

STUDY REGARDING HIGH SCHOOL STUDENTS' INVOLVEMENT IN AN ENVIRONMENTAL PROJECT

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Abstract

The present study reports data from a sample of high school students. A total of 42 students from an urban high school participated in the study: 11% male (26.20%) and 31% female (73.80%). These students were involved in a school project regarding nature. Teachers coordinating the project were selected based on their willingness to volunteer. Students were questioned about aspects that would make them more interested in taking part in a project. Teachers gave the instrument (questionnaire) before and after the end of the educational project, provided students with unlimited time to complete all items.

Key words: project, students, involvement, outcomes

INTRODUCTION

Working with students in a project may come with high risk project failures; because it is not enough to just have a project finish with some degree of success. That's not the case. Despite the odds, schools, inspectorates and educational organizations expect projects to be completed as fast as possible, cheaper, and better. The only way that these objectives can be met is through the use of effective project management processes and techniques (Mochal Tom, 2009). Because educational project involves students, their entire cooperation is needed. Consulting students on their experiences of learning in schools and outside the school walls, it is signaled as a potentially valuable research practice and it is gaining prominence in educational research. The research begins with the premise that to improve classroom practice in schools, it is needed to ask for and attend to the needs and views of students. It is demonstrated how a project reflects values, principles and conditions that support authentic student involvement. (Kane R. G., N. Maw, 2005; Davies M. B., 2007).

MATERIAL AND METHODS

The study included a total of 42 students (31 girls and 11 boys) from the Economic College "Partenie Cosma" Oradea, who were involved in a project organized by some of the teachers in the school. For proper

integration of students in the project, it was tracked and assessed the importance that students attach the following aspects:

- The project's theme,
- Coordinating teachers involved in the project,
- The time necessary for the project activities,
- The places visited during the project.

To know the exact opinion of each student, a questionnaire was offered each for completion. The students were asked to judge the personal relevance of each item. (Park Rogers M.A., S. K. Abell, 2008)

Based on data collected from the students, a project was started. It was called "Rare Species of Flora in Oradea City and its Metropolitan Area". It took place during the year 2008.

At the end of the project, the collected data were materialized in publications. Also, there was an assessment of the impact that such a project would have on students.

RESULTS AND DISCUSSION

One of the first objectives was finding out what students would like to experience through their activity in the project, especially, we searched for their field of interest. The rationale was to explore and discover the field of interest for high school students. (Fig. 1)

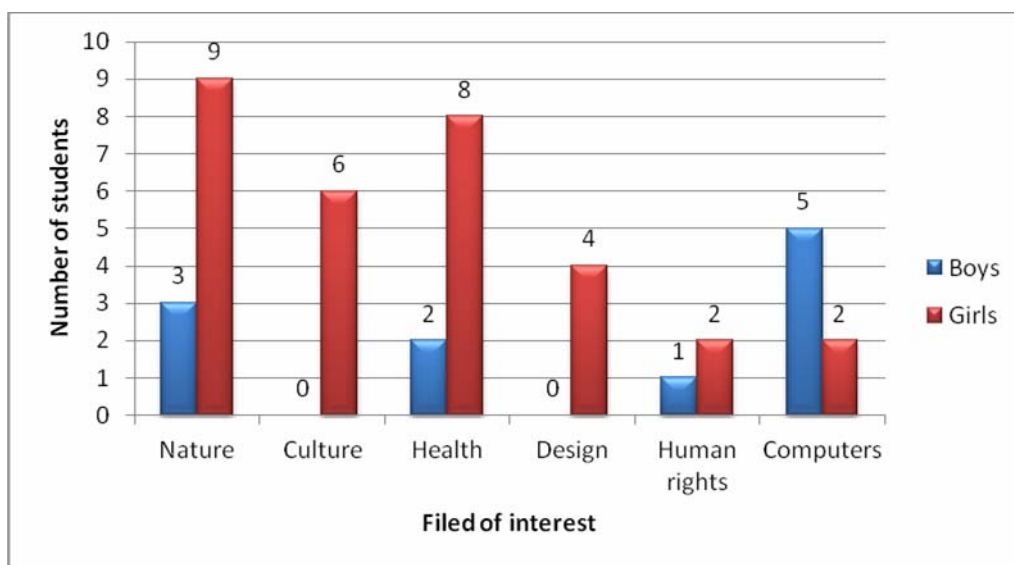


Fig.1. The students' field of interest

Based on the questionnaire, it could be determined that more students are interested in problems regarding nature (28.57%) and health (23.80%). An explanation for these results may come from the fact that more girls were involved in the project than boys. The results of a study published by Jones M. G., Howe A. and Rua M. J. in 2000 showed that boys are more interested in the physical science areas and girls are more interested in the biological science areas, students' reported interests fit these gender-typic patterns. Boys more than girls wanted to learn about planes, cars, computers, light, electricity, radioactivity, new sources of energy, and x-rays. More want to learn about healthy eating, colors, animals, and AIDS.

Jones (1990) examined precollege students' research and found that significantly more males completed research in the physical sciences, whereas girls' research was more likely to be in the area of biology. Biology has been traditionally viewed by girls as a more caring branch of science that focuses on living organisms and human health. Physics, on the other hand, is often viewed by girls as having to do with war and destruction. (Jovanovic J., S. Steinbach King, 1998)

There are many issues related to the successful involvement of high school students in different kind of projects. Some of the most important things in organizing a project involving student are salient; they include securing, funding, the development of a dynamic plan, and administrative decisions. While these are perhaps the most obvious considerations, an often-overlooked but crucial determinant of whether the project succeeds or fails in the classroom is a less than obvious one...the teacher. While attention to choosing the appropriate organizing plan for the classroom is prerequisite, it is the skill and attitude of the teacher that determines the effectiveness of the project and the students' integration. (Bitner N. and Bitner J., 2002).

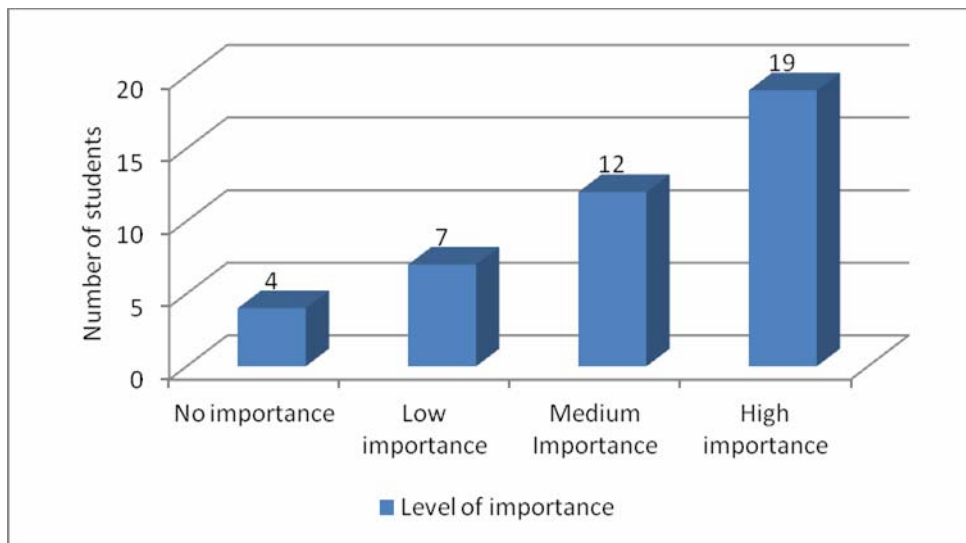


Fig. 2. Evaluation of the importance regarding the teacher/ teachers that coordinate the project

It is obvious that most of the students (73.80%) believe that the teacher/teachers involved in the project represent a key element for the success of the project and, also, for their involvement. (Fig. 2)

The criteria for success of the project management effort tends to be restricted to cost, time and quality/performance (Anton de Wit, 1988). When measuring project success it is important to evaluate how involved students are, regarding the fact that the project represent an extracurricular activity and it implies time beyond the time spent for homework and learning.

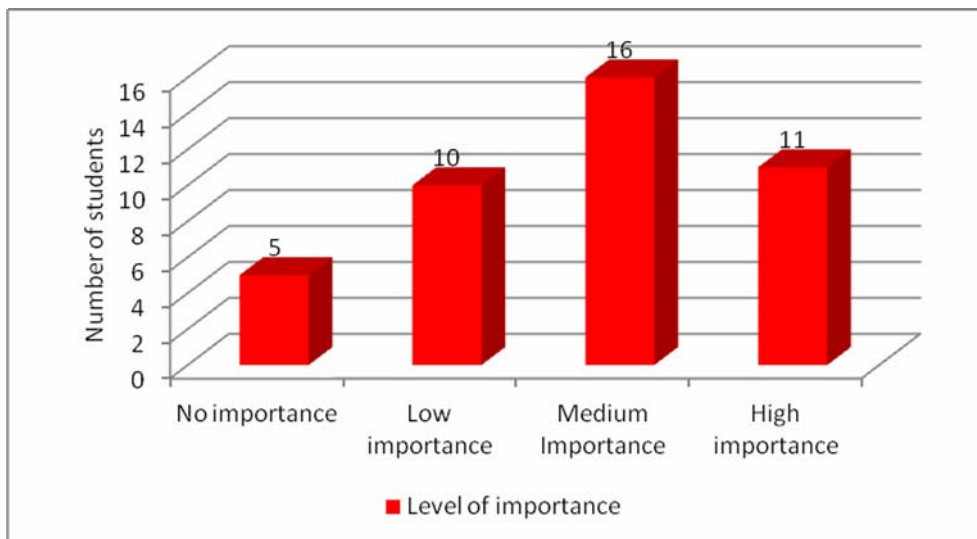


Fig. 3. Evaluation of the importance of time spent for the project activities

For many students (64.28%) time for the project is relevant, because their usual program implies a minimum 6 hours of school and they also need time for homework (Fig.3). That is why this kind of extracurricular activities should take place during the “Different week”, before holidays etc.

A project may be able to resolve key tasks in transcending the artificial boundaries between in-class and out-of-class learning experiences are: to break down the barriers between various units (e.g., academic departments, administrative services, student affairs) and to create situations in which students examine the connections between their studies and life outside the classroom and to apply what they are learning (Kuh G. D. et al, 1994).

All these aspects are recognized by the students, too. This is why for most of them, the places they will visit for the project, are very important (Fig. 4).

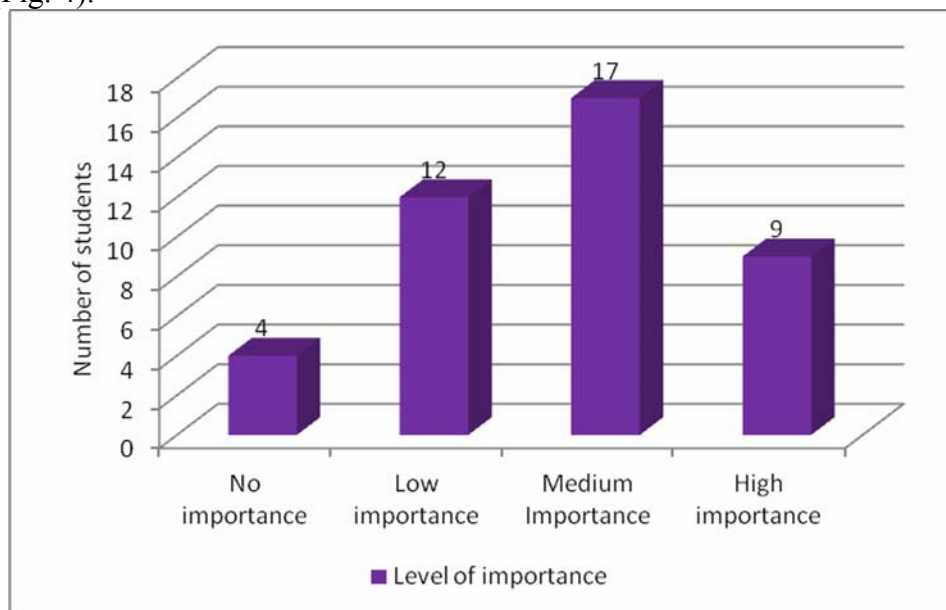


Fig. 4. Evaluation of the importance of the places to visit during the project

Providing students with high quality learning activities in relevant situations beyond the walls of the classroom is vital for helping students appreciate their first hand experiences from a variety of different perspectives.

An experience outside the classroom also enhances learning by providing students with opportunities to practice skills of enquiry, values

analysis and clarification and problem solving in everyday situations. However, taking students outside the classroom requires careful planning of the learning activities and attention to the health and safety risks that might be faced. (UNESCO, 2010).

All the related aspects (theme, teachers, time and place) are important for the good management of an educational project and for the students' involvement. But they were asked to point out which of the four aspects are more important to them. The results are presented in fig. 5.

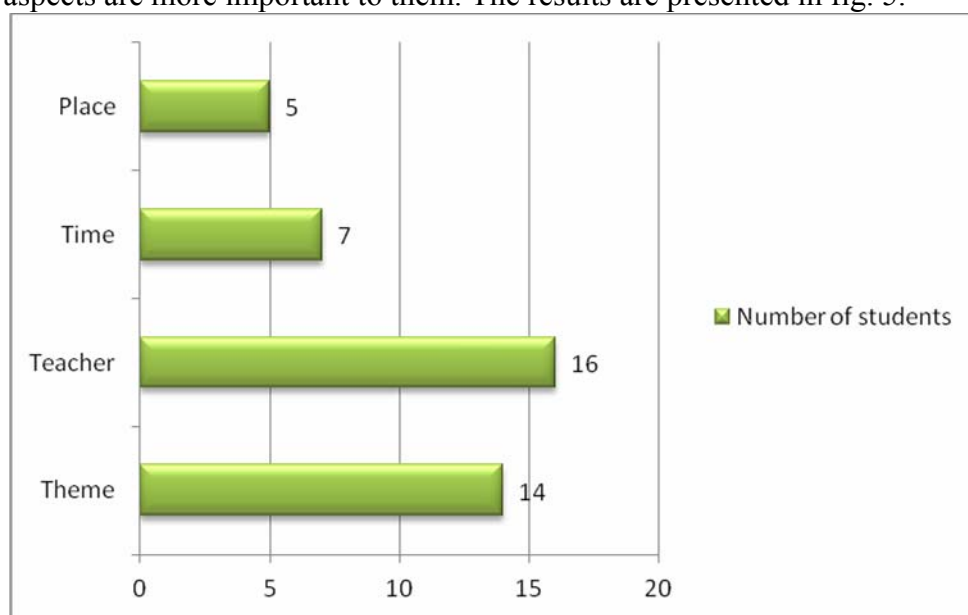


Fig. 5. Important aspects for students regarding a project

Using this information, a project was developed. This project aimed to identify rare species from the flora of Oradea city and its metropolitan area. During this project, students were able to identify twenty rare botanical species and where can they be found: *Corylus colurna*, *Albizia julibrissin*, *Sequoia gigantea*, *Colchicum autumnale*, *Anemone nemorosa*, *Fraxinus excelsior*, *Ruscus aculeatus*, *Ginkgo biloba*, *Juniperus sibirica*, *Juniperus communis*, *Nymphaea lotus* (Oltean-Cosma Cornelia, 1977), *Nymphaea alba*, *Magnolia soulangiana*, *Narcissus angustifolius*, *Musa paradisiaca*, *Platanus hybrida*, *Quercus robur*, *Sophora japonica*, *Taxus baccata*, *Thuja occidentalis*. (Popovici L., C. Moruzi, I. Toma, 1993; Ștefan Eusebiu, 1983)

The main places that students visited while working for the project were: Dendrological Park from Gurahonț Arad, Botanical Garden Cluj-Napoca, Water-lily Lake from Felix Spa and 1 Mai Spa.

Based on their experience, students and their teachers published a brochure, folders, and organized a play for the entire community.

From the students' point of view, the main outcomes of the project were (fig. 6):

- Team work (7 students),
- A new kind of learning experience (17 students),
- Protecting nature (12 students),
- Having fun (6 students)

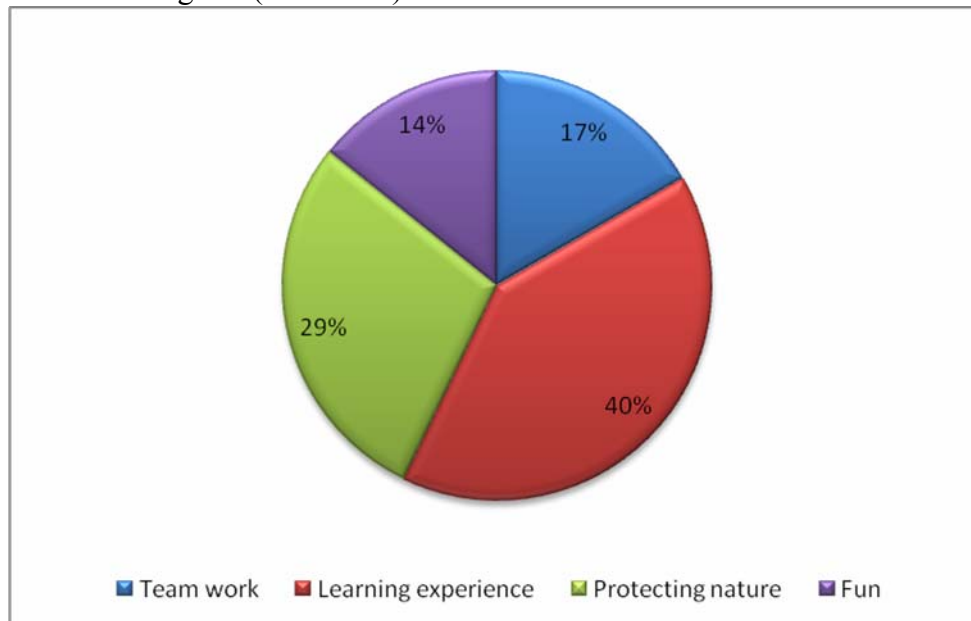


Fig. 6. Main outcomes of the project from the students' point of view

CONCLUSIONS

- Students are interested in being part of a project.
- Their affiliation to a project is more dependent on the theme of the project and the teachers they will be working with, and less dependent on time and place.
- Their curiosity is stimulated by themes like nature, health or computers; their field of interest is correlated with their gender.
- A successful project has many important outcomes: publications, new data, a fruitful learning process, and students wish to participate again in educational projects.

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