The Effect of Simulation Game Learning on Increasing Entrepreneurship Values and Children's Independence

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ABSTRACT

Entrepreneurship programs can be used as a method of career guidance for early childhood. This study aims to determine the effect of Simulation Game Learning on Increasing Entrepreneurship Values and Children's Independence. Through this program, it has indirectly introduced the types of careers to children. This research is a type of quantitative research, with a quasi-experimental research method. The population in this study were the children of group B at Batik Kwadengan Barat Kindergarten and Dharma Wanita Persatuan Lemahputro TK as many as 40 students, class B TK Batik Kwadengan Barat amounted to 20 students as the experimental class and class B TK Dharma Wanita Persatuan Lemahputro amounted to 20 students as control class. Determination of the sample from the population using non-probability sampling. The collected data was then analyzed using statistical analysis to determine the effect of the independent variable on the dependent variable in the 2 groups with treatment only given to the experimental group. The statistical analysis in this study was carried out in 3 stages, namely: Instrument testing consisting of validity and reliability tests, Classical Assumption Test consisting of normality and homogeneity tests followed by hypothesis testing. Based on the test results, it is known that the instrument is valid and reliable and the data is normally distributed and homogeneous. The test results show that there is an effect of Learning Simulation Games on Increasing Entrepreneurship Values and Children's Independence. This is indicated by the significant difference in entrepreneurial development between the control group and the experimental group. As a reference, kindergarten teachers can apply simulation methods to develop children's entrepreneurial abilities and independence.

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1. INTRODUCTION

Teaching and learning activities are activities that connect a person in an effort to gain insight, expertise and positive values by using various sources to train themselves. From the explanation above, currently many institutional managers are trying to practice a learning approach that is concentrated on students (learning centered/student centered) (Wals, 2014). This approach is compatible with Early Childhood Education (PAUD). One form of learning activities is with career guidance from an early age in children. Providing career guidance to children can be through experiences and strategies designed to help these individuals develop their potential (Nota et al., 2016).

Experiences and strategies designed are tailored to the individual’s age stage. Entrepreneurship programs can be used as a method of career guidance for early childhood. This is in accordance with the comprehensive career guidance approach model proposed by Jafari-Sadeghi et al., (2020), which states that the career guidance model for early childhood is more focused on career awareness and self-awareness. One of the goals is to help children recognize the kinds and characteristics of the types of work that are around their environment. Through this program, it has indirectly introduced the types of careers to children. Then through this program children learn to play the role of entrepreneurs (Gehris et al., 2015).

PAUD provides opportunities for children to develop their personality and potential to the fullest. On this basis, PAUD institutions need to provide various activities that can develop various aspects of development such as cognitive, language, social, emotional, physical, motor and artistic (Jungmeier, 2017). These aspects can develop with the maximum teaching and learning process carried out by educators and students. The importance of teaching entrepreneur mentality since childhood is important (Boldureanu et al., 2020).

The spirit of entrepreneurship can be instilled through education that will internalize the value of entrepreneurship in students. Entrepreneurship education is education that leads to the business world. The two goals of most business education programs are to prepare for a successful career and to increase learning capacity for the future. Thus, the main thing in education is personal formation and its contribution to society. This education is aimed at the results in the form of habits, so it is very close to entrepreneurial learning (Jufri & Wirawan, 2018). These habits include increasing innovation, creativity, flexibility, capacity to respond in various situations, independence, self-direction, and self-expression (Vassallo, 2015)

In addition to the value of entrepreneurship, another important value to be instilled in children is the value of independence. Independence is very important in one’s life, because with independence children can become more responsible in meeting their needs and foster self-confidence in children (LeBaron et al., 2018). A child who has a sense of independence will be able to adapt to the environment and the circumstances of the child’s own environment and be able to overcome the difficulties that occur. Children’s independence is cumulative during development, where individuals will continue to learn to be independent in dealing with various environmental situations, so that children are able to think and act independently (Lindsay, 2016) Children who have normal independence tend to be more positive in the future. It can be seen from the observations that independent children tend to excel because in completing their tasks, children are no longer dependent on others. So that children can be more confident in their abilities.

The child’s lack of independence has a negative effect on the development of his own personality, so that the child will have difficulty in further development (Chodorow, 2019). Children who are not independent will be a lot of trouble to others and tend to be insecure so that children are not able to complete their tasks properly. As a result, children’s learning achievement is not good and is very dependent on others. In preparation for studying at school, for example, children always want to be bathed by someone else, assisted in dressing, wearing shoes, asking to be fed, and having to be escorted to school and accompanied by their parents. In learning activities at home, they often ask for help with their assignments. The task that must be completed in childhood is the independence of Khotijah, (2018).
Being independent is not something that can be obtained suddenly. Making children more independent requires a long process that must be started early. The key to the success of a child becoming an independent individual is actually influenced by many factors, one of which is parenting (Klok et al., 2015). Therefore, parents play an important role in nurturing, caring for, educating and directing children to be more independent. The child’s independence is identical with the attitude of depending on the people around him (Drever et al., 2015). The formation of entrepreneurial character and development of independence can be carried out in an integrated manner with learning activities. One of them is through simulation games.

Learning by using simulation games is a suitable learning to be applied to instill the character of responsibility in children. Simulation games can stimulate children to act wholeheartedly. When children act wholeheartedly, they will be responsible for completing their work well without feeling burdened. In addition, in the simulation game the child is given the opportunity to choose what he will do, so that the child will try to be responsible for doing the job well because what he does is a job of his own choosing. Exposure is supported by the results of research Yan (2018) which states that the revival of entrepreneurship education (educational entrepreneurship) is now a growing trend that will continue in the future, because of the challenges of the world which is getting stronger. Every country must prepare to face the era of globalization which requires the economic strength and independence of a nation.

Entrepreneurship and its characteristics are abstract concepts. This theoretically contradicts the cognitive characteristics of early childhood. Jean Piaget (Krakauer et al., 2017) states that early childhood is still in the preoperational thinking stage with the characteristics of symbolic thinking and requires concrete learning. Therefore, entrepreneurship learning for early childhood must use concrete media and methods so that the concepts and insights of entrepreneurship and their characteristics can be understood by early childhood and lead to the growth of an entrepreneurial spirit (Lotulung et al., 2018).

In line with the thoughts of Jean Piaget Lotulung et al., (2018), several studies that have been carried out confirm that learning for early childhood including entrepreneurship education must use concrete media and methods. Hidayat et al., (2015) conducted a study to find out how the entrepreneurship-based curriculum is managed by the organizers of the Khalifah 14 Daycare Playgroup and Kindergarten Yogyakarta. Zozimo et al., (2017) examines the values of entrepreneurial learning for young children through curricular activities and programs support learning activities. Hidayah (2014) researched the development of early childhood creativity based on monotheism and entrepreneurship. In this study, it can be seen that several approaches have been taken to organize entrepreneurship education for early childhood. One thing that has not been included in the entrepreneurship research is that there is no entrepreneurship simulation learning activity with a comprehensive economics approach. This is important, because the link between entrepreneurship and economics is very strong and close. Entrepreneurship is part of micro economic activities (microeconomics). According to Khoeussalim (Blážková & Dvouletý, 2019) Education in Indonesia does not direct its output to become entrepreneurs but is oriented so that people become employees. Higher education, for example, is not oriented to create jobs, but is oriented so that people work as professionals. There is no school or higher education that can create entrepreneurs/entrepreneurs in this country, only education creates workers. Based on the description above, this study aims to determine the effect of Simulation Game Learning on Increasing Entrepreneurship Values and Children’s Independence.

2. METHODS

Research design

This research is a type of quantitative research, with a quasi-experimental research method. The experimental design that will be used is a quasi-experimental design, in this design there is a control group, but it cannot function fully to control external variables (secondary variables) that affect the
implementation of the experiment (Sugiyono., 2017). Thus the results of the treatment can be known more accurately, because it can compare with the situation before being given treatment. This design can be described as follows:

<table>
<thead>
<tr>
<th>Kelompok</th>
<th>Pre-test</th>
<th>Treatment</th>
<th>Post-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>E</td>
<td>Y1</td>
<td>X</td>
<td>Y2</td>
</tr>
<tr>
<td>K</td>
<td>Y1</td>
<td>-</td>
<td>Y2</td>
</tr>
</tbody>
</table>

**Table 1. Research Design Scheme**

Information:
E: Experimental group
K: Control group (comparison)
Y1: Pre-test
Y2: Post-test
X: experimental group with Treatment
-: control group without treatment

The population in this study were the children of group B at Batik Kwadengan Barat Kindergarten and Dharma Wanita Persatuan Lemahputro TK as many as 40 students, class B TK Batik Kwadengan Barat amounted to 20 students as the experimental class and class B TK Dharma Wanita Persatuan Lemahputro amounted to 20 students as control class. Determination of samples from the population using non-probability sampling, this technique is sampling that does not provide equal opportunities/opportunities for each element/member of the population to be selected as samples (Sugiyono, 2015). The collected data was then analyzed using statistical analysis to determine the effect of the independent variable on the dependent variable in the 2 groups with treatment only given to the experimental group. The statistical data analysis in this study was carried out with the help of the SPSS application. The stages of data analysis in this study are as follows:

![Stages of Data Analysis](image-url)

**Figure 1. Stages of Data Analysis**

**Classic assumption test**

The assumption test or analysis prerequisite test is carried out as a condition before testing the hypothesis. The assumption test in this research is normality test and homogeneity test.

**Normality test**

The normality test was used to determine whether the data for each experimental group came from a normally distributed population. The normality test used in this study was the Kolmogorov-Smirnov. Kolmogorov Smirnov this can be done with the help of SPSS 25.00 software. The decision criteria are accepted if the significance value is more than 0.05.

**Homogeneity Test**

The homogeneity test was used to identify the variance match between the two research groups. The homogeneity experiment used in this research is Levene’s. The determination criteria obtained are H0 obtained when F count < F table. Homogeneity experiments with Levene’s can be tested with the help of SPSS 25.00 software. The decision criterion is Ho is obtained if the significance value is more than 0.05.

**Hypothesis testing**

Test the hypothesis using the independent samples t tests method to find out the simulation game on increasing the value of entrepreneurship and independence of group B children.
This different test model is used to analyze the pre-post research model or before and after. Different tests are used to evaluate certain treatments on the same sample in two different observation periods (Pramana, 2012). Paired sample t-test is used if the data is normally distributed. According to Widiyanto (2013), the paired sample t-test is one of the testing methods used to assess the effectiveness of the treatment, marked by differences in the average before and after being given treatment.

The basis for making a decision to accept or reject Ho in this test is as follows.
1. If t count > t table and probability (Asymp.Sig) < 0.05, then Ho is rejected and Ha is accepted.
2. If t count < t table and probability (Asymp.Sig) > 0.05, then Ho is accepted and Ha is rejected.

3. FINDINGS AND DISCUSSION

**Descriptive Statistics test results**

**Table 2. Pretest Entrepreneurship Development**

<table>
<thead>
<tr>
<th>Class</th>
<th>Range</th>
<th>Category</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>2.4-3.0</td>
<td>Tall</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>1.7-2.3</td>
<td>Currently</td>
<td>9</td>
<td>45%</td>
</tr>
<tr>
<td></td>
<td>1.0-1.6</td>
<td>Low</td>
<td>11</td>
<td>55%</td>
</tr>
<tr>
<td>Experiment</td>
<td>2.4-3.0</td>
<td>Tall</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>1.7-2.3</td>
<td>Currently</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>1.0-1.6</td>
<td>Low</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

The results of the control class entrepreneurship development that are in the range 1.0-1.6 with a high category of 11 children or 55%. Then those in the range 1.7-2.3 with a moderate category of 9 children or 45%. Then on the range 2.4-3.0 with a high category of 0 children or 0%. So it is known that the development of the majority of entrepreneurship is in the range of 1.0-1.6 with low category.

The results of the experimental class entrepreneurship development which are in the range 2.4-3.0 with a high category of 0 children or 0%, then the one in the range 1.7-2.3 with the moderate category of 7 children or 35%. Then on the range 1.0-1.6 with a low category of 13 children or 65%. So it is known that the development of the majority of independence is in the range of 1.0-1.6 with low category.

**Table 3. Pretest Independence**

<table>
<thead>
<tr>
<th>No</th>
<th>Range</th>
<th>Category</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>2.4-3.0</td>
<td>Tall</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>1.7-2.3</td>
<td>Currently</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td></td>
<td>1.0-1.6</td>
<td>Low</td>
<td>10</td>
<td>50%</td>
</tr>
<tr>
<td>Experiment</td>
<td>2.4-3.0</td>
<td>Tall</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td></td>
<td>1.7-2.3</td>
<td>Currently</td>
<td>8</td>
<td>40%</td>
</tr>
<tr>
<td></td>
<td>1.0-1.6</td>
<td>Low</td>
<td>12</td>
<td>60%</td>
</tr>
</tbody>
</table>

The results of the development of the control class independence which are in the range 1.0-1.6 with a low category of 10 children or 50%. Then those in the range 1.7-2.3 with a moderate category of 10 children or 50%. Then on the range 2.4-3.0 with a high category of 0 children or 0%. So it is known that the development of the majority of independence is in the range of 1.7-2.3 and 1.0-1.6 with low category.

The results of the independent development of the experimental class which are in the range 2.4-3.0 with a high category of 0 children or 0%, then the one in the range 1.7-2.3 with the moderate category of 8 children or 40%. Then on the range 1.0-1.6 with a medium category of 12 children or 60%. So it is known that the development of the majority of independence is in the range of 1.0-1.6 with low category.

**Table 4. Posttest Entrepreneurship**

Yulia Trisdina, Hendratno, Miftakhul Jannah / The Effect of Simulation Game Learning on Increasing Entrepreneurship Values and Children’s Independence
The results of entrepreneurial development that are in the range 2.4-3.0 with a high category of 7 children or 35%. Then those in the range 1.7-2.3 with the medium category totaling 13 children or 65%. Then in the range 1.0-1.6 with a low category of 0 children or 0%. So it is known that the development of the majority of entrepreneurship is in the range of 1.0-1.6 with medium category.

The results of entrepreneurial development that are in the range 2.4-3.0 with a high category of 15 children or 75%. Then those in the range 1.7-2.3 with a moderate category of 5 children or 25%. Then on the range 1.0-1.6 with a moderate category of 0 children or 0%. So it is known that the development of the majority of entrepreneurship is in the range of 2.4-3.0 with high category.

The results of the development of independence that are in the range 2.4-3.0 with a high category of 7 children or 35%. Then those in the range 1.7-2.3 with the medium category amounted to 13 children or 65%. Then on the range 1.0-1.6 with a moderate category of 0 children or 0%. So it is known that the development of the majority of independence is in the range of 1.7-2.3 with medium category.

The results of the development of independence that are in the range 2.4-3.0 with a high category of 14 children or 70%. Then those in the range 1.7-2.3 with a moderate category of 6 children or 30%. Then on the range 1.0-1.6 with a moderate category of 0 children or 0%. So it is known that the development of the majority of independence is in the range of 2.4-3.0 with high category.

**Table 5. Independence Posttest**

<table>
<thead>
<tr>
<th>No</th>
<th>Range</th>
<th>Category</th>
<th>Amount</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control</td>
<td>2.4-3.0</td>
<td>Tall</td>
<td>7</td>
<td>35%</td>
</tr>
<tr>
<td></td>
<td>1.7-2.3</td>
<td>Currently</td>
<td>13</td>
<td>65%</td>
</tr>
<tr>
<td></td>
<td>1.0-1.6</td>
<td>Low</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Experiment</td>
<td>2.4-3.0</td>
<td>Tall</td>
<td>14</td>
<td>70%</td>
</tr>
<tr>
<td></td>
<td>1.7-2.3</td>
<td>Currently</td>
<td>6</td>
<td>30%</td>
</tr>
<tr>
<td></td>
<td>1.0-1.6</td>
<td>Low</td>
<td>0</td>
<td>0%</td>
</tr>
</tbody>
</table>

**Classic assumption test**

**Normality test**

**Table 2. Entrepreneurial Normality Test Results**

<table>
<thead>
<tr>
<th></th>
<th>Kolmogorof Smirnoff</th>
<th>asymp. Sig. (2-tailed)</th>
<th>Kolmogorof Smirnoff</th>
<th>asymp. Sig. (2-tailed)</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experiment Class</td>
<td>0.249</td>
<td>0.217</td>
<td>0.158</td>
<td>0.200</td>
<td>Data is normally distributed</td>
</tr>
<tr>
<td>Control Class</td>
<td>0.130</td>
<td>0.200</td>
<td>0.109</td>
<td>0.200</td>
<td>Data is normally distributed</td>
</tr>
</tbody>
</table>
The value of Kolmogorov-Smirnov Z in the data on the development of entrepreneurship in the control class is 0.130 and the significance value is 0.200 > Asymp. Sig. (2-tailed) of 0.05. Thus, it can be concluded that there is no difference in the distribution of the data or it can be said that the data is normally distributed. The value of Kolmogorov-Smirnov Z in the entrepreneurship development data in the experimental class is 0.200 and the significance value is 0.217 > Asymp. Sig. (2-tailed) of 0.05. Thus it can be concluded that there is no difference in the distribution of the data or it can be said that the data is normally distributed. The value of Kolmogorov-Smirnov Z in the data on the development of independence in the control class is 0.109 and the significance value is 0.200 > Asymp. Sig. (2-tailed) of 0.05. Thus it can be concluded that there is no difference in the distribution of the data or it can be said that the data is normally distributed.

**Homogeneity Test**

The homogeneity test in this study used the computer assistance of IBM SPSS Statistics 25 using Levene.

<table>
<thead>
<tr>
<th>Information</th>
<th>Lavene Statistics</th>
<th>Sig.</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Entrepreneurship</td>
<td>0.10</td>
<td>0.922</td>
<td>Homogeneous Data</td>
</tr>
<tr>
<td>Independence</td>
<td>0.936</td>
<td>0.339</td>
<td>Homogeneous Data</td>
</tr>
</tbody>
</table>

Based on the table above, it shows that the Levene Statistic value for the experimental class and control class before treatment (pretest) on entrepreneurial development has a significant value of 0.257 (sig > 0.05). So it can be said that there is no difference in variance between the sample groups or in other words the variance between groups is the same (homogeneous). The statistical levene value for the experimental class and the control class before treatment (pretest) on the development of entrepreneurship has a significance value of 0.339 (sig > 0.05). So it can be said that there is no difference in variance between the sample groups or in other words the variance between groups is the same (homogeneous).  

**Hypothesis testing**

Here is served uji Entrepreneurship Development Difference Between Gain Control Class With Experiment Class. The results of the independent sample t-test of the entrepreneurial variable can be seen in the table below.

<table>
<thead>
<tr>
<th>Information</th>
<th>t-test for Equality of Means</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>t-count</td>
<td>t-table</td>
</tr>
<tr>
<td>Gain_Entrepreneurship</td>
<td>3.478</td>
<td>2.086</td>
</tr>
</tbody>
</table>

Based on the results of the independent sample t-test, it can be seen that the t-count value is 3.478 while the t-table value obtained from 20 respondents is 2.086. From these results it can be seen that the t-count value is > than the t-table, besides the significance value is 0.001 <0.05 so it can be concluded that H1 is rejected, so there is a significant difference in entrepreneurial development between before and after the use of the simulation method. In the description, children are able to take care of personal belongings in accordance with the direction of the teacher and children are able to tidy up equipment or
The use of simulation methods (buying and selling) has a significant effect on the development of entrepreneurship and children's independence. This is indicated by a significant difference in the development of entrepreneurship between the control group and the experimental group, namely the development of entrepreneurship in the experimental group is better than the control group, from the
average value and significance level produced. As a reference, kindergarten teachers can apply the simulation method (buying and selling) to develop the entrepreneurial abilities and independence of group B children in Kindergarten, because this type of game can significantly improve children's language and social-emotional development.

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