Traditional Game “Gembatan” and Social Competence of School Age Children.

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Abstract. Traditional game “gembatan” is a traditional game that has values of social competence. This study aimed to examine whether “gembatan” traditional game through experiential learning methods can increase social competence of school-age children. Design of this research is a quasi experimental with multiple treatment and control with pretest design. There are three groups involving of this research. First group obtained the traditional game through experiential learning methods, the second group obtained the traditional game without experiential learning methods, and the control group who did not receive treatment. Subjects were 168 fifth grade elementary school children whose group distinguished between men and women. Measuring instrument used two equal social competence scale. Scale 1 was to measure pretest and scale 2 was to measure poostest. Anava two ways was used to determine differences the gain scores between the first, second, and control group. The results showed that traditional games through experiential learning method or BERLIAN (Bermain-Experiential-Learning-Anak) has effects to increase the child's social competence (F = 13.915; p < 0.01). The traditional game through BERLIAN method can improve social competence more than traditional games without BERLIAN method. There was no difference between boys and girls in improving social competence.

Keywords: “Gembatan” traditional game, social competence, school-age children.

Introduction

Traditional game is the play activities with a longer history, must be of value precisely because they have been passed on from one generation to the next. (Bishop & Curtis, 2005) in special area and culture (Akbari, et al., 2009; Lavega, 2007) would be cultural richness and local culture identity (Dharmamulya, 2006; Sedaywati, 1999). In traditional game including wisdom, humanity, good, positif, valuable, and desirable (Akbari, et al., 2009; Bishop & Curtis, 2005; Suseno, 1999). Traditional game also give advantage to develop children (Iswinarti, 2005), cultural reflection and growing mind children (Krisdyatmiko, 1999).

Traditional game have a role game and physical skills that including educational benefits and growing mind children. Traditional game and physical exercise was recommended to interven alternative in education and growing children's and adolescents (Chileshe, 2004; Eichberg , 2005; Klasilinko, 2006).

Previous research has a same conclusion that traditional game valuable, and desirable for education and growing up to develop children. In preliminary research study conducted by Iswinarti (2005) finding that traditional game involving play activities to school-age children seen advantage to develop physical-motoric, intellectual, social, emotional, and children personality. Iswinarti, Fasichah, and Sulismadi research (2007) recognized 34 traditional game and psychological value for every traditional game tipe. Iswinarti, Fasichah, & Sulismadi (2008) recommended 6 (six) traditional game have high social competence are bentengan, gobag sodor, gembatan, pentiche, wak-wak gong dan goak-goakan. In this recommendation games children learning how to manage strategy, to make decision, to solve conflict, team work and team building, postpone satisfaction, to understanding each other, and other study like social interaction. Then Iswinarti (2012) test this six traditional games and finding that traditional games gembatan is the most popular traditional games in school-age children male or female. Taufik research (2011) result that game bentengan dan gobag sodor can improving ethnocultural empathy to tenager in Solo city. Larasati research also
(2009) finding research that traditional games Yogyakarta used to facilitate increasing social skills in school-age children who have interaction problem.

Iswinarti research result (2012) was describe that traditional game gembatan among them include competency social education value: (1) In problem solving components children learning to setting strategy, to making decision, and conflict resolution, (2) In component controlling children learning to follow rules, make a difference about right behavior and wrong, also to express feelings with proper action, (3) in component teamwork children learning positive interaction each other, sharing idea/material, and team building, (4) in component empathy children learning how to understand feeling, opinion, and condition each other, and empathy with other children feeling. Aspect and indicator social competence to content analyze refer to determine expert concept, problem solving aspect (Bern, 2012; Kostelnik, et al., 2010; Semrud-Cikleman, 2007), controlling aspect (Smart & Sanson, 2003; Kostelnik, et al., 2010), teamwork aspect (Johnson & Johnson, 2009; Smart & Sanson, 2003), and empathy aspect (Bern, 2010; Garaigordobil, 2009; Smart & Sanson, 2003).

Event traditional game have social values and high score psychology value but there is obstacle to reapplying this game to children. According to Bishop & Curtis (2001) children today don’t know how to play traditional game. Sedyawati (1999) wrote that there are a reason why traditional game so complicated because there is no inheritance, there is no area, and children more interesting with modern game.

With this obstacle to practice traditional game naturally need revitalization if will be used for building intervention social competence. Yudhohusodo (2010) and Santosa & Surono (2010), said that revitalization traditional value as Indonesian cultural values currently be important to characteristic building nation children. Iswinarti was made field study et al (2008) and discovered that children today very enthusiastic and happy when play activity games involving forceful physical contact, but they not play anymore traditional game because they didn’t know how to play and no body who teach them. To reapply traditional game as facility to building social competence children, need learning method to give message from traditional game valuable to children.

Social competence learning method with traditional game is experiential learning. Experiential learning belong to David Kolb method at 1981 and published at 1984. This theory one of learning theory that collaborative with the other with cognitive Piaget theory, field theory Kurt Lewin, and pragmatism philosophy John Dewey (Kolb, 1984; Zigmont, Liana, Kappus, & Sudikoff, 2011; Fiore, Metcalf, & McDaniel, 2007). Learning principle experiment implement in training with goal to increasing individual capability in group dynamic.

Theory experiential learning the theory that near with practice (Beard & Wilson, 2006). Mind Principle theory experiential learning base on learning process reflection experienced. How to apply experiential learning theory as learning method was applied to adults and adolescence. Next step this method applied to school-age children (Alkhateeb & Midji, 2009; Houck & Stember, 2002; Teglasi & Rothman, 2001; Weinberg, dkk., 2011). This study experiential learning principle applied to children with learning method social competence, we call this method with "BERLIAN" (Bermain-ExpeRiential-Learning-ANak).

Based on the above presentation can be concluded that the application of the traditional game children "gembatan" with methods of "BERLIAN" is expected to speed up the cultivation of the values of social competence than the implementation with the game without by BERLIAN method.

Research Method

This experimental study with experimental variable is a traditional game through methods BERLIAN and without BERLIAN method. The dependent variable in this study is the social competence and a moderator variable is gender. The research subjects (school age children) or children who are at the end of childhood or late childhood and elementary school sits in the district of Malang. In terms of the child’s age grade 5 elementary school at the end of childhood. Age category childhood end is 8-11 years (Kostelnik, 2010; Pasterski, Golombok, & Hines, 2011; Santrock, 2000). In childhood end of a transitional period adolescence so important to have a high social competence in order to face the challenges of the problems in
adolescence. The criteria for inclusion of research subjects are children without developmental disabilities and severe disease or illness.

This study uses research design "experimental multiple treatments and control with pretest". Shadish, Cook, & Campbell (2002) said multiple treatments design and control with pretest are an experimental design provides more than one involving CONTROL group.

Scale social competence measured from four aspects: problem solving, self-control, cooperation, and empathy. Ratio social competence of "scale 1" and "scale 2" equivalent to measurement of social competence in pretest and posttest. Equivalency scale 1 and scale 2 were tested by t-test ($t = 1.080; p = 0.282$) means that both scales showed no difference. Result homogeneity of variance showed scores of items "both scale" homogeneous ($Lavene score = 0.617; p = 0.433$), reliability scale 1 and scale 2 = 0.857 = 0.846.

In this study, traditional "gembatan game" (Gebokan or Pal-palan's or boy-boy or ganevo or kereweng sepak) with player 8-12 children, using a baseball or "kereweng" (broken tiles). Group "gembatan game" split on two team, "player team" and "guard team" playing competition to be winner. Task for player team, knock down a mound of "kereweng" and reorganize. Task for guard team, to prevent players team rearrange "kereweng" and immobilize players team by throwing ball into direction of the opponent's body. Players team who got hit the ball (except the head) will "game over" have to stand on upfield until a change status of team. Players team will be the winner and will receive on scores when succeed organize kereweng.

In the study "bridge game" one group played with 10 children same sex. Game ball is a tennis ball "green" and kereweng "fake money" out of clay round shaped and flat, with diameter 7 cm.

**Results**

Analysis data this study with techniques Anova with two-way. Summary analysis variance of two-way variables social competence shown in Table 1.

Tabel 1. Summary analysis variance of two-way gain score social competence

<table>
<thead>
<tr>
<th>Variable Effect</th>
<th>F</th>
<th>Sig</th>
<th>Kuadrat Eta</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corrected Model:</td>
<td>23.632</td>
<td>0.000</td>
<td>0.422</td>
</tr>
<tr>
<td>Sex</td>
<td>0.095</td>
<td>0.925</td>
<td>0.000</td>
</tr>
<tr>
<td>Group:</td>
<td>58.515</td>
<td>0.000</td>
<td>0.419</td>
</tr>
<tr>
<td>Interaction JK*KLP:</td>
<td>0.661</td>
<td>0.572</td>
<td>0.007</td>
</tr>
</tbody>
</table>

Results two way of analysis variance showed there is significant differences on calculating corrected model of social competence variables "gender and group" $F = 23.632$ ($p = 0.000$). Two independent variables "gender and group" on social competence variable 42.2%. Results gender variable values $F = 0.009$ and $p = 0.925$. This indicates that gender variable has no effect on social competence. Two-way of analysis variance calculation also show "group variable" influenced on social competence variable ($F = 58.515, p = 0.000$). Result eta squared calculation "group variables" influenced on social competence 41.9%. Calculation two-way of ANOVA showed that there is no interaction between "gender and groups variable" on social competence variables, value of $F = 0.561$ ($p = 0.572$).

Tabel 2. Comparison of difference between "gain score" of social competence

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean</th>
<th>Sig</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>BERLIAN - NON BERLIAN</td>
<td>3.589</td>
<td>0.000</td>
<td>There is a difference</td>
</tr>
<tr>
<td>BERLIAN – CONTROL</td>
<td>6.643</td>
<td>0.000</td>
<td>There is a difference</td>
</tr>
<tr>
<td>NON BERLIAN – CONTROL</td>
<td>3.054</td>
<td>0.000</td>
<td>There is a difference</td>
</tr>
</tbody>
</table>

Result analysis calculation of social competence "pairwise comparison" showing very significant differences between groups of social competence. In Table 21 showed comparative difference "mean gain score" social competence between "experiment I" treatment of traditional games with the DIAMOND method (DIAMOND), and "experiment II" treatment of traditional games (NON DIAMOND), and control
group is a group waiting list (CONTROL group). Result calculation "mean gain score" social competence in different groups DIAMOND highly significant (p = 0.000) with group NON BERLIAN with mean difference = 3.589. This explain that social competence increase from pretest to posttest on higher group BERLIAN of social competence from pretest to posttest on group NON BERLIAN.

Differences "mean gain score" on BERLIAN group highly significant different 6.643 with CONTROL group, this explain increasing on social competence pretest to posttest on BERLIAN group higher than social competence from pretest to posttest in the CONTROL group. Differences "mean gain score" on NON BERLIAN group showing significantly differed on CONTROL group 3.054. This explaining that increasing on social competence from pretest to posttest in NON BERLIAN group higher then social competence from pretest to posttest CONTROL group.

Figure 1. Comparation gain score average problem solving aspect social competence between group BERLIAN, NON BERLIAN, dan CONTROL

Discussion

The results of the study there is the influence of the traditional game against social competence supports previous studies showed no relationship between playing with social competence. The results of the meta-analysis was conducted by researchers (Iswinarti, 2012) by retrieving data 20 research articles there is a correlation between play and social competence although the correlation is not always positive. negative positive correlation between play and social competence are described on the type of game. The game in the category of social play such games locomotor, rough & tumble, sociodramas, social play with objects, and games with rules. The results showed a positive correlation of social play while playing their own social competence (solitary play) was negatively correlated with social competence (Coplan et al, 2001; McAloney & Stagnitti, 2009; Spinrad et al, 2004; Uren & Stagnitti, 2009).

The traditional games used in this study is a traditional game gembatan or in some regions have different names like boy-boy’s, pal-Palan, gebokan, soccer kereweng, dina boy, and ganevo. This game is a game that has characteristics which are: (1) is a social game because it involves more than one person, (2) involve physical activity (3) games have rules, (4) characteristics of group games because it consists of two teams in one group, (5) a group game competition because it produces winners and losers. Several features of the game in the top of the similarities in the characteristics of the rough and tumble games studied by Pelligrini (1998). Results of research conducted longitudinally in children of primary school age shows that the rough and tumble games can improve social competence in children who are popular, while the children are denied this game can regulate aggressiveness.

Another explanation could be used to discuss the relationship between traditional games with social competence is about the content (content) material in the game. Based on a content analysis of
traditional games gembatan (Iswinarti, 2012) can be seen that the traditional game gembatan game contains indicators that have the values and social competence is problem solving, self-control, cooperation, and empathy. Content or materials relating to the game that affect social competence also studied in the meta-analysis by Anderson, et al (2010) who found that the video material on the theme of violence is positively correlated with the aggressiveness and negatively correlated with empathy and prosocial behavior. Aggressiveness is a behavior that reflects the low social competence, whereas empathy and prosocial behavior is an aspect of social competence. An overview of the various studies that support this research indicates that whether the game can either increase or decrease the aspects of social competence depends on the type and content of the game. This result can be explained by social learning theory or social cognitive theory (Bandura, 1979; Buckley & Anderson, 2006) which says that people learn through direct experience or through observation. In observing one can observe themselves and others in the same room, on television, in film and video. When observing someone will consider whether the behavior earn reward or punishment. Someone will tend to mimic the behavior if they see that such behavior will be rewarded and less emulate if the behavior is obtained punishment. Based on this theory, the explanation of the content or materials games experienced and observed by the children will be important. When experienced and observed by a child is a video about violence then be emulated children is aggressive behavior, whereas if it is experienced and observed by a child is a game that contains social values then that will be replicated child is social behavior.

Discussion between the traditional games with social competence neuroscience-related topics. Although yet to provide insight into the relationship between neuroscience play with it to make a discussion about the issue. It is thus expected no further research that addresses the traditional game in relation to neuroscience.

Based on the research results Pelligrini (1998) ditemukan that the rough and tumble games can improve social competence of children of school age. Research on the effect of the rough and tumble game against social competence are also carried out in rats to see the development of "social brain". Based on research conducted by the Natural Sciences and Engineering Research Council of Canada and the Alberta Heritage Foundation for Medical Research (Pellis, Pellis, & Bell, 2010) were applied in rats showed that there was the influence of the game rough and tumble to the improvement of social competence in mice. Based on the results of a study of rat brain neurons is known that there is no control on the behavior of subcortical mechanisms play that mediate motivation and behavior while playing. Experience in play will modify the development of the cortex area to another. Changes in the cortex that appears to be mediated playing for the improvement of social skills.

In this study proved that the traditional game which has some similarities with the characteristics of the game rough and tumble associated with increased social competence. Thus the children who play traditional games are also likely to experience the development of "social brain". According to Donald (2007) basically social brain is home to the neurobiology of social cognition. Thus when the social brain develops the social cognition will also be developed. Some experts also support the notion that the play is closely related to brain development (Brown & Vaughan, 2009; Goldstein, 2012; OECD, 2007; Sattelmair & Ratey, 2009). The results in this study indicate that the traditional game with BERLIAN method has a higher impact in improving the social competence compared to traditional games without BERLIAN method. The results of this study indicate that traditional games accompanied by reflection guided by facilitators of children's experiences in the play has a role in improving the social competence of children.

"BERLIAN Method" (Bermain-Experiential-Learning-Anak. It was acronym Indonesia phrases from Play-experiential-learning-children) in this study Method BERLIAN is method to training children social competence with traditional games. Silberman said (2007a) experiential learning compatible to interactive training. important component in experiential learning partisipant was active to participate in concrete activities so they have experience be learner and they can reflect activity experience.

In this study, children who obtained the traditional game with “BERLIAN” methods deliberately given experience learn the values of social competence in traditional games gembatan. The game involved the child's physical, cognitive, emotional, and behavioral. According Zigmont et al. (2011) and Kohonen
experience contributed most to ignite emotional learning process, pressing, challenge so that the whole body to be fully involved. The design simulations make optimal body changes significantly strengthen the reflection but does not affect the pressure in the learning process. reflection process of experiential learning experience in order to facilitate these experiences means (Guthrie & McCracen, 2010; Kolb, 1884; Schutte & Wetmore, 2012). Reflecting the child’s experience when doing traditional games then the child will learn about the values of social competence that exists in the game so that the child will be easier to obtain the meaning of the experience than if the child only play alone without being accompanied by reflection on the experience of a process of experiential learning at child or children to learn through experience.

The survey results revealed that there are no sex differences in social competence and influence the improvement of its aspects after receiving treatment with BERLIAN traditional games and NON BERLIAN method. both sexes equally increased and the increase is not different. This is in contrast with the hypothesis that gender moderated the increase in social competence. These results provide information that affects the sex roles in play activities and social competence showed varying results. The results of this study in contrast to some previous studies that indicate the presence of sex differences in children's social competence.

Pellegrini (1990) stated that there is a relationship between the behavior of the boys in the playground with social cognition status of boys but there is no relationship between the two girls. Daigle (2003 also found that boys and girls differ in view of the support of others in the activities of physical activity and sport. There is a feeling capable in physical activity in girls more influence on participation in physical activities and sports than in boys . thus, the support from teachers and peers also have more influence on physical activity and sports in girls than in boys.

Gender factor in this study not only play a role in social competence variables but variables play a role in as well as the relationship between two variables, play and social competence. Most studies showed no sex differences in the desire to engage in prosocial behavior in children. This means that both boys and girls have the same capacity to prosocial behavior (Kostelnik, 2012). On the other hand, some studies showed different results. Girls are more frequently participate in prosocial behavior compared to boys (Keane & Calkins, 2004; Hastings, Rubin, & DeRose, 2005).

Various mixed results about the role of gender in social development of children can not be separated from the development of play in children. Based on the literature, Kostelnik et al (2012) concluded that the growing age of the child then play increasingly different gender. In school-age children by Goodwin (2006) in both boys and girls are involved in competitive games but males tend to be more involved in competitive games open while girls prefer games that do not attack the other children because of their role different from the boys. Judging from the development of school-age children play at the final level of the children at this age (8-11 years) there is a tendency to play with friends with the same gender, boys spend more time playing competitive games while children women spent more time to talk and converse with close female friends (Pastersi, Golombok, & Hines, 2011). Likewise Fabes, Hanish, and Martin (2003) emphasize that my group with the same sex is a potential force for socialization in children in order to build social competence because in this age group dynamics being formed. The absence of a difference in improvement of social competence among boys and girls can also be based on the experimental process. Based on observations during the experiment can be seen that both the subject of men nor women have gained significant difference about their behavior during play. Excitement, enthusiasm, sincerity and good research on the subject appears in boys and girls. This is evident from the results of manipulation checklist showing that the average ratings of three observer of the game in the boys and girls, both in groups and NON DIAMOND DIAMOND shows the results are not much different.

Conclusions and Recommendations

Based on the results of this study concluded that there is influence of traditional games through the DIAMOND method to increase the social competence of children of school age. The traditional games accompanied by methods BERLIAN have a higher impact in improving the social competence compared to
traditional games that are not accompanied by methods DIAMOND, while the game’s traditional that is not accompanied by methods BERLIAN could further enhance the social competence than if the child does not receive treatment traditional games. The traditional games accompanied by BERLIAN methods can improve all aspects of social competence that aspect of problem solving, self-control, cooperation, and empathy, while the traditional game without BERLIAN method can improve aspects of problem solving and cooperation of school-age children.

In this study it was found that gender does not function as a moderator in the relationship between traditional games through methods BERLIAN and without going through the DIAMOND method to increase the social competence of children of school age. That is, there was no difference in improvement of social competence among children of school age boys and girls. Based on the results of the study can be recommended to the observer of the child’s development is expected to apply the traditional game media and experiential learning methods to optimize the development of the child. The school is expected to incorporate this traditional game play activities as part of the character formation of children of school age, especially to stimulate the development of social competence. To the government, especially the basic education department is expected to consider a program of traditional games as part of a curriculum that is applied to a primary school. This curriculum can be included in sports and extracurricular subjects such as scouts or self-development program. For the next researcher advised to develop this research by taking a different subject such as the age of the fourth grade and sixth grade and junior high school students. However, further research can also be done by taking the traditional games such as, gobag Sodor wak-wak gung, kasti, and others. Given that in the discussion raised the possibility of reviewing the traditional game based neuropsychological related to brain development and social cognition, it is expected kapada further research to examine more deeply about traditional games in reviews neuroscience.

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