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Nature Walk Program as Means of Reconnecting with the Natural Environment: An Alternative Physical Education

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Abstract

Introduction: The paper is a result of introducing environmental ecology awareness through an outdoor recreation activity as a Physical Education (PE) course dubbed as the “Nature Walk Program.” It was grounded on the principle that the need for environmental protection may not only be the work of practitioners in the pure sciences but also essentially believed to look into more avenues of the school setting particularly in the discipline of Physical Education. It is a means of putting up an alternative physical education activity utilizing the natural environment following a series of carefully planned procedures devised by the author. **Methods:** The participants of the study were college students and Physical Education teachers. Exposed to different sites that contain a wide variety of flora and fauna both endemic and introduced to the place. Using the qualitative design, it looked into the participant's awareness of nature; effects of the natural environment on perceptions based on the four areas of learning development in physical education namely: emotional, social physical and mental. **Result:** Introducing the participants to the different avian species, various endemic plants and the serenity of the study's sites, has resulted in a more profound awareness. It led to understanding the need to protect the environment, appreciation of the value of natural areas and acquiring a positive attitude for sustainable use of the environment during the practice of Physical Education. Participants were able to identify and appreciate various species of birds and some plants found in the sites of the study that may lead to further conservation. **Conclusion:** This research, found out that a nature walk program is a useful tool in the procreation of various Physical education activities using the natural environment. It may lead to an answer to the question of bringing to attention the limited inclusion and facilities in PE programs. As it is increasingly well established that the natural and constructed features of the environment affect behavior, interpersonal relationships, and actual mental states.

Keywords: Appreciation, Conservation, Recreation, Bird Watching, Nature Activities, Physical Education

Introduction

The paper is considered an attempt to introduce the relevance of the natural environment to Physical Education and also to add to the limited amount of related literature on the subject under study. One of the emphases of the presentation of the paper is the actual method and procedures held during the conduct of the activities with the hope that it would foster as a teaching method in creating nature awareness and holistic development through the performance of a Physical Education class.

The Need for Awareness of the Natural Environment

The condition of the physical environment is one of the biggest concerns of every known institution like any country on the planet from the past to the present. Man lives in a society who relies mainly on his physiological needs and in everything that surrounds him. Man utilizes the environment for his very existence and for all the developmental works which are necessary to lead a comfortable life (Husain M. 1997).

The term environment refers to all external physical factors that affect one's existence. For a man to survive, it requires a certain amount of high-quality air, water, food and shelter (Edlin and Golany 2014). Ecology was initially a technical term to describe that branch of biology which is concerned with studying the relationships between plants and animals and their environment. Ecologists often became concerned about conservation of what they investigated, and as a result, the word ecology has developed overtones which it previously never had. Today it can refer to a way of life or political persuasion based on ecological concepts (Moore N. 1987). Environmental awareness is to recognize the fragility of the environment and the importance of its protection. The fundamental need for environmental protection may not only necessarily be the work of people in the pure sciences. It is also deemed necessary to look into more avenues of the school setting. The concept of change carries with it improvement and progress (Andin C. 1978). With the present problem of global warming, land degradation, freshwater shortages, air pollution exposure to toxic chemicals, nuclear, chemical problems and the extinction of species, governments alone cannot solve the problem (Gordon and Golanty, 2014). Everyone must play a dynamic role in the concern for the environment.

Educational institutions have given rise to core programs from engineering to pure sciences and from the arts to social sciences. Husain (1997) pointed out that the goal programming approach in terms of environmental course should be imparted to the students' side by side with their primary studies. Furthermore, the structure of these proposed courses might be as simple and easy for adaptation which could enable even the common man to protect himself from the declining effect of environment and to develop the spirit of self-dependence, and protection.

Environmental awareness is one area of focus in Environmental Psychology: an area of psychology described as the discipline that is concerned with interactions and relationships between people and the environment (Mac Andrew, 1993) and how these factors affect cognition behavior (Kaplan 1987, Qoreishvandi, Mohsen and Rezayi, 2014). Geller (2002) stated in his study, (on) "The Challenge of Increasing Proenvironment Behaviour," that human behavior can protect or destroy the environmental conditions and resources that support life on Earth. It would explain the need for a radical action to change people's thoughts and attitudes towards the creation of awareness and appreciation of environmental ecology.

The New Physical Education

The need for new approaches in Physical Education was to make sure that all students experience a variety of movement forms rather than limiting the experience to traditional team sports and games (Flemming and Bunting 2007). Accordingly, the school is becoming more and more regarded as a place where people should gain experience for a better living rather than a filling station for knowledge or information. Given the changing needs of learners, an extensive variety of activities offers an opportunity to facilitate growth (Melograno, 1996). Acquaintance to various activities enhances self-testing, exploration and new interests.

Physical education has contributed to the goals of education. Bucher and Wuest (2003) mentioned that Physical Education makes a unique contribution to the development of a total person. In this manner, a quality Physical Education program enhances the health and well-being of its students, contribute to learning readiness, and physical education can be an essential part of an integrated educational curriculum. With the integration of learning experiences, it is understandable that there is an excellent emphasis on *multidiscipline with the combination of subjects* across the curriculum. It provides opportunities to students to see new relationships, to transfer what they have learned from one set to the next and to reinforce learning in various ways. Bucher and Wuest (2003) also mentioned that Physical Education offers some exciting possibilities as part of a

multidisciplinary approach to learning. According to Lambert L. (2000), a quality, Physical Education program is essential in helping students achieve competence and confidence in a variety of movement forms such as sports, dance, recreational activities, and fitness activities. The nature and purpose of Physical Education, when planned and taught properly is “*education through the physical*,” its activity serves as a medium through which a total learning experience takes place. Seaton et al. (1992) stated that researchers have determined that such experiences improve not only our physical health but also enhance our emotional outlook and even stimulate our intellectual activity and ability- that is, it improves our “wellness” and consequently improve us. As physical activity can positively affect both physical and psychological well-being (Scully et al. 1999), Pretty et al. (2005) who hypothesized that there may be a synergistic benefit in adopting physical activities whilst at the same time directly exposed to nature (Hayashi et al. 1999) have called this ‘green exercise’. It is increasingly well established that the natural and constructed features of the environment affect behavior, interpersonal relationships and actual mental states (Frumkin 2001).

The Outdoor Physical Education as a Tool for Nature Conservation

The concept of outdoor Physical Education in the field of Physical Education is a recreation subject. Under this idea, recreation means “what you do to be amused or refreshed” (Bammel and Bammel, 1992). The root word *to re-create*: to create one-self anew, implying that putting oneself back together again presumably after suffering the day’s obligation. The notion of recreation in the context of Physical Education is the proliferation of an active lifestyle. As cited by Godbey (2009), outdoor recreation did not only provide an active lifestyle, but it also contributes to wellness mostly through prevention. And the most beneficial outdoor pursuits are those that become part of one’s life, done regularly. Many participants board on an occupation in a particular activity, becoming more devoted to it and adapting their participation to changing life circumstances (Bryan 1970, Stebbins 1992). Godbey (2009) also noted that outdoor physical activities often include several kinds of actions. Bird watching, for example, may consist of walking, understanding sounds and visual signs and mingling with fellow birdwatchers where each of these has its wellness implications. Walking is a shared denominator for most forms of outdoor recreation.

The concept of forest schools in Germany Switzerland and Asia to name a few have listed benefits of outdoor activities. In a study made by O’Brien and Murray (2006), on participatory action-research that discussed the impacts of a forest school on the children involved, stated that, it made impressions on children in terms of their confidence, social skills, language and communication, motivation and concentration, physical abilities, knowledge, and understanding. According to Dickson et al. (2008), the main benefits of outdoor adventure activities include interpersonal and intrapersonal skills developed through engaging in outdoor adventure activities in meaningful ways. However, benefits for the natural environment were less directly evidenced, hence the need to cultivate more nurturing individuals and communities, and increasing environmental awareness and stewardship among the people. In this manner, any effort conceivable for guaranteeing the conservation of the environment in current times and the future must be proposed and carried out as one more part in a global plan which affects all areas of human development (Varela, 2010).

Methods and Procedures

The study is a qualitative design utilizing a descriptive approach in data analysis. It intended to introduce Physical Education as a medium for environmental awareness, and a means to develop the person holistically. Dubbed as the “Nature Walk Program,” a carefully planned out method and procedures were devised by the author for the said study. Participants had nature hikes, outdoor recreation activities and bird watching during their Physical Education classes and workshops. These interventions were used to gain further information regarding the participant’s attitude towards the environment, perceptions, and understanding of the given variable.

Purposive sampling was the method for the selection of participants in the study. Students of bird watching class and other PE classes were pre-selected according to their area of specialization. With the understanding that they were neophytes in terms of exposure to the natural environment. Also, the group of Physical Education teachers

who participated in the activities of the study was not fully aware of the birds and other species that naturally dwell in the identified sites of the study.

In gathering and evaluating data, participants of the study were made aware that the researcher will be eliciting comments on how they perceive the activities and the results will be treated as research data. Participants were asked to describe their experience after performing the set activities and the factors that influenced their perception towards it. While for bird watching students, a pre-field questionnaire was asked, such as what is the reason why they enrolled in the identified PE class and what are their expectations of the course. After the intervention, the participants were asked to describe the experience in terms of identifying the factors that affected their observation on the environmental activities and were asked to rank and justify their answers based on perceptions according to the four (4) areas of learning in physical education namely: physical, emotional, social and intellectual. Participants of the study write-out their perceptions in essay forms using simple creative paragraphs.

The data was transcribed, and verbatim comments were lifted out from context. The method for analysis used is an approach that strengthens the improvement of formal processes for critical assessment and evaluation of policy-related qualitative studies; its aim is for grounding policy and practice in best evidence (Corden and Sainsbury, 2006).

Bird watching as a formal Physical Education course was introduced initially in the University of the Philippines Baguio in the summer term of the school year 2013-2014 wherein eighteen students were introduced to bird watching as a nature activity (Floresca, 2015). Since then, offering the course in the mid-semester of the school year 2014-2015 has 32 students and second semester 2015-2016 with 27 students enrollees. Bird watching was also introduced to Physical Education teachers in a seminar workshop with a total of 25 participants. As for the nature appreciation walks, it as an alternative activity in the subject *Foundation of Physical Fitness* under the topics on environmental and emotional wellness with 70 student participants.

The concept of bird watching in this particular study was subjecting the participants to a variety of physical activities namely: walking around the site while looking out for birds, mountaineering- dubbed as “scouting”- where participants together with the author was subjected to almost 35 hours of hiking around five (5) different sites. Bird watching students were provided a list of birds found in Baguio and Benguet Province which was published in the Asian Journal of Applied Sciences (AJAS) of the Online Journal Systems (OJS) by the author as their reference and guide in their activities. The participants for the bird watching class spent a total of 102 hours of outdoor activity. List of places where the study took place is presented in the figures below:



Figure 1. The Sites Where Nature Activities Took Place

Results of the Study

Nature Walk Program for Physical Education Students

Foundation of Physical Fitness is a course at the University of the Philippines Baguio that is designed to cover the role of physical education particularly physical fitness in everyday life. It is in this course that students had a chance to study different aspects of fitness and dimensions of wellness. Through this course, student-participants engaged in the *Nature walk* activity. The lessons in this particular study are PE activities that will deeply immerse the participants to nature. They walked in forest trails, and while inside the forest they practiced self-meditation. The participants also listened to the sounds heard while inside the forest. Adding on, they were asked to look for anything that would be of interest to them and find a particular species of plant that is endemic to the place and any insect that would interest them. Other activities were to look for different patterns in the tree trunks and count the number of birds they have seen while in the vicinity. The author perceived all these activities as going to deeper immersion with nature. These particular activities were just newly introduced in the subject matter of the said subject for the given semester in the University of the Philippines Baguio.



Figure 2. Physical Fitness Students' Identification of Species that could be of Interest to Them

The result of the environmental exercise as an intervention to the participant's perception of the environment made a significant change in their attitude. Participants saw emotional development as an essential aspect as they had stressful experiences as college students. Most of them reside in urban settlements such that the natural environment served as a venue for them to find solace hence creating in them relaxation and emotional satisfaction. It was also eminent that the activities performed were physically challenging due to the physical demands of walking. Social development, wherein the students had the opportunity to interact with each other while doing the activities and not merely limited within the four corners of the classroom. Lastly on the mental aspect of the study which involved identification of plants and birds, Accordingly, the exercises were beneficial to their psychological development as they were just newly exposed to the activities and whatever they have seen was something new to their intellect.

Introducing the Nature Walk Program to Physical Education Teachers

Before the teacher's introduction to the intervention, the participants were already exposed to outdoor recreation activities. The study introduced PE teachers to a different approach to Physical Education as an outdoor activity. They were taken in forests and presented in activities undertaken in large areas of the environment. This study reinforced their experiences on these activities and introduced them to a different approach in Physical Education as an outdoor activity undertaken in large areas of the environment. These PE activities include but are not limited to outdoor camping, night outdoor activities like listening to sounds made by nature (e.g., sound of critters, wind, birds, flowing water along creeks or rivers, etc.), looking at the night sky (moon and star gazing) and playing (group games) and bird watching.

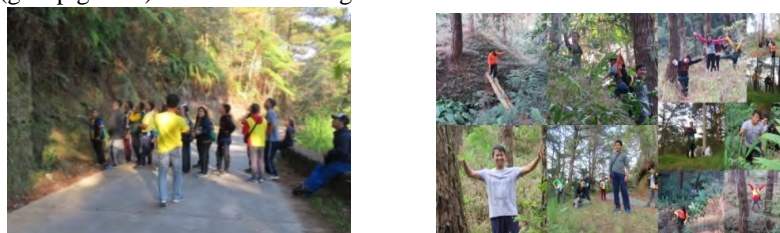


Figure 3. Exposure of Physical Education Teachers to the Natural Environment

During the daytime activity (figure 3), the participants woke up early for a morning nature walk where they were led to foray on trails under a thick canopy of trees. While on their nature walks, participants were required to spot for different species of animals, insects, plants, and birds. The participants were asked to name the species based on the list provided by the author.

Through the intervention in the study, they became aware of the different species of plants, insects, and birds found in the environment. The actions executed by the participants in the study significantly changed their perception of a Physical Education activity.

For this group of respondents, they considered emotional development to be the top indicator of the benefits they acquired during the interventions. The participants appreciated the idea that communing with nature offered them emotional relaxation and temporarily relieved them of problems and stress. The social aspect was indicated on the way they interact between their co-participants that took place during the conduct of activities. It further enhanced their acquaintanceship highlighted by the fact that they have not experienced in past PE teachers training they attended. Physical development is evident, owing to the fitness and health benefits during nature walks. Significantly, one participant claimed of improving his confidence after overcoming the challenge of crossing Log Bridge and negotiating steep climbs. The participants' indicated mental development as all activities also involved mental effort especially in memorizing the name of the species and the trails they had taken.

Bird Watching as a Physical Education Subject

Bird Watching is a course that introduces itself as a leisure activity. The objectives of the course are to contribute to better understanding of bird ecology, enhance awareness on the different species of birds found in Baguio City and the nearby municipalities of Benguet Province and provide basic techniques in identifying them. As a whole, this course infuses in every student the appreciation for the avian species.

Before the actual fielding of the student participants (Pre-field), they were asked to state the reason/s why they enrolled in the subject. The indicators for selection of reasons were Curriculum- (pertains to school policy or requirement) and self-perception, (driven by their awareness and the influence of external factors such as former classmates and social media).

Fifteen percent (15%) of the responses are curriculum related while the majority at 85% showed self-perception as the dominant reason driven by the respondents' curiosity and interest towards bird watching as a PE course. Their interest to enroll in the course was stimulated after hearing about it from past students of the subject. Other factors that motivated the students to enroll the subject are the advance information they acquired from social media and the exhibit of bird photo by the author. These factors presented what to expect from the course and stirred the interest and curiosity of the majority of the enrollees.

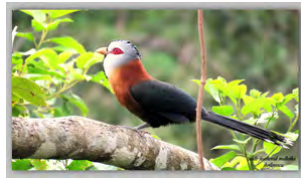


Figure 4. Variety of Nature Activities for Bird Watching Students

Student-participants were subjected to various environmental exercises during the whole duration of the five (5) month course of bird watching as a PE subject (PE2- Bird Watching) as shown in Figure 3. These exercises consisted of watching birds in the selected natural environments, mountain/ trail hiking or trekking, outdoor camping and nature survival activities.



Torquise Flycatcher (Resident)
(Endemic)



Scale Feathered Malkoha (Endemic)



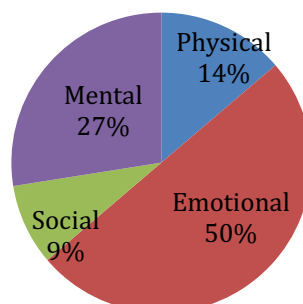
Luzon Water Redstart

Figure 5. Some of the Birds Spotted by the Students

During the interventions, participants were grouped and furnished a list of birds found in Baguio City and Benguet Province personally documented by the researcher. (Examples of these recorded birds are presented in figure 4). Out of the ninety-three (93) birds' species in the list, Group 1 spotted 56 birds representing 60% of the 93 (60%), Group 2 had 47 (51%), Group 3 had 42 (45%), Group 4 had 58 (62%), Group 5 had 56 (60%) while Group 6 had 58 (62%). The percentage or the number of birds spotted over the total amount in the list is an indication that there is an abundance of avian species found in the sites of the study. It is worth noting that the bird watching participants were able to document a substantial number of birds over a short and limited period considering that they are also preoccupied with other academic classes as full-time college students. Aside from the birds, plant species were also identified as frequent destination/ nesting place/ resting place of these birds. These plants and trees include giant fern tree, pine tree, fire tree, Alnus tree, bottle brush tree, golden shower tree, mulberry tree, aratiles tree, guava tree, coral tree, passion flower, paradise flower, pitcher plants, and thunbergia. This observation kindled a more profound appreciation for the environment by the participants.

Participants from the bird watching class stated that spotting or seeing a bird regardless of species brought a particular type of feeling of ecstasy, happiness, and fulfillment (Emotional). The other activities were admittedly equally tiresome. Nonetheless, the participants commented that they feel relaxed at night, forgot about their worries and alleviated of their sadness brought about by homesickness and anxiety of academic works. The bird watching class involved group effort hence promoting teamwork and a closer relationship between the participants. It was brought about by being together when they search for birds during their free time wherein these activities served as their "group bonding" (colloquial term for spending time together to create deeper relationship) moments (Social). The participants already anticipated the physical demands of the activities hence not a big deal to them. Accordingly, they do not mind being exposed to the physical requirements of the course, because it is part of their development. Some participants claimed that they exercised their mental ability due to the challenge of looking out for birds in the area, memorizing the names of these birds and stimulating their minds to go through the rigors of hiking and outdoor survival activities. Taking part in these activities enhanced their confidence and mental abilities.

Overall Result of the 4 Areas of Learning Development for all the Participants



Discussion of the Overall Result of the Study

Looking at the relationships of the results for the three (3) groups of respondents employing frequency count and percentage; the study found out that this environmental awareness and appreciation exercise have elicited emotional development as the highest in the percentage of responses followed by mental, physical and social in that order. Moreover, all three groups of respondents have the same order in their perception of what the interventions of the study could cultivate in terms of the four areas of learning development. The finding may have been because all three (3) groups of participants have visited the same (one to two fields) sites.

Some activities set are identical to the programme of events for the study, and the participants were already expecting (predetermined) the possible experiences during the conduct of the physical education activities. The remarks of the participants are a reliable indicator that the events involved in the performance of bird watching, mountaineering, outdoor camping and nature trekking were very successful. It was evident that through these activities, the participants' emotional and mental faculty was stimulated besides developing their physical fitness and social awareness most especially if done regularly. They have accumulated new experiences that are useful in their everyday life. Realizing self-worth, sense of belonging with a group, overcoming physical challenges and being a testament that many species especially birds will thrive as long as there is a preservation of the natural environment where the forests and trees flourish.

Conclusion

The experience of the students and Physical Education teachers to the activities introduced in the study on various outdoor and nature awareness have given them the realization of the multitude of benefits that the natural environment can offer. It was evident in the study that the four areas of learning development in Physical Education namely emotional, social, physical and mental have been fully met through the various activities performed.

The result of the study has reinforced the advocacy of physical education that students' development must be on a holistic approach (Melograno, 1996; Bucher and Wuest, 2003; Fleming and Bunting, 2007;). Specifically, in this study, the participants rated emotional development as the highest area of learning followed by social, physical and lastly mental. The result of the interventions is a manifestation that the course on environmental awareness and appreciation is an effective means of instruction that develops the learner as a total person.

Finally, the result of the study has also indicated that there is a strong motivation for the majority of participants to protect the environment as they realized the importance of the natural environment not only for their survival but also of birds and other species that thrive in it. The study has created a deeper awareness and appreciation on the part of the participants and inspired them to become advocates in the campaign on environmental awareness and protection starting in their locality.

The study's intervention has shown to be a useful tool in reconnecting the participants to the natural environment through the physical education course. It provided an alternative means in conducting a physical education course and serves as an impetus in the broader appreciation of the PE program, especially in the Philippines.

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