



The Influence of Outdoor Education and Gender on the Development of Social Values

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Info Artikel

Sejarah Artikel:

Diterima Desember 2017
Disetujui Februari 2018
Dipublikasikan April 2018

Keywords:

Outdoor education, gender, and development of social values

Abstract

This article reveals the differences in the development of social values through outdoor educational activities (OE) equipped with structured and unstructured games by looking at gender factors. OE activities were conducted in Parongpong and Gunung Artapela, West Bandung West Java Indonesia, followed by 32 students divided into two groups. With a simple 2 x 2 factorial design, the first group was given an OE activity equipped with a structured game and a second group of unstructured games, amounting to 16 people per group. Before and after following OE each sample filled out a questionnaire about the development of social values (environmental care, self-control, communication, and cohesiveness). Gain scores are used to test the hypotheses of the questionnaire after and before following the OE through ANOVA and Tukey. The results are: firstly, there is no overall difference in the effect of OE equipped with structured games with unstructured development of social values; Secondly, there is an interplay between the game model in OE with gender so as to give different effects on the development of social values; Thirdly, there is a difference of influence between OE and structured game with unstructured development of social values in the male gender group, OE equipped with better structured game than unstructured game; Fourth, there is a difference in the effect of OE with unstructured game structured to the development of social values in women's gender groups, OE activities with unstructured games better than structured. OE activities require the right type of game according to their gender. Equips OE with structured games suitable for men and unstructured for women.

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INTRODUCTION

Outdoor Education (OE) characterized by physical and outdoor activities has become new additional needs among society, including students despite the fact that it has not been integrated in educational curriculum yet. In some other countries, OE has been integrated into their national sport and health curriculum (J. Dymont, Morse, Shaw, & Smith, 2014; Atencio, Tan, Ho, & Ching, 2014; Thomas, 2015). OE as an outdoor activity program is often deemed similar to outdoor recreation (OR) that may be used as effective therapeutic in overcoming juvenile delinquency. (Sandell & Öhman, 2013; Bowen & Neill, 2015). Because of its outdoor physical activity characteristics, OE has been frequently utilized in building environmental awareness attitude (Sandell & Öhman, 2013; Bowen & Neill, 2015).

Hence, Physical activities in forms of outdoor education and learning has resulted in new insights in integrating environmental study as part of ecological responsibility and social sustainability (Lugg, 2007; Pavlova, 2012; d'Angelo & Brunstein, 2014). In cultural comparison, this has brought into the light the possibility in integrating environmental education into physical and sports education as a potential curriculum change in Brazil (Rodrigues & Payne, 2015) This fact has encouraged the physical and sports education in Indonesia to adopt OE as an integral part. It is important as nature-integrated outdoor design has a significant role in developing students skills as in their academic achievement and social behaviour (Mirrahmi, Tawil, Abdullah, Surat, & Usman, 2011).

OE significantly contributes in developing cognitive, affective, social and psychomotor aspects (Dettmer, 2005). The contribution of OE in cognitive aspect is represented through students' learning mastery because of the integration of theory and practice in the learning process (Knapp, 1989; Quay, Kokkonen, & Kokkonen, 2016; Manni, Ottander, & Sporre, 2016), in addition, OE has encouraged students activity, creativity, imagination and cooperative skills in improving their learning achievement, the integration between fact, fiction and enjoyable learning environment has created constructive teaching learning atmosphere (Kangas, 2010).

The affective aspect contribution of OE is portrayed through students' mood, mental attitude, empathy and so on. OE has materialized certain attitude and perspectives focusing more on norms, moral ethic, and universal and acceptable behavior required as social skills (Iozzi, 1989; Wang, Ang, Teo-Koh, & Kahlid, 2004; Moser & Martinsen, 2010; Ampuero, Miranda, Delgado, Goyen, & Weaver, 2015). OE social and self-development contribution is reflected through such qualities as: respect, teamwork, communication, cohesive, empathy, discipline, self control, self esteem, honesty, tolerant, environment awareness, social skills and so on (Warren, 2005; Quinn & Stacey, 2010; Scrutton, 2014; Bergman, 2015; Johnson & Chin, 2015; Fenton et al., 2016).

The psychomotor benefit from OE is that it comes along with the stellar social values

since OE is almost always hand in hand with physical activities such as hiking, rafting, and camping wherein physical activities are inevitable (Bunting, 1989; Davidson, 2001; Beames & Atencio, 2008; Schwab & Dustin, 2014; Williams & Wainwright, 2016). In line with its characteristics, OE enables students to enjoy outdoor atmosphere apart from classroom or building so that the teaching learning process is different from the traditional method especially doing physical activities while getting closer to the nature and ecology (Cherif, 1992). Moreover, OE in forms of outdoor activities and desert program can stimulate mental health in teenagers and young adults (Mutz & Muller, 2016).

Referring to the aforementioned benefits of OE, the researchers are interested in designing some activities in OE program. Designing learning games is an effort in fulfilling students' needs, designated outdoor is so important that it encourages better learning achievement for the students (Acar, 2014). The designated OE is integrated hiking and camping accompanied by various kinds of games. Hiking is a physical activity as in taking a long walk in the wood or wilderness in which it involves the interaction with nature and it has been considered as a killing time activity for the society (Kastenholz & Rodrigues, 2007; McNamara & Prideaux, 2011). On the other hand, camping is mostly referred as psychosocial activity contributing to experiencing different natural environment, social interaction, certain comfort, self identity and learning has brought in to discursive interest in contemporary society (Garst,

Williams, & Roggenbuck, 2009). In this hiking and camping activities, certain games are designed to meet the enjoyable OE characteristics. These games are designed to add more fun so that the games are important in OE (Luckner, 1994; Ward & Griggs, 2011; Morissette, 2014). This games atmosphere is used as the triggering indicators for OE participants to develop such potentials as: team work in problem solving, transforming challenge into opportunity, giving meaning to events, supporting teammates, participating in team and so forth (Humberstone & Stan, 2012).

There are two designated games in this research; structured and unstructured models focusing on learning (Hubball & West, 2009), in brief, adventure sport or physical based OE is equipped with enjoyable games as in sports in general this may lead to personal development motive (Gröpel, Wegner, & Schöler, 2016). the experience of outdoor activities influences childhood. realizing the importance of playing outdoor on children' healthy development is expected to change the educational practice that focuses more on indoor activities into outdoor activities to build the interconnection with nature elements, risk, socialization and highlighting family professional role in creating quality outdoor activities (Bento & Dias, 2017). Structured games model refers to level the games starting from the simples activities to more complicated ones the unstructured games, on the other hand, is not design in order and random. Between two models, which one gives more meaning. In addition, is there any interaction between gender based OE model that gives

different influence on social value development furthermore, this article analyzed the following gender based questions, do the two models affect social value development represented through natural awareness, self control, communication and cohesiveness when applied to male and female, if so, which one is superior?

METHOD

This research was carried out in Ciwangan Indah Camp Parongpong and Mount Artapela, Bandung, West Java, Indonesia, this location was deemed appropriate for Outdoor Education due to the fact that this location has camping ground facility, clean river, and hiking location, and beautiful waterfall. The research method used in this study was true experiment wherein it consist of two groups; experimental group with outdoor education through hiking and camping by distinguishing the games order, one with structured games and the other with unstructured games. The participants of the study are: (1) Pelita Nusantara students and (2) Universitas Pendidikan Indonesia Lab School students. This research model was chosen as the follow up step from quasi experimental research that identified contributing factors on personal development in OE participant, the analyzed elements are gender and module used based on OE activity order the analysis focused more on confirming participant personality development during certain period of time (Harun & Salamuddin, 2010).

Questionnaires are used to identify social value development as a result of OE program participation. The instrument used to measure social values was new ecological paradigm (NEP) (Dunlap, Van Liere, Mertig, & Jones, 2000). Self control instruments were adopted from Tangney, et.al (2004), communication instrument construction was based on Hartley P., (1999, 21-27), and cohesiveness intrsument was derived from Forsyth (2010, 127). Simple 2x2 factorial design was described as follows :

A: Outdoor Education (OE)		
	A1: Structured Games	A2: Unstructured Games
B1: Male	A1B1	A2B1
B: Gender		
	B2: Fe- male	A2B2
Social Value development : environment care attitude, self-control, communication, and cohesiveness		

Figure 1. Research Design

Notes

- A1 : OE with Structured games
- A2 : OE with unstructured games
- B1 : Male
- B2 : Female
- Dependent Variables : Social Value Developments

RESULT

The description of data collection and analysis :

No.	Variabel	A ₁ vs A ₂		A vs B		A ₁ B ₁ vs A ₂ B ₁		A ₁ B ₂ vs A ₂ B ₂	
		F _o	F _t α= 0,05	F _o	F _t α= 0,05	Q _o	Q _t α= 0,05	Q _o	Q _t α= 0,05
1.	Environment Care	7,8	4,20	2,45	4,20	4,46	3,26	1,11	3,26
	Conclusion	Significant		Not Interaction		Significant		Not Significant	
2.	Self Control	42,76	4,20	0,85	4,20	5,26	3,26	8,125	3,26
	Conclusion	Significant		Not Interaction		Significant		Significant	
3.	Communication	0,067	4,20	37,24	4,20	6,36	3,26	7,25	3,26
	Conclusion	Not Significant		Interaction		Significant		Significant	
4.	Cohession	10,57	4,20	15,85	4,20	7,25	3,26	0,73	3,26
	Conclusion	Significant		Interaction		Significant		Not Significant	
5.	Social Values	1,76	4,20	49,46	4,20	8,37	3,26	5,71	3,26
	Conclusion	Not Significant		Interaction		Significant		Significant	

Environment Care Attitude Development

Based on Table 1, Environment care attitude, the statistical computation has resulted in the following analysis:

1. $F_o = 7,8$ is bigger than $F_t = 4,20$ with 0.05 alpha, it means that there is significant influence difference between structured OE games and Unstructured OE games toward environment care attitude, structured OE games is better than unstructured OE games in terms of improving nature care attitude development. The implication and recommendation is that in holding OE activities in search for environment care attitude development, structured games is more recommended.
2. $F_o = 2,45$ is smaller than $F_t = 4,20$ with 0,05 alpha, it means that there is no interaction between OE games model and gender so that it has no effect on environment care attitude development.
3. Bigger $Q_o = 4,46$ than $Q_t = 3,25$ in 0.05 alpha, means that there is environment care attitude development differences between structured games and unstructured games in male students, structured games OE is better than the unstructured it is implied and recommended that structured games OE is more effective in developing environment care attitude for female group students.
4. Lower value of $Q_o = 1,11$ than $Q_t = 3,26$ in 0,05 alpha, indicates that there is no difference in environment care attitude development between structured games OE and unstructured games OE in female group students the structured and unstructured games OE has an equal effect on environment care attitude development. It has led to the implication that both structured and

unstructured games OE can be equally used in developing environment care attitude for female group students.

Self Control Development

Based on Table 1, the analysis and result of data computation can be described as follow:

1. $F_o = 42,76$ is bigger than $F_t = 4,20$ in 0.05 alpha, it means that there is significant influence difference between structured games OE and unstructured games OE toward self control development, the unstructured games OE has better effects on self control development. It is recommended that unstructured games OE be utilized in order to develop students' self control
2. Lower $F_o = 0,85$ than $F_t = 4,20$ in 0.05 alpha reveals that there is no interaction between OE games models and gender in self control development.
3. $Q_o = 5,16$ is higher than $Q_t = 3,26$ in 0.05 alpha, it means that self control development on male students has significantly been affected by OE games model, unstructured games OE is better than structured ones. This means that unstructured games OE is recommended to be applied in developing male students' self control.
4. $Q_o = 8,125$ is higher than $Q_t = 3,26$ in 0.05 alpha, this indicates that there is self control development difference between structured and unstructured games in female group students. unstructured games is better than structured games. This leads to the implication and recommendation that unstructured

games OE is expected to be used in improving female group self control development.

Communication Value Development

Based on table 1, the analysis for communication value development is portrayed as follows:

1. Lower $F_o = 0,067$ than $F_t = 4,20$ in alpha 0.05 shows that there is no significant effect differences between structured and unstructured games toward communication development both games models have similar effect on communication development. It means that either structured or unstructured games model may be used to improve students' communication development.
2. Higher $F_o = 37,24$ than $F_t = 4,20$ indicates that there is an interaction between OE games models and gender that leads to significant communication development.
3. $Q_o = 6,36$ is higher than $Q_t = 3,26$ in 0.05 alpha, it implies that there is significant effect difference between structured and unstructured games on male communication development, structured games is better than the unstructured games. It is recommended that structured OE games may develop male communication development.
4. Higher $Q_o = 5,84$ than $Q_t = 3,26$ reveals that there is significant effect difference between structured and unstructured games on female communication development. the unstructured games is better than the structured games, the implication is that unstructured games is more recommended to be used in developing female communication development.

The following discussion is based on table 1 in analyzing the cohesiveness values

1. $F_o = 10,57$ is higher than $F_t = 4,20$ in 0.05 alpha, there is significant effect difference between structured OE games and unstructured OE games in improving cohesiveness development, structured OE games has better effect on cohesiveness development. It implies that structured OE games is more recommended to be applied in improving cohesiveness development.
2. Bigger $F_o = 15,85$ than $F_t = 4,20$ in alpha 0.05 has indicated that there is a significant effect of OE games models on gender that eventually affect cohesiveness development.
3. Bigger $Q_o = 7,25$ than $Q_t = 3,26$ in alpha 0.05 reveals that there is significant influence difference between structured and unstructured games OE on male cohesiveness development, structure games is better than the unstructured. This leads to the implication that structured games is recommended in developing male cohesiveness development.
4. Lower $Q_o = 0,73$ than $Q_t = 3,26$ has shown that there is no significant effect difference between structured games and unstructured games in developing female cohesiveness. It implies that both structured and unstructured games can be used in developing female group cohesiveness.

Social Value Development

Social value development is the combination of all variables; environment care attitude, self control, communication and cohesiveness. The data analysis based on table 1 is presented as follow:

1. $F_o = 1,76$ is lower than $F_t = 4,11$. it means that there is no significant effect difference between structured and unstructured games on social value development. Either structured and unstructured games can be used to improve social value development.
2. $F_o = 49,46$ is higher than $F_t = 4,11$ it means that there is some interactions between games models and gender in improving social value development.
3. $Q_o = 8,37$ is higher than $Q_t = 3,15$. it indicates that there is significant difference between structured and unstructured games on male social value development. This means that structured games is preferable in improving male social value development.
4. $Q_o = 5,71$ is higher than $Q_t = 3,15$, this confirms that there is significant effect difference between structured games and unstructured games in OE on female social value development in which unstructured games gives better contribution than the unstructured. It implies that unstructured games is more recommended for developing female social values.

Discussion

Relevant to the aforementioned discussion, the following questions are referred as the main consideration in discussing social value variables: First, why do structured and unstructured games give similar effect on social value development? Second, why does the interaction between games model and Gender have different effect on social value development? Third, why do structured and unstructured games have different effect on social value development wherein structured games contribute better toward male group students? Fourth, why do structured and unstructured games have different effect on social value development wherein unstructured games contribute better toward female group students?

It is obvious that gender does give significant effect in affective, psychomotor and social factors. An interesting case has been indicated that compared to man, woman is consistently encouraged to surpass man in social performance result (Lortie, Castrogiovanni, & Cox, 2017). Different case in social anxiety, woman tends to have more anxiety and less physical confidence in which the difference is consistent in age (Hagger & Stevenson, 2010). Those cases are likely to be affected by the woman characteristics, natures and personalities that is more open compared to man. In addition woman has more anxiety and inferior physical condition. Therefore, it is acceptable that most research highlight the difference between male and female groups as in OE activities.

The first result of the study has confirmed that structured and unstructured games

have similar effect on social value development. It means that in general, both models can be used when the participants are the combination of male and female group. However, if the participants are dominated by either male or female group, the effect will be different. This indication is in line with the second result of the study; there is an interaction between games models and gender that contribute to the social value development. Furthermore, third result of the study discovered that structured games contribute better to social value development in male group students. On the other hand, the fourth result has found out that female group students tend to be more affected by unstructured OE games. Why is male group more responsive positively in structured games while female is more responsive in unstructured games? It can be analyzed by exploring the main characteristics of structured OE games. Structured games begins with simple activities and it systematically increase to more complicated phase, simple games activities require less physical and thinking skill, more complicated games, on the other hand, need higher physical and thinking skills. Henceforth, in line with Hagger and Stevenson (2010), woman tends to have more physical stress, less self-esteem on physical ability than man so that she is likely to find more problem when more complicated games are placed in the last session. As a result, giving various games to female groups will also allow them to explore new experience to have a better insight (Ismail Abdul Fatai O., Asrul Faqih, & Wafa K. Bustan, 2014). Along with the aforementioned explanation, male social value development is more affected by

structured games, it confirms the fact that male physical ability is superior to female. That logic is relevant to the statement claiming that female shows lower functional performance than male (Bravell et al., 2017).

CONCLUSION

To improve social value development, students are supposed to be more involved in OE activities that is equipped with structured and unstructured games models. OE activities that is equipped with structured and unstructured games models has different influences based on gender Male group students responded more positively in developing social values if OE activities are arranged in more structured games from simple to complicated. On the other hand, female group students is more responsive in developing their social values when OE activities are equipped it random or unstructured games.

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