

Development of Edutainment Learning Model Based on Traditional Games to Improve Children's Social Emotional

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Abstract: One crucial aspect that needs to be considered in the growth and development of children is emotional and social development. This study aims to analyze and formulate the needs, design, feasibility and effectiveness of the traditional game-based edutainment learning model to improve children's social and emotional well-being. The research design used in this research is Research and Development. The subjects of this research were the students of Public Kindergarten 1 Kaliori and Kindergarten of Rahayu Wiroto, Rembang Regency. The results showed that 1) an edutainment learning model is needed following the needs analysis of the learning model. Based on the results of interviews and observations, it is known that the existing learning is still conventional and does not attract children's interest, 2) the development of an edutainment learning model based on traditional games is realized in the form of a guidebook. The guidebook contains instructions or guidelines for implementing edutainment learning, 3) the edutainment learning model is declared suitable for use in Public Kindergarten 1 Kaliori and Kindergarten Rahayu Wiroto both in terms of media and material, and 4) edutainment learning models are effectively used to improve children's social and emotional abilities in Public Kindergarten 1 Kaliori and Kindergarten Rahayu Wiroto. The effectiveness of the edutainment learning model is based on hypothesis testing with the results $t\text{-count} > t\text{-table}$. Based on the results of the n-gain test, it was found that the learning model in the category was quite effective.

Keywords: Edutainment, children's social and emotional, traditional games

1. Introduction

Early childhood is a golden age or often called the Golden Age. At this time, the child's brain experiences the fastest development in the history of life. This takes place when the child is in the womb until an early age, namely the age of zero to six years (Ogunnaiké, 2015). However, the period of a baby in the womb until birth, until the age of four, is the most decisive. During this period, the child's brain is experiencing very rapid growth. Therefore, paying more attention to children at an early age is a necessity. The form of attention includes providing education directly from their parents or through early childhood education institutions (Stacey, 2018). Developments in this early period will be decisive for subsequent actions. Success in carrying out developmental tasks at one time will determine success in the next development period (Fauziddin, 2016).

Quality education in the practice of the learning process must be able to meet all the needs of students, or in other words, the learning process should be student-centred. Students must feel comfortable, happy and not pressured when involved in learning activities. Learning must provide deep meaning and is always directed to the growth and development of students, respecting the environment so that its potential develops optimally. Quality education functionally delivers every individual the ability to survive, be competitive, and independently in a dynamic and fast-paced life full of competition (Ardiyanto & Sukoco, 2014).

On the other hand, educational practices, especially the learning process services that have been widely carried out so far, are only limited to how students are taught to receive several materials to meet the demands of the program and the curriculum that has been set, where the learning program is designed according to a schedule to meet the targets— heavy and tight marks. Learning absorption is measured through an assessment that has not fully measured students' competence. Learning services have not touched students' interests as learners, and learning services have not met the uniqueness and diversity of students, which are related to physical, intellectual, mental, emotional and social conditions. At the same time, quality education services have become a commitment, responsibility and obligation of the government and the rights of every citizen. The conditions described above indicate a gap between the demands of the world of education that should be on the one hand and situations that actually occur at the level of educational services on the other hand (Ardiyanto & Sukoco, 2014).

From the results of observations that we have made on the children of Public Kindergarten 1 Kaliori and Kindergarten Rahayu Wiroto, Rembang Regency, from Monday to Saturday, October 25-30, 2021, children's social and emotional abilities have decreased. The following symptoms mark the decline: children prefer to play alone and get angry when disturbed (especially after studying from home). In addition, they desire to be busy playing mobile phones rather than playing physical games at school. From the results of these observations, it is necessary to find a solution so that the child's social emotionality can increase again.

One of the exciting learnings for children is playing, and preschoolers are no exception. Children can achieve physical, intellectual, emotional and social development through play activities. Physical action can be seen while playing. Intellectual development can be seen in using or utilizing the environment. Emotional development occurs when children feel happy, angry, and lost (Ramayenda, 2020). Social development can be seen in the relationship with peers, helping, queuing in waiting for the game and paying attention to the interests of others. Therefore, we need a fun teaching method so that the message to be conveyed can be accepted in early childhood. One approach that can be used is edutainment based on traditional regional games.

2. Literature Review

Early Childhood Education is teaching that focuses on the physical, fine and gross motor, language, cognitive, emotional, social, moral, and religious components of children's development. Therefore, the learning carried out aims to maximize the development of all areas of child growth and development and is adjusted to the interests, sensitivity, and age of the child (de Souza Martins et al., 2016).

The fun and astonishing learning process takes place in a fun environment. A friendly and memorable learning environment will attract students to participate actively, maximizing the achievement of learning objectives. Education is a learning process that aims to make learning fun by successfully combining informative and entertaining information (Sulistyaningtyas & Fauziah, 2019). The edutainment concept provides a variety of interesting, imaginative, cutting-edge, and fun learning methodologies and methods. This idea helps in carrying out educational activities in the best possible way. In an effort to grow the discipline, it is easier to find, validate and collect the necessary data. To meet the teaching objectives, the teacher must facilitate the learning process as well as possible.

One technique for fostering emotional social behavior in children is the play approach. Playing traditional games is one type of game that has several advantages for children apart from being a nostalgic activity. Traditional games can improve social interaction skills, arithmetic, sensory, and motor holistically (Pranoto, Sugiyo, & Hong, 2014). Traditional games can also be used to develop gross motor skills and body coordination. Winning conventional children's games also requires coordination between groups. Cooperation is needed in many areas of life. Social values such as equality of position, togetherness, obedience to rules, strategic and creative thinking, intelligence, competition, social sensitivity, responsibility, openness, drive for achievement, and adaptability are all present in traditional games (Adi, Arianto, & Sukarmin, 2022).

Conduct that demands socialisation regarding interactions with others and is carried out with a sincere attitude in order to play a social function in the environment is referred to as social and emotional behaviour. As long as the youngster continues to practise socialising and build social behaviour patterns, their capacity for social behaviour will continue to grow.

3. Methodology

3.1 Research Design and Procedure

The focus of this study aims to develop children's social and emotional through the edutainment method, so this research refers to the type of development research (Research and Development). According to Sugiyono (2017), Research and Development research is a method used to produce specific products and test their effectiveness of these products. The research procedure can be presented in Figure 1.

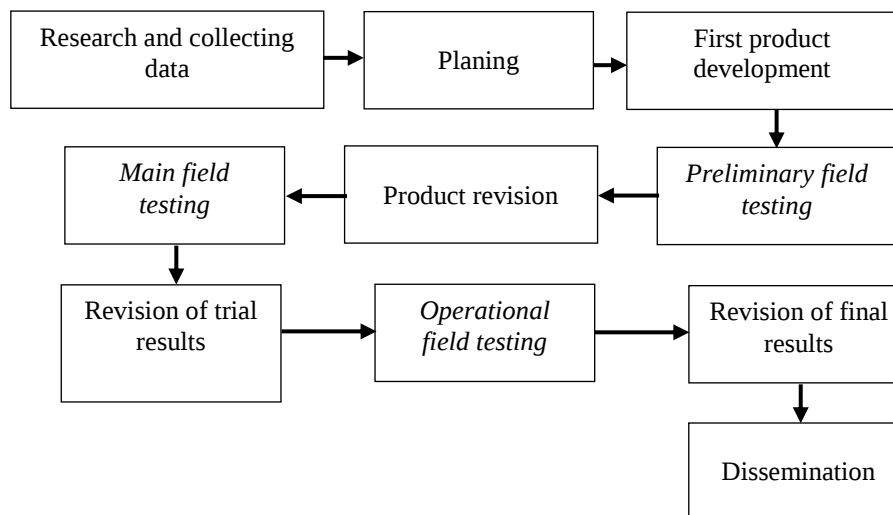


Figure 1. Research procedures for the development of edutainment learning models

3.2 Sources and Data Collection Techniques

This study's data sources were teachers and students at Public Kindergarten 1 Kaliori and Kindergarten Rahayu Wiroto. The data collection technique used is observation and interviews. Observations were made on children in the two kindergartens, while interviews were conducted with teachers.

3.3 Data Analysis

3.3.1 Feasibility Test of Learning Model

This validity is carried out using an expert judgment technique by a learning expert validator based on logical analysis. This validity test is carried out in consultation with experts by comparing the contents of the instrument and the material. Validation was carried out by two learning experts, namely lecturers and teachers, through validation sheets to assess the design of the learning model development and whether it was feasible to use or not. Learning experts who have validated will provide evaluations and suggestions. The assessment results from the validator are calculated using the Formula (1).

$$x = \frac{\text{Total score obtained}}{\text{maximal score}} \times 100 \quad (1)$$

After calculating the results of the assessment, then they are interpreted using the criteria for the level of validity of the learning model in Table 1.

Table 1. Criteria for validity level of learning model

Score	Category	Description
$25 \leq x < 43.75$	Invalid	Can't be used yet and need more consultation
$43.75 \leq x < 62.5$	Not enough	Can be used with multiple revisions
$62.5 \leq x < 81.25$	Valid	Can be used with a little revision
$81.25 \leq x < 100$	Very valid	Can be used without revision

The learning model feasibility test score was obtained from the difference between the pretest and posttest scores, which were calculated using the normalized N-gain formula. The purpose of the gain test is to determine how much the students' conceptual understanding increases before and after being taught using the learning model developed in the experimental and control classes. The N-gain test formula is.

$$g = \frac{S_{\text{posttest}} - S_{\text{pretest}}}{S_{\text{maksimum}} - S_{\text{pretst}}} \quad (2)$$

The criteria for the level of N gain are divided into three, namely: high ($g \geq 0.70$), moderate ($0.30 \leq g < 0.70$), and low ($g < 0.30$).

3.3.2 The Effectiveness Test

The effectiveness test aims to determine the difference in the average value of concept understanding between the experimental and control classes. The learning model is effective if the average value of students' conceptual knowledge in the experimental class is higher than in the control class. This effectiveness test was carried out using a two-sample t-test: the left-hand test with a significance level of 5%. The hypothesis is:

Ho: $\mu_1 \geq \mu_2$, the average concept understanding ability of students in the experimental class is not better or equal to the average concept understanding ability of students in the control class.

Ha: $\mu_1 < \mu_2$, the average concept understanding ability of students in the experimental class is better than that of students in the control class.

Descriptions:

μ_1 = the average concept understanding ability of students in the experimental class.

μ_2 = the average concept understanding ability of students in the control class.

Suppose after the data is tested for normality and homogeneity, it states that the data is normally distributed and homogeneous. In that case, the concept understanding ability test uses two independent sample t-tests. The effectiveness test was carried out using the SPSS application. P-value = $1/2 \times 2$ -tailed sig value. Ho is accepted if the P-value $> 1/2$, and if the P-value $< 1/2$, then Ho is rejected.

4. Result and Discussion

4.1 Edutainment Learning Model Design

The concept of edutainment learning has been widely known since the 1980s. It has become a successful learning method that has tremendously impacted education and training in the millennium era. According to the edutainment concept, fun learning can be done by inserting humour and games into the learning process (Sufa, Santoso, & Su'ad, 2022). Still, it can also be done in other ways, for example, by using role play, demonstration, and multimedia methods (Maftuh, 2017).

The stages of developing a traditional game-based edutainment learning model design consist of 10 stages, which can be summarized into three phases: planning, developing a draft learning model (hypothetical model) and designing a learning model development.

4.1.1 Planning

Planning is the initial stage in developing a traditional game-based edutainment learning model. The planning process is intended so that the learning model that will be formulated can be prepared carefully. In planning, steps were taken, namely: determining objectives, curriculum analysis, material analysis, compiling learning tools, and finally making media plans and assessment instruments, all of which can be described as follows:

a) Curriculum Analysis

At this stage, the researcher analyzes several curricula following the lesson plan of early childhood education, including competency standards, basic competencies and themes.

b) Setting goals

This study aims to design a traditional game-based edutainment learning model to improve children's social-emotional abilities.

c) Material Analysis

The purpose of the material analysis is to find the material that will be presented in regional game-based edutainment learning to make it easier for teachers to carry out learning activities.

Based on the results of the material analysis, several games are obtained that will be selected in this learning media. This analysis aims to determine the suitability of the material with basic competencies. Consistency between basic competencies, indicators, and themes while still prioritizing the characteristics of children, namely playing, is essential because the quality of learning will be better if children are active in learning through games.

d) Develop a Learning Implementation Plan

At this stage, before learning, the researcher makes a learning device consisting of a Lesson Plan and a syllabus.

e) Designing a Learning Model

The learning media design that will be developed is edutainment, an entertaining learning model. Edutainment that will be used is traditional games, including *Gotri*, *benthek*, *engklek*, *jamuran*, *pathol sarang*. Apart from being an activity for children, these games are also a requirement for positive values, especially for children's social and emotional aspects.

4.1.2 Development of Learning Model Draft (Hypothetical Model)

The hypothetical model consists of three main stages: planning, process, and evaluation. First, the planning process is carried out to prepare the main activity in the form of edutainment learning. Before carrying out edutainment learning, the teacher determines the media be used and arranges supporting devices such as lesson plans and syllabus. The next stage is the process. At this stage, the main activity is carried out, namely edutainment learning, and then the impact on children's social and emotional. The games chosen in this study were *buckshot*, *benthek*, *engklek*, *jamuran*, *pathol sarang*. The last stage is an evaluation which contains activities to see the game's impact on children's social and emotional aspects.

Before compiling the development design, the researcher formulates a hypothetical model first. The hypothetical model contains the design model to be developed. The hypothetical model in this study can be seen in Figure 2.

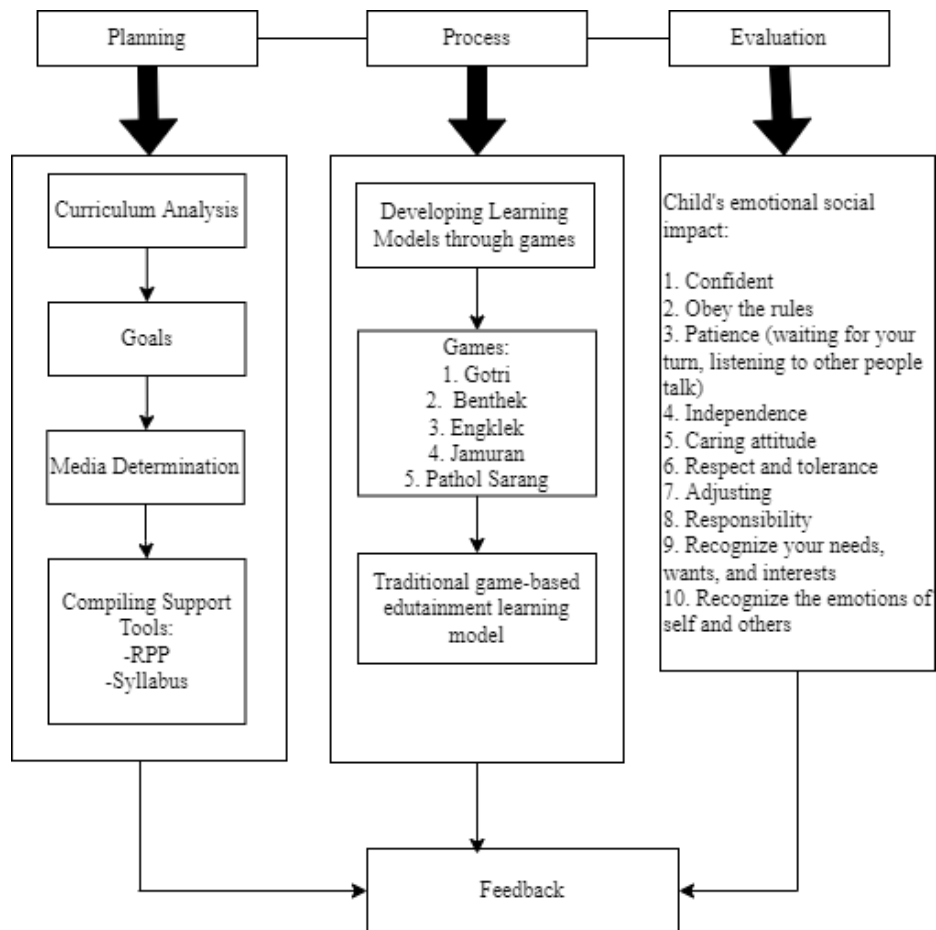


Figure 2. Hypothetical model of edutainment learning model development

4.1.3 Learning Model Development Design

Based on the needs of Public Kindergarten 1 Kaliori and Kindergarten Rahayu Wiroto, it is necessary to actively have fun learning involving children. Therefore, the learning model that will be developed is a traditional game-based edutainment learning model. There are five games used in this game. The five games include Gotri, Benthek, Engklek, Mushroom, and Pathol nest. Therefore, the product in this research is a guidebook on traditional game-based edutainment learning.

After using the traditional game-based edutainment learning model, it is known that the social and emotional aspects of children are increasing. With games, children can explore many things for themselves, their peers, and the environment. According to Conny & Semiawan (2008), social-emotional early childhood has several very essential aspects that need to be developed, and these aspects include the development of emotions and friendships, the development of self-identity, the development of gender identity awareness, and moral development. In addition, according to McKown et al. (2016), there are several aspects of children's social and emotional factors. These aspects are social elements in play, autonomy and initiative that develops feelings about self, peer relations, social conflict, prosocial behaviour, child fears and gender understanding.

In early childhood, interpersonal and emotional intelligence are not naturally possessed by children but must be grown and developed by parents and educators by developing social and emotional aspects of early childhood because

the factors that can affect the development of emotional and social intelligence in early childhood are heredity (parents), environment and general characteristics.

4.2 Feasibility Test of Edutainment Learning Model

A learning model is said to be suitable for use if it positively impacts children. The learning model is a component of learning resources or physical vehicles that contain instructional materials in the student environment that can stimulate students to learn.

Experts validate or feasibility of traditional game-based edutainment learning models as validators. There are two validators: validation for media experts and material experts. In addition to expert validation, the feasibility test was obtained from student and teacher responses to applying traditional game-based edutainment learning models. The following is the feasibility test of each validation.

Table 2. Feasibility test of media validation and material validation

	Media Validation	Material Validation
Total Score	117	157
Max Score	125	165
Validation Number	93.6	95.15
Criteria	Very Valid / Eligible	Very Valid / Eligible

The results of this study strengthen Moss's opinion that at preschool age, children's social-emotional abilities, in general, are like a normal curve, where most children have average or dominant abilities, and only a small proportion is low or high (Moss, 2019). However, this ability score is still very likely to increase if stimulated in various ways by adults. This is in line with Rahma, Lestari, & Nugroho (2018) research that children's social-emotional abilities could be continuously improved through educational institutions and homeschooling stimulation, namely by providing various game tools and play activities to facilitate children. Explore and develop their social-emotional abilities.

4.3 Edutainment Learning Model Effectiveness Test

The N-gain test (normalized gain) was used to measure the increase in science process skills and cognitive learning outcomes between before and after learning. The gain normality test is a test that can provide a general description of the increase in learning outcomes scores between before and after the application of a treatment. The results of the n gain test for the control class and the experimental class are:

Table 3. N-Gain test results in Public Kindergarten 1 Kaliori

No.	Value	Control Class	Experimental Class
1	N-Gain	0.0223	0.7082
2	Criteria	Low	High
3	N-gain%	2.2361	70.8211
4	Interpretation	Ineffective	Effective enough

Based on these data, the results of the n-gain calculation are:

a) Control Class

The N-Gain value in the control class is 0.0223 in the low category. This means that the increase in the social-emotional aspects of children is lacking in this class group. This is because the control class was not given any treatment. The N-Gain % value is 2.2361 in the ineffective category. This means traditional game-based edutainment learning is ineffective in developing social-emotional children in Public Kindergarten 1 Kaliori.

b) Experiment Class

The N-Gain value of 0.7082 is interpreted in the high category. This means a significant increase in the socio-emotional state of Public Kindergarten 1 Kaliori children. On the other hand, the N-Gain percent value of 70.8211, which is interpreted in the category, is quite effective. This means that the traditional game-based edutainment learning model is effective enough to improve children's social-emotional abilities in Public Kindergarten 1 Kaliori.

Based on these data, the results of the n-gain calculation are:

a) Control Class

The N-Gain value in the control class is 0.0295 in the low category. This means that the increase in the social-emotional aspects of children is lacking in this class group. This is because the control class was not given any treatment. The N-Gain % value is 2.948 in the ineffective category. It means traditional game-based education is useless in developing children's social and emotional development at the Kindergarten of Rahayu Wiroto.

b) Experimental Class

The N-Gain value of 0.69 is interpreted as being in the medium category. The N-Gain percent value of 68.99 which is interpreted in the category, is quite effective. This means that the traditional game-based edutainment learning model is effective enough to improve children's social and emotional abilities in the Kindergarten of Rahayu Wiroto.

Table 4. N-Gain results test in Kindergarten Rahayu Wiroto

No.	Value	Control Class	Experimental Class
1	N-Gain	0.0295	0.6899
2	Criteria	Low	Middle
3	N-gain%	2.948	68.999
4	Interpretation	Inefektif	Effective enough

Based on the trials that have been carried out regarding the traditional game-based edutainment learning model, it is known that there is a significant increase in classes that use the edutainment learning model and those that do not. This can be seen from the results of observations before and after the implementation of edutainment (Roslan et al., 2021). The effectiveness test used the N-Gain test, which obtained high criteria and improved children's social and emotional abilities. This shows that the edutainment learning model effectively improves children's social and emotional skills.

The existence of an interest in the activities of friends and an increasingly strong desire to be accepted as a member of a group are some of the signs of the development of children's social behaviour (Mayar, 2013). Children's social development starts from being egocentric and individual to communal interaction (Jamal & Wahyudi, 2021). At the age of 3 years, children begin to grow social characteristics, such as hanging out with other children and playing together. This can be seen when children begin to learn to socialize when they enter preschool education. In addition, children learn to adjust to peer groups (Sobarna & Hakim, 2017). This social development includes two crucial aspects, namely social competence (children's ability to adapt to their environment effectively) and social responsibility (children's commitment to their duties, respecting individual differences, and paying attention to their environment) (Jamal & Wahyudi, 2021).

5. Conclusion

Based on the results of research development and discussion described in the previous chapter, it can be concluded that an edutainment learning model is needed following the needs analysis of the learning model. Furthermore, based on the results of interviews and observations, it is known that current learning is still conventional and does not attract children's interest. Therefore, the edutainment learning model was declared feasible and effective to be used in Public Kindergarten 1 Kaliori and Kindergarten Rahayu Wiroto both in terms of media and material.

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Conflict of Interest

The authors declare no conflicts of interest.

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