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**LEARNING SCIENCE THROUGH OUTDOOR ACTIVITIES: BASIS FOR INSTRUCTIONAL INTERVENTION PLAN**

**ANDY R. PIEDAD**

**TEACHER I**

Bagacay National High School

andypiedad@deped.gov.ph

**ABSTRACT**

The qualitative study aimed to determine the experiences of learners in learning Science Through Outdoor Activities as basis for instructional intervention Plan. The research method utilized in the study was qualitative using in depth interview and the design was phenomenology. It was found out that learners experienced the following: enjoyable, learning environment, adequate outdoor learning, lack of engagement and focus, curiosity to learn outdoor, distractive outside learning environment, exploration towards learning environment, easy learning experience and enough space to learn. Learners may also utilize their imagination and creativity to learn how to engage with and interact with the world around them. The learners must learn from various learning environments that build their physical and emotional strength. It is advised that educators carefully plan outdoor learning spaces to accommodate the whole spectrum of students' play and activities. Through first-hand experiences and observations in a natural setting, learners should be able to discover and explore their own capacity to study science. This will help them build their knowledge and create a deeper grasp of the various branches of science.

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**Keywords:** *Learning Science, Outdoor Activities, Intervention Plan*

## INTRODUCTION

Real-world science-related activities and events don't necessarily take place indoors. To investigate habitats, the impact of the seasons on plants, or the health implications of urban heat islands, for example, scientists must go outside. On the other hand, scientific teaching is typically taught inside of a school and only very seldom outside (Glackin, 2016).

This may help to explain why many authors believe that to balance out the commonly mentioned and criticized lack of authenticity at school, greater connections with real-life contexts need to be made (Fägerstam, 2014).

It has been suggested that teachers think about the potential of teaching science outside when this situation signals potential to make educational activities more real. According to Braund and Reiss (2006), in such a rich environment, teachers regularly could contextualize ideas.

According to studies on outdoor education, these locations can positively affect students' knowledge, attitudes, interests, or motivation (Hovardas, 2016).

School-based outdoor learning increased student motivation and enjoyment" after performing a longitudinal case study with teachers who frequently utilized the possibilities of school grounds. Outdoor settings can also support contextualization in science instruction at K–

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12 levels, according to numerous additional research that did not compromise student progress (Fägerstam, 2014).

Learning outside is often fun and it adds something to the learning process. Although increasing student satisfaction may be a sufficient justification for teaching science, there are other crucial factors to consider. For instance, picture yourself teaching a class when you could somehow flip a switch to make the room's walls and ceiling disappear, thereby putting you outside. Before proceeding, it is important to understand that studying outside of the classroom might entail several things. School field trips are still common, though it's possible that the number is decreasing due to financial constraints. These trips, which are often to aquariums, zoos, museums, or science centers, are significant events.

They also provide pupils with worthwhile and interesting learning experiences. Careful planning in compliance with the curriculum and tight coordination with the receiving institutions could make a big difference in the quality of these visits. Teaching teams pre-made materials, and coordinated activities that can be both general and specific are common features of these institutions. Even if it's important and valuable, outdoor learning is just that. It can need the same amount of resource creation and planning, but the learning possibilities it provides are very different.

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## MATERIALS AND METHODS

### Research Method

Qualitative Research is a holistic approach that involves discovery. It also described as an unfolding model that occurs in a natural setting that enables the researcher to develop a level of detail from high involvement in the actual experiences (Creswell, 1994).

In-depth interviews were used as part of a qualitative research methodology for the study.

During the interview, the interviewer and interviewee were permitted to sit apart and consider the series of questions regarding a certain topic. Through their responses to the questions, participants were asked to provide their primary or essential viewpoints on a particular topic in a social context.

### Research Design

Research design refers to the overall strategy that you choose to integrate the different components of the study in a coherent and logical way, thereby, ensuring you will effectively address the research problem; it constitutes the blueprint for the collection, measurement, and analysis of data.

A phenomenological research design was employed in this study. A philosophical strategy for conducting qualitative research is phenomenology. By concentrating on a person's subjective perceptions of what she encounters, phenomenology seeks to understand how others view the world and how this perspective may differ from widely accepted beliefs. Phenomenology, which

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is widely applied in disciplines like psychology, sociology, and social work, involves interviewing the subjects to learn about their impressions.

Smith (2013) defined phenomenology as the study of consciousness structures as they are experienced first-person. The intentionality, or being oriented toward something, is the primary structural element of an experience because it is an experience of or about some object. An experience is oriented toward an object by virtue of its meaning or content (which symbolizes the object) and the appropriate enabling circumstances.

### Participants of the Study

The participants of the study were the thirty (30) purposely selected Grade 8,9, and 10 junior high school science learners of Bagacay National High School.

The study was carried out in a school situated in a hilly area, providing students opportunities for outdoor activities to supplement their science education.

### Sampling Design

The sample plan used for the investigation has a purpose. Based on demographics and the objective of the study, a non-probability sample known as a purposive sample is selected. Other names for purposeful sampling include subjective, judgmental, or selective sampling (Crossman, 2020).

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## Research Instrument

A schedule of interviews created by the researcher was the research tool used in this study.

Two questions regarding the purpose of the study were on the interview schedule.

With the participants' consent, voice and video recorders were utilized for data collection and documentation.

## Validity of the Research Instrument

Prior to the researcher, the adviser, the dean of the graduate school, and a panel of jurors who will be considered for their expertise in the field of research, testing and assessment, and Science, validating each question for review and modification was requested.

A researcher's conclusions must be suitable, meaningful, correct, and valuable to be considered valid. The content and format of content-related evidence of validity must be consistent with the definition of variables and sample of the subject to be measured, and it also aids in validating the questionnaire's items.

Using the proper form of Good and Scates (Appendix A), the comments, changes, and suggestions of the panel of validators regarding the interview schedule were taken into consideration.

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## Data Gathering Procedures

The researcher received approval to carry out the study from the advisor, dean of the graduate school, superintendent of the school's division, district supervisors, heads of schools, and specific participants.

To conduct the interview, the researcher physically traveled to the participants' homes, communities, or schools.

The researcher conducted an interview to the participants but prior to this, the researcher encouraged the participants to sign a waiver or permission relative to the conduct of the study.

A voice and video recorder were provided during the in-depth interview to fully document the interviewee's statements.

After a series of interviews, the researcher transcribed, organized, classified, and combined all the information gathered.

## Data Analysis

Thematic analysis was used to examine the data collected.

Finding patterns or themes in qualitative data is the process of thematic analysis. The goal of a thematic analysis, according to Maguire and Delahunt (2017), is to find themes, such as fascinating or significant patterns in the data, and then utilize those themes to discuss the research or make a point about a problem. This involves condensing, evaluating, and interpreting the information gathered and giving it meaning.

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## RESULTS AND DISCUSSIONS

### Summary

The study determined the experiences of learners and teachers in the learning science through outdoor activities as basis for Instructional Intervention Plan in Bagacay National High School, Schools District of Tigbauan during the school year 2022-2023.

In-depth interviews were the primary research method used in this study, and phenomenology was the chosen research design.

The participants of the study were the thirty (30) purposely selected Grade 8, 9 and 10 junior high school science learners of Bagacay National High School. The study was carried out in a school situated in a hilly area, providing students opportunities for outdoor activities to supplement their science education.

Data were gathered using an interview plan that the researcher created.

With the participants' consent, voice and video recorders were also employed for data collection and documentation.

The group of specialists validated the questionnaire's content. The validity of the interview schedule's questions was validated using Good and Scates (2007) Criteria for the Content Validation. All feedback and recommendations pertaining to the tool's validation were taken into consideration by the researcher. Permits were obtained to enable the researcher to begin conducting the in-depth interview once the validity of the questionnaire had been determined.

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The researcher received approval to carry out the study from the advisor, dean of the graduate school, superintendent of the Office of the Schools Division, school head, and individual participants. For the interview, the researcher personally traveled to the participants' homes, communities, or schools.

After a series of interviews, the researcher transcribed, organized, classified, and combined all the information gathered.

Thematic analysis and interpretation were used to the material acquired.

The following are the findings of the study:

Based on the results of the in-depth interview with the learners as to their experiences on the learning science through outdoor activities, it was found out that they experienced enjoyable learning environment, adequate outdoor Learning, lack of engagement and focus, curiosity toward learning outdoor and distractive outside learning environment.

Based on the results of the in-depth interview with the learners as to their experiences on the learning science through outdoor activities, it was found out that they experienced Exploration to learn, easy learning experience, enough space to learn, enjoyable learning environment and lack of engagement and focus.

## Insights

Based on the findings, the following insights were drawn:

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To effectively teach science through outdoor learning over the entire quarter, a teacher needs to be directed by a variety of teaching approaches and strategies.

When students can answer questions and comprehend the material by developing a deeper comprehension of all the various scientific fields, outdoor learning is more advantageous.

To focus on and engage in outdoor learning, students should be allowed the freedom to learn and explore who they are.

Teachers must be provided with a unique strategy for teaching especially in an outdoor learning environment in order that learners to be more engaged and motivated to unlock their curiosity with studying about nature.

When creating a lesson plan, educators should consider how students learn best in their own environments and provide them with opportunities to continue developing a deeper awareness of the outside world of learning. Additionally, students must be given the freedom to explore their interests and potential for growth in the various scientific fields.

To help students develop a deeper understanding of the real-world applications of the various scientific disciplines, teachers must possess the necessary knowledge and expertise to design effective teaching strategies that allow students to explore and discover their own capacity to learn science through firsthand experiences and observations in a natural setting.

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The learners should be given opportunities to learn from different learning set-ups to develop their physical and emotional strength. They can also use their creativity and imagination to learn how to engage and interact with the world around them.

To accommodate the full spectrum of play and activities that students engage in, teachers should carefully plan outdoor learning spaces. Much like they do for the indoor space, they can designate activity areas. Quiet, manipulative, physical, natural, social, dramatic, and artistic areas may be among them.

To help students become more productive and realistic when studying the natural world of sciences, teachers can also use or give the same resources used indoors to encourage involvement outside.

## RECOMMENDATIONS

The following recommendations are made considering the study's results and conclusions: Teachers and other school personnel must require integrating learning science through outdoor activities and utilize them in the teaching-learning process.

Upgrading of school science laboratory equipment for teachers use and availability of these should be given high attention by DepEd authorities.

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Any learning material used and to be used for teaching-learning process should undergo content analysis and rigid quality assurance and control. To make the teaching-learning process effective and productive, it should be done in an interactive and participative manner.

Good relationship among the learners, teachers, and parents, including other stakeholders should be maintained and sustained by creating a program purposely for the institutionalization of good relationship in the school system.

Teachers should be innovative and creative in making use of scarce resources and availability of the latter in transferring and sharing the science learning and knowledge to the learners.

Parents should be capacitated on how to extend support to their children at home and appreciated of the work done to sustain their interest and enthusiasm in supporting the school and their children's education.

A copy of the remediation and enrichment programs should be given to the Schools Division Office, Regional Office, and Central office for them to approve and implement. If a copy of this recommended remediation and enrichment programs would not be approved, school heads are encouraged to implement these in a local arrangement bases only.

Future research that uses other variables not included in this paper or mentioned in it is also welcomed.

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