongoing projects or learning. In addition, the presence of the Oemah Ulo community can also provide opportunities for children to interact directly with a variety of reptiles such as snakes, iguanas, geckos and other animals. This can enhance their understanding of the topic and provide valuable practical experience. Thus, field work by bringing the Oemah Ulo community to school can be an important part of practical and contextualised learning that engages students directly with the real world outside the classroom.

Representative: After the field work is completed, the Representative project in the context of making a zoo diorama in PAUD is an activity that aims to represent a certain concept or theme using a miniature model or diorama. In this case, the children were asked to create a diorama depicting the zoo in the best possible detail.

This activity not only involves the creative process in making the diorama, but also requires an understanding of the zoo as a concept and the various elements that exist in it, such as animals, trees, and visitors. Children are asked to gather information about the zoo and apply it in making their diorama. In addition, the activity of making a zoo diorama can also involve the use of various materials and techniques, such as making animals from paper or clay, creating landscapes using materials such as sterofoam, pebbles, and arranging diorama elements with interesting aesthetics.

Through this activity, students can develop their creative skills, fine motor skills, and understanding of the concept of the zoo. They can also learn to work together in a team and appreciate the work of others. In addition, the diorama they made can also be exhibited as a representation of the project they have completed.

Display: Display project of making zoo diorama in PAUD refers to the way the diorama is exhibited or displayed to others. After the diorama is finished, the next step is to display it in an area that can be accessed by students, teachers, and parents.

A zoo diorama exhibition can be organised in a classroom. In the project display, the diorama is placed in an attractive and accessible way so that people can see it clearly.

Project displays can also involve adding additional elements to enhance the presentation of the diorama. For example, children can add labels or explanations about each part of the diorama, such as the name of the animal or type of plant depicted. They can also add additional decorations, such as paper cutouts in the shape of flowers or trees, to add detail and beauty to the display.

The data showing the frequency distribution of NAM scores (Table 4) of these 239 children can be analysed based on Jean Piaget's theory of cognitive development, which includes four stages: sensorimotor, preoperational, concrete operational, and formal operational. (Piaget, 1964). At an early age (2-7 years), children are typically at the preoperational stage, where they begin to develop abstract and logical thinking abilities, albeit still limited. In the context of NAM scores varying from 74 to 94, we see that most children (more than 50%) have scores between 80 to 94. This suggests that these children have a higher level of comprehension and strong critical thinking skills, reflecting cognitive abilities that are developing according to the concrete and formal operational stages expected at that age. The even distribution and gradual increase in frequency (e.g., 2.9% at score 74 to 100% at score 94) illustrates the process of assimilation and accommodation identified by Piaget, where children constantly update their cognitive schema through learning experiences. This suggests that most children are

able to achieve higher moral and religious understanding, along with their cognitive development.

The frequency distribution data of the NAM scores of the 239 children can also be analysed using Lawrence Kohlberg's theory of moral development, which consists of three levels: preconventional, conventional, and postconventional. (Ibda, 2023; Kohlberg & Hersh, 1977).. These levels reflect an individual's ability to make complex moral decisions. The variation in scores from 74 to 94 indicates different levels of moral understanding and reflection among children. Most children (more than 50%) scored between 80 to 94, which suggests that they may be at the conventional or even post-conventional level in their moral reasoning. This means that they tend to understand and apply higher and more abstract moral principles in their learning process. A distribution that shows a gradual increase in frequency (e.g., 2.9% at score 74 to 100% at score 94) illustrates a continuous process of moral development. Children gradually reach higher levels of understanding, demonstrating their ability to apply moral values in their academic context, which aligns with Kohlberg's higher levels of morality.

Martin L. Hoffman's theory of moral development emphasises empathy as the core of moral behaviour. The frequency distribution data of the NAM scores of these 239 children illustrates the development of empathy and moral understanding based on Hoffman's theory. Scores ranging from 74 to 94 indicate varying levels of empathy among the children. A total of 47.3% of children had scores between 83 and 94, indicating high levels of empathy and moral understanding. According to Hoffman, children with these high scores are likely to have developed strong empathy, which drives moral behaviour and decisions based on a deep understanding of others' feelings. In contrast, children with lower scores, as seen in scores of 74 to 80 (16.6% of the population), may still be in the early stages of empathy development, where the ability to understand and respond to others' feelings is developing. This cumulative distribution suggests a gradual increase in levels of empathy and morality, in line with Hoffman's view that moral development is a gradual and continuous process that is strongly influenced by the individual's social and emotional experiences (Martin, 1996).

Jonathan Haidt's moral theory, which emphasises that morality stems from social intuition and consists of several key moral foundations, can also be used to analyse this data. The moral foundations identified by Haidt include care/harm, fairness/fairness, loyalty/betrayal, authority/violation, and sanctity/degradation. (Haidt, 2013). Most children (47.3%) scored between 83 and 94, reflecting a high level of morality in relation to these moral foundations. Individuals with lower scores (16.6% with scores of 74 to 80) may still be developing or prioritising different moral foundations. This distribution of scores shows variation in moral understanding, with a general trend towards higher levels of morality. This reflects the influence of social intuition in moral development as defined by Haidt

User Needs Analysis

This research began with a user needs analysis through literature studies, in-depth interviews, and the distribution of questionnaires to teachers, students, and parents in several schools in East Java. The results of the needs analysis revealed that most teachers felt there was a gap in learning materials related to character values based on local wisdom. A survey conducted among 150 teachers and 300 students found that 85% of teachers and 78% of students agreed that character education utilizing local cultural values could enhance students' understanding of cultural identity and strengthen their sense of love for their homeland.

Teachers also expressed that they often face challenges in integrating local values into the learning process due to limited resources and media. Additionally, interviews with several parents revealed that they desired education that instills moral and cultural values in their children, especially amid the growing influence of globalization. Based on these findings, the development of a mobile application focusing on character education based on local wisdom was considered a potential solution to address these needs.

Design and Development of the Application

After conducting the needs analysis, the next step was the design and development of the application. The application was developed by considering key features based on feedback from teachers, students, and education experts. The main features integrated into the application include interactive learning materials about East Java's local wisdom, educational quizzes, folk tales presented in animation, and traditional story-based games. The user interface (UI/UX) design was done iteratively, focusing on ease of use and interactivity.

After the initial development phase, the application underwent alpha testing by the development team to ensure stability and smooth basic functionality. Subsequently, beta testing was conducted in three schools in East Java, involving 50 students and 10 teachers. During beta testing, feedback was collected regarding user experience, feature usability, and content relevance. The beta test results showed that 92% of students found the application's interface easy to use and engaging, while 87% of teachers rated the content as suitable for character education based on local wisdom.

Effectiveness Testing of the Application (Field Testing)

After receiving feedback from the beta testing phase, the application was then field-tested. The trial was conducted over four weeks, involving 120 seventh-grade students from three schools in East Java. Prior to using the application, a pre-test was administered to measure students' understanding of local wisdom values. The pre-test results showed that the average understanding score of students was 65%. After using the application for learning, a post-test was conducted, showing an average score increase to 82%. This improvement of 17% indicates a positive impact of the application on students' understanding of local wisdom.

To evaluate the significance of this improvement, statistical analysis using a paired t-test was conducted. The statistical test results showed a p-value smaller than 0.05, indicating that the increase in students' understanding of local wisdom values after using the application is statistically significant. Therefore, it can be concluded that this mobile application is effective in supporting character education based on local wisdom.

User Satisfaction Evaluation

In addition to quantitative measurements, this study also assessed user satisfaction with the developed application. After the trial period, data was collected through a user satisfaction questionnaire filled out by students and teachers. Based on the data analysis, 88% of students reported being more interested in learning about local cultural values through the application compared to conventional learning methods. Teachers also stated that the application helped them deliver character education materials in a more interactive and engaging way.

However, some users provided feedback on technical issues that need improvement, such as slow loading speed and minor bugs encountered during application use. Users also suggested adding features like the integration of educational video content and interactive discussion features to increase student engagement in learning. These findings will serve as the basis for further improvements to the application before broader implementation.

Impact Analysis on Character Education

This study not only measures students' understanding of local wisdom but also examines the application's impact on changes in students' attitudes and behavior concerning character values such as honesty, responsibility, and cooperation. Through classroom observations and interviews with teachers during the trial, it was found that about 70% of students showed positive changes in their attitudes toward peers and teachers, especially in terms of group cooperation and initiative to behave honestly. Teachers reported an increase in student participation during learning activities that used the application.

CONCLUSION

A comparison of NAM data with various theories of moral development reveals how different perspectives contribute to a deeper understanding of the distribution of moral and religious values among children. Piaget emphasizes cognitive development and the progression of abstract thinking, while Kohlberg

focuses on the stages of increasingly complex moral reasoning. Hoffman underscores the role of empathy as the foundation of morality, whereas Haidt highlights moral foundations shaped by social intuition. Each of these theories offers valuable insights into the ways children develop their moral and religious values.

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