Abstract: There is an increasing awareness of the importance of outdoor learning in Indonesia which indicated by the increasing provision of various outdoor learning facilities in elementary schools. Previous studies on integrating regular school with various outdoor activities found that firsthand experience of outdoor learning could stimulate positive development in children behaviors which affects their learning process in school positively. For gaining understanding about the current status of outdoor facilities and determining the extent to which outdoor learning has been carried out in elementary schools in Indonesia, a preliminary study was conducted in SD Muhammadiyah Sapen Yogyakarta. The main purpose of this research is to assess the implementation of outdoor learning as part of school framework in SD Muhammadiyah Sapen Yogyakarta and to determine the optimal way for improving the system. Qualitative and quantitative research was conducted by questionnaire with students, parents, and teachers as subjects of research. As the result, although outdoor learning is highly favored by the students, parents, and teachers, however, the application at selected schools is still hampered by limited space and facilities. The result of this study could be used for further studies, especially on designing school outdoor facilities suited with each schools condition, in terms of the availability of space and facilities.

Keywords: school; outdoor learning; outdoor facilities; learning environment; outdoor space.

1. Introduction

Playing outdoor is one of the basic needs for children which should be carried out spontaneously and instinctively. This is one of the particular reasons why educational institutions thrive to secure an outdoor space for their students. Outdoor learning is one of the important aspects in the learning process because it prioritizes acquisition of knowledge with the direct experience of students to relate subjects learned with phenomena observed in the environment. The way children come in to contact with the phenomenon is supporting the embodiment of knowledge. Furthermore, outdoor learning would facilitate the strong engagement between the learner and the focus of learning.

However, the available spaces sometimes are still not optimally utilized for intended outdoor learning purposes. There are also cases where the utilization of outdoor facilities could not be optimized due to the lack of understanding on the principles of outdoor learning itself. Therefore, instead of doing outdoor learning as a part of learning process, students and teachers are only moving the classroom outdoor. Hence, it is necessary to have a comprehensive understanding for designing outdoor facilities and applying outdoor learning with careful planning and assessment.

2. Literature Review

2.1. Outdoor Space and Outdoor Learning in School

2.1.1. Natural Learning Environment

Outdoor space as the natural learning environment would be just a place for running and playing around. However, when an outdoor space or facilities is being used optimally, it could be a complete learning environment that could accommodate cognitive, linguistic, emotional, social, and physical needs of the children [1].
To support outdoor learning in elementary school, it is necessary to provide enough access for student to various outdoor facilities. By having continuous access to those facilities, students will learn through various authentic hands-on experiences beyond the educational setting, which make the learning process will be more believable and relevant with students’ real life [2]. It is different when compared to classroom or indoor learning where students must imagine and find the relevancy by themselves. The students will learn to relate what they learn with their daily life.

Outdoor learning experience often more remembered and attached for a lifetime. Previous study on the use of open green space concluded that children who do not have or have less access to the outdoor environment will unlikely spend time outdoors as adults, which consequently impact their health and well-being [3]. In addition, there is a tendency that children who never or rarely do outdoor activities will be more difficult to adapt to an outdoor environment comparing to children who often do outdoor activities. When this kind of gap occurs in the process of learning outside the classroom, without the proper explanation and assistance from the teacher, there could be confusion during the activities.

2.1.2. School and Outdoor Learning

Schools play an important role for children development. Aside from home, student will mostly spend their time at school. To provide enough access for children to interact and learn in an outdoor environment, accommodating outdoor facilities in school area become essential. Furthermore, due to the presence various elements, both natural and man-made, the outdoor facilities could become a micro representation of a larger scale environment, thus become an optimal setting for learning [4].

Recent study also implies the physical and behavioral impacts of outdoor learning including cognitive, affective, interpersonal/social skills, which are nurtured through three types of outdoor learning activities; fieldwork and outdoor visits; outdoor adventure education; and school grounds and community projects [5]. There are various constraints that might occur while learning outside the classroom, especially when the school having an outdoor visits, such as the difficulty of supervising a large group of students and providing them with the assistance needed; missing the main lesson thus alterations have to be made; time needed for planning the trip; cost, if needed; lack of detailed knowledge of the locality; safety of the students; and lack of necessary skills in students [6].

Due to various factors that must be considered for carrying outdoor learning activities, the concept to provide proper outdoor space in school boundary becomes very significant. Thus, planning and designing outdoor facilities in school which could facilitate learning process for different purposes is a challenging task.

2.1.3. Learning Outside the Classroom (LOtC)

Previous study about learning outside the classroom manifesto expressed that learning process is not only about what is being learnt but also more importantly is about how and where are the learning process taken places [7]. Learning outside the classroom (LOtC) is best seen not as a subject in its own, but as a tool for teaching and learning which can be utilized across all subject areas and all age groups for a number of purposes [2].

The increasing awareness about the importance of the space as part of learning, especially outdoor space is happening in worldwide, including in Indonesia. The increasing awareness is due to the understandings of various benefits that can be gained by students with outdoor learning process which implemented optimally in support to indoor/classroom learning. Through proper planning, outdoor learning have many potential to develop children knowledge, life concept, and skills from across the school curriculum, increase academic achievement, and makes an important contribution to students’ physical, personal and social education, and also social and emotional intelligence [8].

Aside from several constraints about outdoor learning thru outdoor visits stated by UNESCO [6], there are also several other factors that hamper the implementation of outdoor learning at schools, such as school curriculum requirements, The lack of teachers’ confidence for teaching outdoor, shortages of time, lack of resources and supports, the need of wider changes within and beyond the educational regulations, as well as personal factor of the student itself; such as age, prior
knowledge and experience, fears and phobias, learning styles and preferences, physical disabilities and special educational needs, ethnic and cultural identity [5].

Many factors that influence outdoor learning process indicate that the learning process outside the classroom requires careful planning by both of the teachers and the schools. Lack of full support from schools will result in less optimal implementation. This is one particular reason that to optimally benefit from outdoor learning process, schools should incorporate the outdoor learning process in to school design and school frameworks (Setyawan, 2018) [9]. Previous studies affirmed that the outdoor learning process is a process of continuous learning, so that the benefits can only be gained by routinely programmed activities rather than just stand alone activity. By implementing learning outside the classroom as a planned program which is frequent, continuous, progressive, and fully integrated in to curriculum planning, there will be transformational impacts on students, teachers, and culture of the school (Waite, 2017) [2].

2.2. Implementation of Outdoor Learning

Recently, there is an increasing trend in the number of nature schools and regular schools offering outdoor activities in Indonesia, especially in the city of Yogyakarta. This shows that the popularity of schools with outdoor learning facilities began to be favored by parents, where previously schools with the best academic quality were the top priority. Parents begin to realize the importance of the outdoor space for child development, especially when lately open public spaces are becoming increasingly scarce in the neighborhood. One of the regular schools which includes outdoor learning programs in the learning process is SD Muhammadiyah Sapen Yogyakarta which becomes the case study of this research.

To find out the progress of the application of outdoor learning at SD Muhammadiyah Sapen, a preliminary research was conducted. The extent to which outdoor learning has been carried out, how the roles of teachers and students during the process, what kind of obstacles are encountered in the implementation process, and how to better optimize the process of outdoor learning in schools were explored.

3. Material & Methodology

3.1. Data

Quantitative and qualitative data was collected by questionnaire with students, parents, and teachers at SD Muhammadiyah Sapen Yogyakarta as subject of this research. Students from class year 4 and 5 were assessed based on their experiences with technology, eagerness to do outdoor activities, availability of outdoor facilities in school, and about school activities in outdoor environment. Some interviews and observation was also being held as part of this research.

3.2. Method

To get straight forward answers, the assessment in this study was carried out in accordance with the theory developed by Guttmans [10], which consist of yes-no questions. In addition to that, to capture actual condition in SD Muhammadiyah Sapen Yogyakarta, in regards to the purpose of this research, open questions also included.

The students, as the main user, is the main subject of the research, while parents are direct observer especially at home and teachers are direct observer at school and facilitator of the learning process. The data was analyzed with data reduction, categorization and interpretation.

By the end of this study, as part of the preliminary research, general perspective of the subjects of outdoor learning was achieved. Various issues related to the needs of children to do outdoor activities were also discussed. Finally, school potentials to support outdoor learning was analyzed and proposed improvements were discussed.

4. Results and Discussion

4.1. Result

The questionnaire in this study can be categorized in to three sections. First section is about the exposure of the students with technology especially related to gadgets usage. Student opinion towards nature as part of outdoor activities is explored in second section. Last section is about outdoor facilities and outdoor learning at SD Muhammadiyah Sapen Yogyakarta.

The exposure of technology is often blamed as the reason why children prefer being indoor and reject outdoor activities. Based on data in table 1, as expected for students in most cities in Indonesia, the gadget ownership
among the students is very high, at 91%. Most of them use gadgets for over 2 hours per day, mostly for playing games, doing homework, browsing for information, and accessing social media.

Table 1. Gadgets usage statistics of the students in this research

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ownership of gadgets</td>
<td>91</td>
</tr>
<tr>
<td>2</td>
<td>Usage of gadgets for &lt;1 hour/day</td>
<td>28</td>
</tr>
<tr>
<td>3</td>
<td>Usage of gadgets for &gt;2 hours/day</td>
<td>72</td>
</tr>
</tbody>
</table>

Interestingly, despite the frequent use of gadget, 65% of students still show preference on doing outdoor activities (Fig. 1a). More interestingly over 90% of the students feel enjoyment when being in the nature (Fig. 1b) and almost 100 percent wants to do school activities within nature (Fig. 1c). The data shows that for some children, despite their lack of desire to do outdoor activities, they do enjoy doing activities within nature in general and for school learning in particular.

![Figure 1. a. Students preference of doing outdoor activities; b. Students preference of natural environment; c. Students preference of doing outdoor learning at school](image)

SD Muhammadiyah Sapen is currently on progress incorporating nature school into its education system. The school provides more outdoor facilities (sitting area, garden, and school field) compared to other general schools. All students in this study already experienced the outdoor learning activities, which mostly for teaching science related subjects (Fig. 2).

Figure 2. Subject taught by outdoor learning activities

Table 2. Positive and negative aspects of outdoor learning activities at SD Muhammadiyah Sapen Yogyakarta

<table>
<thead>
<tr>
<th>Students satisfaction towards outdoor learning activities</th>
<th>Aspects</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Safe and comfortable environment</td>
<td>70</td>
</tr>
<tr>
<td></td>
<td>Quality of Learning Process</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Presence of outdoor excursion (i.e. outbound &amp; camping)</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>Presence of school holiday / end of semester events</td>
<td>4</td>
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<table>
<thead>
<tr>
<th>Students dissatisfaction towards outdoor learning activities</th>
<th>Aspects</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Lack of outdoor learning facilities</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Fully packed schedule</td>
<td>18</td>
</tr>
<tr>
<td></td>
<td>Unsupportive learning environment (teachers and other students)</td>
<td>30</td>
</tr>
<tr>
<td></td>
<td>Difficulties on accessing school facilities</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>Nothing</td>
<td>17</td>
</tr>
</tbody>
</table>

The safety and quality of outdoor facilities is critical on encouraging students to do outdoor learning. Most of the students in this research were satisfied with the safety and quality of the school environment (table 2). Meanwhile, the factors that discourage students
from doing outdoor activities are mostly related to unsupportive learning environment, and full packed schedule with less break time (table 2).

4.2. Discussion

Based on the results of this study, the development of technology, which tempts children to spend their time indoor playing with gadgets, only slightly affects the desire of students in this study to do outdoor activities. The presence of safe, comfortable, and familiar environment encourages children to do outdoor activities. Based on this study result, such environment is provided by school, in this case SD Muhammadiyah Sapen Yogyakarta. This result is amenable with previous findings about the need to do outdoor learning for children development, with school as the most appropriate institution to provide natural setting for outdoor activities [5, 11, 12].

SD Muhammadiyah Sapen Yogyakarta already applied outdoor learning for some school subjects. However, in current setting the outdoor learning is still not optimally utilized. According to the results of this study, there are still some issues, related to the lack of facilities and the design of learning process which need to be resolved.

This study aims to gain better understanding about the current status of outdoor learning in Indonesia, which finally will be utilized to develop an outdoor learning model in elementary schools recognized by the Indonesian National Education Standards (Standar Pendidikan Nasional). National Education Standards itself aimed at ensuring the quality of national education which is planned, directed and sustained in accordance with the local, national and global demands. Innovation in outdoor learning is expected to facilitate the schools to achieve the two components of the National Education Standards, the Educational Process Standards [13] and School Facilities and Infrastructure Standards [14].

Educational Process Standards could be accomplished through the development of interactive, inspiring, fun, and challenging outdoor learning activities, which could motivate students to actively participate and develop creativity, initiative and independence match with their talents, interests, physical, and psychological development. At the same time, schools will not only provide facilities (i.e. books and other learning resources) and infrastructures (i.e. classroom and laboratory) which are necessary and essential for the learning process, but also provide outdoor facilities such as school field, herb garden, sport fields, and other outdoor facilities. By providing carefully planned and designed outdoor facilities, School Facilities and Infrastructure Standards can be achieved.

5. Conclusion

SD Muhammadiyah Sapen Yogyakarta as an example of regular school with outdoor learning activities has successfully providing safe and comfortable environment and a system which encourage students to enjoy the outdoor learning activities. However, some issues related to school facilities and outdoor learning curriculum need to be overcome. Further researches on how to design and integrate outdoor learning into school frameworks, along with how to utilize current facilities or to extend outdoor facilities in SD Muhammadiyah Sapen Yogyakarta are needed. Those researches can be utilized to develop a model for outdoor learning activities in elementary schools which meet the the Indonesian National Education Standards

Acknowledgement

This research was supported by teachers, students, and parents of SD Muhammadiyah Sapen Yogyakarta.

References


[13] National education minister's regulation Number 41 Year 2007 about Process Standards for Primary and Secondary Education Units

[14] National education minister's regulation Number 24 Year 2007 about Facilities and Infrastructure Standards for SD / MI, SMP / MTs, and SMA / MA