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Long-term environmental awareness and attitudes among Israeli Junior High school students in Hiriya Ecological Center

Conciencia y actitudes ambientales a largo plazo entre los estudiantes israelíes de secundaria en el Centro Ecológico Hiriya

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Abstract

At present, many countries have multiple problems related to environmental awareness and environmental care. In 2015, the United Nations General Assembly established through the 2030 Agenda a total of 17 Sustainable Development Goals to achieve a more sustainable future for all societies. This article is a case-study about relationship between environmental ethics and environmental responsibility (or behavior) among young students in Israel. The basic question of this case study was whether and to what extent environmental values influence environmental responsibility development? The main objective of this study to give the students an opportunity to participate in outdoor experiences, learn about ecological principles, and develop an understanding of their relationship to and role within nature through this study. To meet this objective, a case study has been carried out on the relationship between environmental ethics and environmental responsibility among young students in Israel. The purpose of the study was to determine the educational value and efficacy of environmental field trips on student learning. The problem is that it was unknown whether or not students were learning (or sufficiently learning) on the field trips currently undertaken. Specifically, the changes in environmental awareness among the ninth-grade participants (N= 40) in the Hiriya Visitors Center, the landmark of garbage in Israel, taking an excursion to said center, have been examined. The main result was a greater knowledge of students about environmental concepts and awareness of the local environment with significant improvements. It was also found one year after the excursion that the students recalled what they had seen and heard and had developed a perceived pro-environmental attitude towards the environment and became agents of change towards the environment compared to a control group (N = 30 students) who had not disclosed any environmental responsibility in additive environmental activities. A strong correlation has been found between values and environmental responsibility in 9th grade students, and values are directly related to the development of environmental responsibility.

Keywords*:* Pro-environmental values, Place Based Education, Hiriya Open Space, Environmental awareness.

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Resumen
En la actualidad, muchos países enfrentan múltiples problemas relacionados con la conciencia ambiental y el cuidado del medio ambiente. En 2015, la Asamblea General de las Naciones Unidas estableció, a través de la Agenda 2030, un total de 17 Objetivos de Desarrollo Sostenible para lograr un futuro más sostenible para todas las sociedades. Este artículo es un estudio de caso sobre la relación entre la ética ambiental y la responsabilidad ambiental (o comportamiento) entre los estudiantes jóvenes en Israel. La pregunta básica de este estudio de caso fue si y en qué medida los valores ambientales influyen en el desarrollo de la responsabilidad ambiental. El objetivo principal de este estudio es ofrecer a los estudiantes la oportunidad de participar en experiencias al aire libre, aprender sobre principios ecológicos y desarrollar un entendimiento de su relación y su papel dentro de la naturaleza a través de este estudio. Para cumplir con este objetivo, se ha realizado un estudio de caso sobre la relación entre la ética ambiental y la responsabilidad ambiental entre los estudiantes jóvenes en Israel. El propósito del estudio fue determinar el valor educativo y la eficacia de las excursiones ambientales en el aprendizaje de los estudiantes. El problema es que se desconocía si los estudiantes estaban aprendiendo (o aprendiendo suficientemente) en las excursiones realizadas actualmente. Específicamente, se han examinado los cambios en la conciencia ambiental entre los participantes de noveno grado (N= 40) en el Centro de Visitantes de Hiriya, el hito de la basura en Israel, tomando una excursión a dicho centro. El principal resultado fue un mayor conocimiento de los estudiantes sobre conceptos ambientales y conciencia del entorno local con mejoras significativas. También se encontró que un año después de la excursión, los estudiantes recordaban lo que habían visto y escuchado y habían desarrollado una actitud proambiental percibida hacia el medio ambiente y se convirtieron en agentes de cambio hacia el medio ambiente en comparación con un grupo de control (N = 30 estudiantes) que no había manifestado ninguna responsabilidad ambiental en actividades ambientales adicionales. Se encontró una fuerte correlación entre los valores y la responsabilidad ambiental en los estudiantes de noveno grado, y los valores están directamente relacionados con el desarrollo de la responsabilidad ambiental.

Palabras clave: Valores proambientales, Educación Basada en el Lugar, Espacio Abierto de Hiriya, Conciencia ambiental.

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Introduction

Environmental awareness has recently been increased due to cooperative international systems about global environmental issues, which are cross-border and growing with the globalization of the economy. Furthermore, the efforts made by individual countries alone are insufficient when it relates to environmental education.

On the other hand, place sense refers to the meanings and attachments individuals and groups assign to places. An individual's experiences in a place significantly impact its sense of place. Educational activities play an important role in the recognition of the local environment and sense of place. Therefore, it would be more efficient for teachers to develop their own curriculums than to implement curriculums developed by others. A teacher should establish a link between students' performance standards determined by region or district and unpredictable events outside the classroom.

The goal of Environmental Education (EE) is to generate citizens who are aware and more experienced about the biophysical environment and its problems, enable to find solutions to those problems which can be found through a variety of strategies and actively engaged in working toward their solution. According to Woodhouse and Knapp (2000), Place-based education includes community-based schooling, ecological education, and bioregional education. In spite of the fact that place-based education is rooted in environmental education, it differs from conventional environmental education because its pioneers focused on both the natural and social environments.

A traditional focus of EE has been implemented to teach children about polluted or abandoned environments. For metropolitan and rural kids, this frequently implies study hall gaining from books and wall diagrams or long transport rides to nature centers and preserves. The literature suggests that supporting kids' environmental knowledge and concern is most effective when they are in close contact with a particular place. (Cohen, R., & Levi, D. (2020).

This finding implies that there is a strong sense of caring and connection to a place can be developed by teaching children about positive aspects of their local environment. An environmental educator's main aim is to develop environmentally literate and responsible citizens who change their behavior towards the environment. Therefore, teachers play a key role in developing environmental literacy (EL) in the next generations.

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By promoting pro-environmental values and increasing understanding of the environment, environmental education is a sequential process that seeks to motivate citizens to act individually and collectively in an environmentally conscious manner that balances today's economic, social, and ecological needs while ensuring those of the future. (Hungerford, H. R., & Volk, T. L. (1990). Yet, place-based education emphasizes students' local environment as a learning location and emphasizes multidisciplinary learning.

Environmental issues in Israel, infusion and imposition approaches have been integrated into the national education curriculum since the 1970s, in elementary and junior high school. The study of environmental topics and units in high school is associated with various environmentally oriented subjects, including geography, life sciences, and agriculture.

Since 1983, the Israeli Ministry of Education, Culture, and Sport has declared that environmental studies (nowadays environmental science) in high schools as an independent elective subject toward the matriculation exams. One of the main objectives is to promote environmental awareness among students' pro-environmental behaviors.

Actually, environmental awareness has been emphasized in the literature on environmental stewardship. Yet, a personal relationship with nature may be associated with pro-environmental behaviors (PEBs). PEB- pro-environmental behaviors engagement was more strongly associated with connection to nature than psychological restoration and environmental attitudes. (Whitburn, J., Linklater, W. L., & Milfont, T. L. (2018). Second objective which was taken into consideration, is to assess the impact of the Visitor Center at Hiriya on the intermediate participants student's awareness of amenities in the visitor center and their response to suggest solutions to our waste problem technological. Furthermore, it has been focused on children's ecological knowledge and their awareness of the form and features of their local environment comparing to the Recycling Park, Hiriya.

This case study is also based on a model in which environmental knowledge, environmental values, and environmental responsibility all predicate pro-environmental intentions, which then have an impact on pro-environmental behaviors in the long term. Mostly, it has been examined the interest of seventh-grade students to the Visitor Center at Hiriya, Israel's trash landmark.

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During the tour for high school students, the students were revealed in Hiriya site where they face larger waste problem in Tel Aviv. Yet, they were exposed to current data on the amount and composition of waste in Israel by volume and weight. They had a workshop where three technological possibilities for dealing with waste – recycling, burning, and dumping – were discussed. The question which was raised whether additive solutions were operated to the waste problem technological solutions. Regarding the term awareness as an important variable when assessing how a place-based environmental education program will impact on junior high students to develop an environmental responsibility.

In this study, it has been focused on children's ecological knowledge and their awareness of the characteristics and form of their local environment, in comparison to the Recycling Park. This emphasize is aligned with Henita R. (2020) research, which suggests that school students are not improved to face significantly with main environmental issues.

Due to the fact that the urban ecosystem contains both natural and built forms, this study examines awareness both of the natural environment (flora and fauna, soil, water resources, rocks, etc.) and of the built environment (playground equipment, buildings, etc.). Furthermore, the Environmental Education Field Trip (Hiriya Park, is an environmental alert and recycling theme park for young, putting into a global concern, admits students' need for sustainable development education. Yet, current literature has suggested that through environmental education, participants acquire a personal ecological knowledge base and develop pro-environmental attitudes and behaviors. Within a series of sequential steps, it should offer a range of techniques and characteristics. Some suggested characteristics are : (a) direct aesthetic experience with the natural environment, (b) environmental restoration activities to increase participant ownership (Hartig, Kaiser, & Bowler, 2001), (c) sensitive or emotional content (Armstrong & Impara, 1991; Pooley & O'Conner, 2000), (d) a multi-sensory learning environment to promote student engagement (Liobikienė, G., & Poškus, M. S. (2019) , and (e) relevant and personal information that promotes empowerment and ownership (Hungerford, 1996; Kals, Schumacher, & Montada, 1999).

Therefore, environmental education field trips should be evaluated for their long-term effects on students in order to determine their sustainability and usefulness in different outdoors environmental programs such as exploring the long-terms effects on seventh-grade students of

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a field trip that took advantage of Hiriya - A Mountain of Waste, turned to a green and flourishing recycling park. The objective of this study is to know the impact of an excursion to promote care for the environment influences the development of environmental responsibility of students and to what extent.

Methodology

The design implemented in this study was an experimental group design to determine whether or not the independent variable (environmental field trip) had a significant effect on the dependent variable (student learning). Specifically, the design helped determine whether or not the number of students who answered the items seriously, perceived pro-environment attitude. The present study demonstrated clear differences among students regarding their perceptions of the environment in terms of environmental pollution, and environmental responsibility, which has become a daily task in their near environment.

Initial scale items were aggregated from a range of previous studies measuring various aspects of PEB -(Pro-Environmental Behavior) These studies were intentionally reviewed by experts in the field of environmental psychology, communication, and education to determine the breadth of behaviors that fall within Steg and Vlek's impact-oriented definition of PEB and Lange, F., & Dewitte, S. (2019).

Young students in Israel are examined in this case study for their relationship between environmental ethics and environmental responsibility. The study examined the changes in environmental awareness among ninth-grade students (N=40) taking an excursion to the Hiriya Visitors Center, the landmark of garbage in Israel.

Data Collection Instrument: An environmental values scale (Likert-type scale of, attitude and behavior) and a personal environmental responsibility scale were included in the preliminary questionnaire, titled "knowledge and attitude of students towards the environment" which contain 10 items. The questionnaire and the interviews were personally administered with two trained research assistants working in Hiriya Center. Face to face method was adopted to make sure that the respondent filled the questionnaire effectively.

Participants

The participants were 40 students in the seventh-grade class at a public intermediate high school in an urban town in Tel-Aviv-Jaffa, who in 2020 took an all-day field trip to Hiriya,

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National Park. Class members primarily had Jewish cultural heritage (91.8%). In 2020, 550 students attended the school; 60% were girls, and 40% were boys. 70 students were in the seventh grade. The control group consists (N=30 participants) comparing to the active participants (N=40).The day's activities included a visit to Hiriya - a mountain of waste, turned to a green and flourishing recycling park, hands-on learning activities about recycling garbage, utilizing biological subsystems to reduce municipal waste weight by over 90% and generate biogas to create electricity, while also recovering glass and metal .The student has been exposed to the recycling plant for tires plan. Ultimately, students have discussed recycling, pollution, environmental impact, and conservation behavior that could help to address the problem.

Methods – Data Used

A) Student Interviews

We have focused informally, in-depth interviews in the fall of 2022, to explore the students' long-term memories of the field trip experience, from a total of 40 that participated in the program where a qualitative analysis was conducted. Students were contacted initially to explain why they had been contacted; we and the teachers have planed the interviews a week later, to give the students more time to be ready for the interview by undertaking to remember this significant program. The unlimited interviews started with the following citation: " Are you able to inform the details of the field trip you took part to Hiriya National Park last year?

Teachers' subsequent statements or questions aimed at clarifying or elaborating a student's experience. Yet, participants have controlled the path of the interviews, including the range of fields discussed, as part of participant-centered interviews. Following up with follow-up questions only for summaries of content and clarification of the students' responses, the interviewer gave minimal encouragement to students' responses. For each of the 20 students, the interviewer adhered to the same strategy of not having a preplanned agenda of questions for the interview.

B) Phenomenological Case Study Analysis

A phenomenological analysis was conducted on each interview, asking for the essence of the phenomenon, for what makes it what it is. Phenomenology further seeks for researchers with open minds so they may attempt to present the world as expressed by the participants.

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A common method in phenomenological research is the use of in-depth interviews. It has been shown that in-depth interviews can provide a more accurate representation of the actual experiences of participants than experimental methodologies. (Rennie, Feher, Dierking, & Falk, 2003). A variety of techniques have been used for this purpose, such as structured and open-ended interviews, think aloud techniques, audio recordings, and video recordings.

Yet, audio recordings, video recordings, structured interviews, and think-aloud exercises have all been used to achieve this goal. By studying phenomenology, researchers are able to clarify perceptions and experiences, mainly the subjective meaning of events, concepts, and problems (Liobikienė, G., & Poškus, M. S. (2019). Although both aspects are noted, it is the differences in structure that emerge from individual experiences that are crucial. Ultimately, the emergent themes are constructed through the responses of the individuals.

Therefore, the themes illustrate the different ways in which a particular group experiences the phenomenon. Phenomenological data analysis contained three first research stages: (a) analysis of the experience itself (in this case participant recall of an environmental education field trip to Hiriya National Park), (b) description of general aspects of the phenomena, and (c) presentation of crucial relationships among the chapters.

In order to complete the analysis, a three-step coding and data checking process were followed. First, an interview data was displayed from each participant interview by identifying and coding categories of data. Secondly, each transcript was analyzed and was broken down into short phrases in order to understand any student's memory of the program and the trip to the park. Diverse activities such as four types of pollution air, water, land, and noise, ecological terminology, environmental issues, mentioned during the program were recalled.

Clusters of data have been derived from the statements, revealing chapters that were common to all descriptions of the participants. Finally, the chapters were reviewed, the categories were analyzed. The researcher Patton had mentioned that the qualitative inquiry was conducted in accordance with the following protocol: Three researchers experienced with qualitative research, analysis, and coding cross-validated and cross-checked the themes and delineated data in order to establish greater credibility. (Patton, 2002, p. 545). The discrepancies were then discussed and re-evaluated as to their reliability.

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C) Questionnaire

An assessment of students' environmental knowledge was conducted a week before and then a week after they participated in the program using a brief (10-items) questionnaire. The questionnaire was administered orally and written responses were not required. As a result of the significant differences in reading and writing skills within classes, this method has been selected to deal with the substantial variation. Students were asked questions about the main subjects of the program in an attempt to determine whether they gained knowledge from them, such as ecosystem function, recycling process, culture of consumption, water quality, types of urban pollution and the interrelation of ecosystems.

Results

There are four themes associated with the students' long-term memories regarding the environmental education center field trip to Hiriya National Park emerged through our interpretation of the analysis of the interview data: (1) student practice and general content knowledge, (2) ecological and environmental knowledge, and (3) perceived pro-environment attitude.

Student Actions

The field trip experience was described by all twenty students using action words or phrases. The recollections of participants were consistent of the Hiriya Visitor Center Program using different environmental activities such as recycling, dumping, observing, drawing and measuring implied by other words. Terms such as studying and learning, memorizing, measuring (air and soil temperature), aligning air pollution, graphing, working on project, and making activities during their field trip. Participants remembered active cognitive skills from their interviews such as - "We would follow the footprints on paper." "We would write down the questions on the piece of paper ".

One student said: We were using the plastic bags and materials that surround us: fabrics, newspapers, ". Another participant mentioned distinctly the action of recycling and making compost. Other students said:" Climate change, air pollution and dealing with waste is in high priority nowadays. On the other hand, thirteen students used different stages to describe the walking, drawing, studying different aspects of the program.

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A variety of techniques were used to work with plastic bags, cardboard and paper wrapping, plastic containers, and leftover fabrics. Twelve students cited the waste problems in general, and on organic waste in particular. They had deepened their understanding of the processes that occur during composting, and learnt different methods for creating compost on different scales and had learnt the differences between different compost types, and their uses for gardens, trees, or agriculture.

Ecological and Environmental Knowledge

It is important to mention that participants consistently have used ecological literacy and terminology while they have described their visit at Hiriya park center. During the program, eight participants have expressed an interest in ecological and environmental aspects.

Moreover, 19 students among the twenty students have remembered in details ecological terms and have emphasized environmental knowledge. Observations of participants that conceptualize that knowledge are depicted in the theme of ecology and the environment.

Among the terms used by participants in response to concepts on ecology and the environment were compost preparation, invasive species in Hiriya Park. The most commonly used terminology was waste pollution, recycling and reused materials. Another participant stated the difference between recycling, reducing and reusing.

Perceived Pro-environmental Attitude

Responses were received from six students on the topic of perceived pro-environmental attitudes. Attending environmental education may have fostered the ecological-based attitude demonstrated in these responses in the Visitor Center in Hiriya. Interviewees mentioned things such as taking the environment more seriously, treating it more carefully, preventing waste accumulation, preserving electricity, conserving water and taking care of our national parks.

Yet, a student explained further: "There is a need for more care to be taken with our environment, along with an awareness of waste pollution in the field. "Some students emphasized their understanding of air pollution in the park: "We can avoid air pollution in the park by not driving everywhere; for instance, we could walk a mile to the store instead of driving everywhere. Also, we can save water and preserve electricity to save energy, make a clean environment and to take care of our park avoiding pollution."

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Actually, we can understand by these quotations that by focusing on psychological antecedents to environmental behavior instead of its environmental impact, 'pro-environmental behavior' (PEB) has become a more prominent concept than environmental impact alone .The use of PEB scales assumes that all the included behaviors are linked by a common psychological construct (Kristian S. Nielsen, Viktoria ,C.,Florian ,L.(2021).

Student Activity	Questionnaire	Percentage (%) Agree	Percentage (%) Disagree
A. Student's activity during work with group	1. Enthusiastic to be exposed in diverse environmental activities in the field.	99	1
	2. Recording information during team work together.	100	0
	3. Feel convinced to treating the environment more carefully by preventing waste accumulation, preserving electricity, conserving water	98	2
B. Student's activity during gather information and student interest after the field trip activities	4. Gain knowledge of new information about Hiriya Visitor Center using different environmental activities.	94	6
	5. Understanding the consequences of pollution sources on the environment in direct observation in Hiriya.	88	12
	6. Difficult to use ecological literacy and terminology during their visit in different stations.	75	25
	7. Difficult to know the status protected, rare & endangered species due to pollution.	88	12
	8. Were exposed to a variety of techniques were used to work with plastic containers /bags and paper wrapping.	100	0
C. Interested in effort to save the environment.	9. Environmental sustainability has become a task to achieve daily.	98	2
D. Interested in becoming responsible for overseeing the environmental performance of public, private, or even voluntary organizations.	10. I comprehend the importance of conserving water and energy and feel responsible to increase public awareness of environmental hazards and sustainability in my community.	94	6

Table 1. Questionnaire of student activities during and after field trip activities

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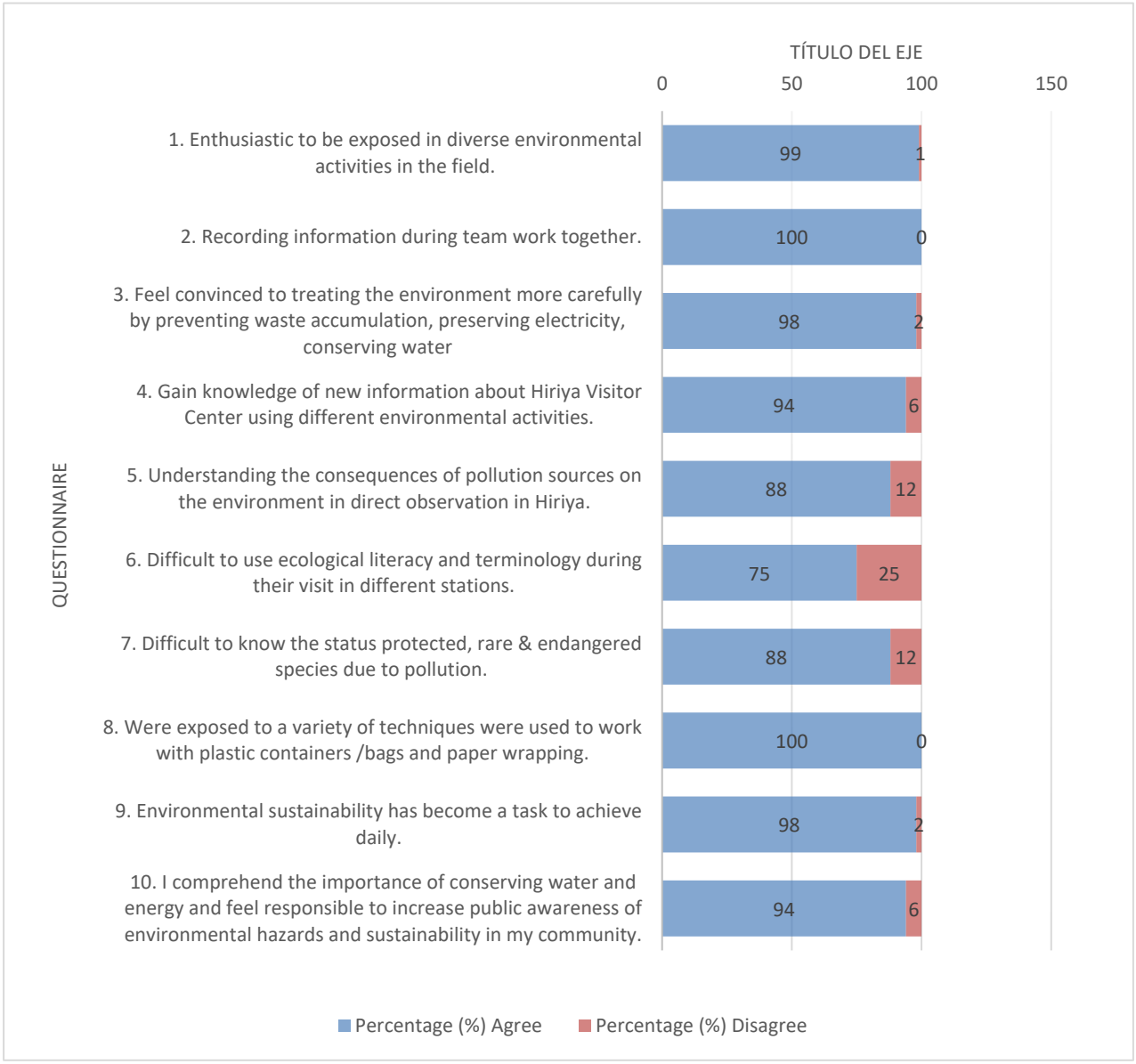

Figure 1. Graphical representation of Table 1

Table 1 compares four categories that emerged from students interviews during work with group and students' interest after the field trip activities. Analysis of the percentage of the different categories indicates that sustainability is perceived mainly in bio-technological terms during student visit in Hiriya Center. Differences were clearly presented for the perception of the environment in terms of environmental pollution, and environmental responsibility which

has become a task to achieve daily in their near environment. Students identified actual information during a field trip, such as listing the number of diverse environmental activities in the field. The contexts of variety of techniques were used to work with plastic containers /bags and paper wrapping have acquired students to a significant daily achievement protecting their near environment. A small percentage of students wasn't really interested in this field trip but at least in the various technology.

Discussion

There are many research studies that support positive outcomes over the long term among participants. This case study, however, has reported outcomes of the environmental experience. A field trip gives students an opportunity to learn about environmental issues in natural areas such as parks, forests, and wetlands. There are many topics to explore during field trips, from water quality to biodiversity to climate change, where students observe wildlife, collect data, and engage in hands-on activities such as planting trees or removing invasive species. It is very effective to promote environmental literacy through field trips since they provide students with a direct connection to nature. According to researchers, environmental education aims to promote the skills necessary to participate in ecological conservation and preservation as well as encourage a pro-environmental attitude and behavior by fostering relationships between people and the outdoors. (Braun, T., Cottrell, R., & Dierks, 2018).

One of the main elements is to foster pro-environmental citizenship behavior (Hungerford & Volk, 1990). On the other hand, Fang (2021) has proposed the concept of citizens with environmental literacy concerning residents who tend to be activists and enable to promote behavioral change for environmental responsibility and to plan pro-environmental decisions so that they can improve environmental quality. Researchers found that several students maintained long-term environmental and ecological content and expressed an increase in pro-environmental attitudes after completing this study, comparing to the control group which didn't express any important contribution to the learning process in this outdoor trip.

Eighteen of the participants who have discussed different ecological and environmental issues, such as waste dumping on Hiriya Mountain and turn it into a transfer station , and also into a green and flourishing park that would lead environmental change worldwide comparing to the control group which didn't show any interest .Actually , it has

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revealed pro- environmental attitude by evaluating outstanding comments of 22 out of 40 students collected by their interviews for: "I believe that we need to be more concerned about our environment and to take more environmental actions ."We have to minimize environmental damage and to give garbage a second life as raw materials."

In order to promote an environmentally responsible consumer behavior there are different ways like purchasing environmentally friendly products (recyclable packaging, ozone-friendly materials) as well as encouraging to reuse plastic bags and printed paper."(Harahap, F, 2018).

Yet, it should be also considered some of the students' ethnicity (newcomers to Israel) which can show the gaps between knowledge or attitudes and behavior should be sought out and examined as it had been revealed in Klockner, 2018 research.

Environmental education philosophers support the notion that a personal ecological understanding (Hungerford, 1996), the belief and understanding of how to make a direct personal contribution (Hartig, Kaiser, & Bowler, 2001), an affinity to the place (Kals, Shumacher, & Montada, 1999), and a hands-on approach (Pomerantz, 1986) all work to foster pro-environmental attitudes or behaviors. Some student obtained each of those elements that foster pro-environmental attitudes or behaviors.

A cross-sectional study was conducted on junior high school students in Jakarta with a quantitative and observational approach. According to results, knowledge of the product correlates with green buying behavior. This case study emphasizes the value of recycling so that the students are relatively well exposed to this environmental subject.

During the field trip, their statements were directly related to their deeds and experience. By using direct language about actions or events, we interpret the memories as being taken from the field trip itself rather than from later experiences (Chanvin, MAgil, Widdig, A. (2023).

As the conversation shifted away from the students' field trip experience at Hiriya Park, there were evident attempts to redirect the conversation to the park's activities and the field trip experience. On the other hand, the problem that has been raised is the absence of a profile students' attitude in waste management.

Finally, highlight the results of a study carried out on a sample of 84 secondary school teachers where it was found that opportunities for practice in environmental issues, theoretical

and practical information are not sufficiently provided to students, field trips are not financed. Current environmental practices leave the subjects untouched and, as a result, the curriculum becomes inadequate to educate students as environmentally sensitive individuals.

Conclusion

Different models of experiential learning in environmental education show their effectiveness in promoting environmental literacy. There are several models of experiential learning in environmental education, including field trips, service-learning projects, outdoor education programs, technology-based learning, and citizen science projects.

The objective of this study is to know the impact of an excursion (field trip model) to promote care for the environment influences the development of environmental responsibility of students and to what extent. “Attitude Scale for Sustainable field trips, the learning is mainly based on a direct Environmental Education” where interaction between the student and the environment is an integral part of the science curriculum.

The development of tools in environmental education, such as smart trash, is therefore necessary based on the environmental attitudes of students (Henita R, Ilmi, Z. Ichsan1& Vina, O. (2020). Actually, we can't ignore the opportunity that earlier or later classroom experiences may have a significant impact on student perception, growth, and learning, towards the environment despite the efforts to discover only the recollections derived from the field trip program at Hiriya Park. Knowledge retention can be enhanced through classroom experiences before and after a field trip. A significant unknown variable regarding the current study is the frequent use of classroom experiences in conjunction with field trips. However, reviewing the interview data multiple times, it has been revealed there isn't any mention of earlier or later classroom experiences.

Field trips positively affect students’ knowledge on and attitudes towards the subject. The fact that learning environment is less formal than the one in the classroom positively affects the teacher-student relationship and thus it is among effective methods that Education: In this study, a total of can be used while teaching the subject of ecology.

Therefore, the value of field trips lies in the ability to introduce students to concepts, ideas, and experiences that cannot be provided in a classroom setting. Teaching and learning in transdisciplinary areas, like science and environmental education, is particularly important.

Educational research paints a more complex picture of the value of field trips than educators and students believe. Field trips generally help students learn and are viewed by educators as a valuable alternative to classroom instruction.

Yet, it is important to mention there is often a wide gap between field trip theory and practice at a time when school systems demand proof of field trips' educational value. However, a clear advantage of field trips is that students get to experience real-world situations firsthand, away from the classroom.

Ultimately, outdoor education programs have been found to increase students' appreciation for the natural world and their understanding of environmental issues.

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