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PERCEPTIONS OF LECTURERS ON SUSTAINABLE ENVIRONMENTAL EDUCATION

PERCEPÇÕES DOS DOCENTES SOBRE EDUCAÇÃO AMBIENTAL SUSTENTÁVEL

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Abstract: Global environmental deterioration has been a subject at the forefront of human development and sustainability. Efforts have been constantly made with regard to global environmental and ecological sustainability, and one of such significant dimensions of these efforts is the use of environmental education. Environmental education is a process of creating awareness and equipping individuals with the necessary knowledge of sustaining the environment. This research has been carried out to investigate the perceptions of university lecturers on sustainable environmental education. The study was designed to survey university lecturers in North Cyprus using qualitative scientific methods. The study focused on evaluating the perceptions of lecturers with regard to their background, perceived meaning, perceived impact, and perceived ways to improve sustainable environmental education. The research has shown that the majority of lecturers in North Cyprus have an adequate understanding of what sustainable environment education is, and they also perceive the process is impactful in ensuring global environmental sustainability. The paper here reports and presents comprehensively the implemented scientific methods in the research, the findings of the research, and adequate recommendations are given.

Keywords: Environmental education. Environmental education perception. Environmental Sustainability. Sustainable environmental education.

Resumo: A deterioração ambiental global tem sido um assunto na vanguarda do desenvolvimento humano e da sustentabilidade. Esforços têm sido feitos constantemente em relação à sustentabilidade ambiental e ecológica global, e uma das dimensões significativas desses esforços é o uso da educação ambiental. A educação ambiental é um processo de conscientização e capacitação dos indivíduos com o conhecimento necessário para a preservação do meio ambiente. Esta pesquisa foi realizada para investigar as percepções de professores universitários sobre educação ambiental sustentável. O estudo foi projetado para pesquisar professores universitários no norte de Chipre usando métodos científicos qualitativos. O estudo concentrou-se na avaliação das percepções dos professores com relação à sua formação, significado percebido, impacto percebido e maneiras percebidas de melhorar a educação ambiental sustentável. A pesquisa mostrou que a maioria dos professores no norte de Chipre tem uma compreensão adequada do que é a educação ambiental sustentável e também percebem que o processo é impactante para garantir a sustentabilidade ambiental global. O artigo aqui relata e apresenta de forma abrangente os

métodos científicos implementados na pesquisa, os resultados da pesquisa e recomendações adequadas são dadas.

Palavras-chave: Educação ambiental. Percepção de educação ambiental. Sustentabilidade ambiental. Educação ambiental sustentável.

1. Introduction

Our planet is currently facing a critical ecological crisis, and environmental deterioration (Jorgenson et al., 2019). The rate at which the environment is deteriorating is at an unacceptable state if the sustainability of the environment and the planet is to be considered adequately. Several efforts are being made to mitigate the rate at which the environment and the global climate are deteriorating by world leaders and policymakers. One of the measures and policies put in place to fight and mitigate environmental challenges is the use of education as a tool for fighting environmental deterioration through methods of awareness and skill acquisition using conventional educational systems as mediums for carrying out such processes (Agbedahin, 2019). Several environmental sustainability researchers have significantly associated the sustainability of the environment as being achievable with the adequate use of environmental education in societies to promote the process (Kioupi & Voulvoulis, (2019). Environmental education is a concept that promotes the adequate use of natural resources through consideration of long-term sustainable development goals and environmental sustainability.

Environmental education has been defined in the declaration of Tiblisi (Gillett, 1977) as a process that is aimed at the development of the global population to be aware of the environment and be concerned about the challenges it is faced with and to be adequately equipped with both knowledge and skill to be committed, motivated, and indulge in the creation and implementation of environmental sustainability solutions to the current problems and the prevention of further environmental challenges (Ahmed et al., 2019). Environmental education relative to the history of the world is a novel concept that only dates back to about 50 years ago, and in this relatively short time it was introduced, it has actively contributed to the global efforts of environmental deterioration mitigation and promotion of environmental sustainability (Ardoin et al., 2020).

Environmental education is a process that places a strong emphasis on knowledge, attitude, and skillful ability that is related to the sustainability of the environment. Through the use of educational infrastructures, these emphases are developed in students to proffer global

environmental sustainability efforts. Environmental education is based on the provision of feasible environmental deterioration mitigation processes using teaching and learning techniques (Yadav et al., 2022). Environmental education establishes a sustainable development relationship between individuals and their immediate environment as well as the global environment, this is done through the shaping of the behavior of individuals towards realization and appreciation of the critical importance of the environment to our well-being (Tseng & Wang, 2020). Environmental education and its aim of promoting environmental sustainability and sustainable development have different conceptions and processes of being implemented. These concepts are all related and aimed at environmental conservation, environmental sustainability, environmental health, and sustainable development.

Perceptions of Environmental Perception and Concern

Environmental concern is defined as the overall individual orientation toward the natural environment (Marpa, 2020). This includes the level of worry about the current state of the environment and the critical possible future of the environment due to the current trends in environmental deterioration. Environmental concern is associated with the level of awareness individuals have towards the environment with respect to the critical state of the environment (Schweiker et al., 2020). Environmental concern has a significant impact on the behavioral will and intent of being involved in sustainability efforts on the environment. Despite the growing awareness in people about the critical state of the global environment, studies have shown there is a significant gap between the level of achieved awareness and the level of will and intent of individuals to indulge in environmentally sustainable practices (Bradley et al., 2020).

Perception is described as the result of cognitive activities that involve the interpretation of information, and signals from the impacts of events (Saari et a., 2021). Environmental perceptions especially in the context of environmental risks focused on the observed negative impacts of unsustainable environmental practices and their resulting degradation (Memon et al., 2018). Hence the environmental concern is directly related to the perceived impacts of unsustainable environmental practices and associated risks, and how they are understood by individuals.

Research Problem

Environmental education is a process that is concerned with the knowledge, abilities, and attitudes of individuals related to the sustainability of the environment. Environmental education is designed to impart knowledge and skills for the sustainability of the environment to individuals through processes that involve raising their awareness about the challenges of the environment. Research reports have shown a significant growth in global environmental education efforts and a positive impact on environmental sustainability (Memon et al., 2018). However, there have been studies and reports that have indicated there is rather poor active participation in environmental sustainability practices by individuals that have gone through environmental education programs (Blankenberg & Alhusen, 2018).

This research is designed and implemented as an investigative effort toward the analysis of the perceptions of both teachers and students toward environmental education. This study is carried out to investigate the students and teachers that have gone through the process of sustainable environment education with respect to their perceptions of environmental education with regards to environmental sustainability and their own individual contributions towards environmental sustainability. This research is aimed at answering the following research questions:

- Do teachers have an adequate understanding of environmental sustainability education?
- Do teachers perceive environmental sustainability education as useful?
- What can be done to improve environmental sustainability education?

This study presents a comprehensive report on the study of the perception of teachers with respect to their perceptions of environmental education. The findings of this study are significant as they highlight the perceptions of teachers as instrumental members of society in ensuring an educated society, and how their current perceptions can be used to further optimize the process and tools of environmental education.

2. Methodology

This study is carried out using a qualitative research method. The qualitative research method is chosen for this study to carry out a comprehensive literature review and the collection of data for analysis using a structured open-ended questionnaire. The research method design

uses theoretical background from the literature review to design a survey questionnaire for open-ended data collection from respondents targeted using convenience sampling. The qualitative research method is chosen as an adequate research method for this study because the study is based on the investigations of perceptions of respondents, and an open-ended questionnaire is a technique that adequately enables the self-expression of perceptions of subjects (Johnson et al., 2020).

Case Study and Sample

This research is designed and carried out to investigate the perceptions of lecturers on sustainable environmental education (SEE). The study was implemented by drawing on North Cyprus as a case study. North Cyprus as a case study is chosen because of the ongoing sustainable environmental education in the country's educational system. Using North Cyprus as a case study enables an investigation into a comprehensive and objective finding. This research uses lecturers in North Cyprus as the study sample, the study uses a convenience sampling technique to target a total of 30 survey respondents for data collection among the teachers in various universities in North Cyprus.

Data Collection Tool

This study carries out primary data collection for the purpose of analysis. The primary data is collected using a semi-structured open-ended questionnaire. The closed-ended questions in the survey are used to collect demographic data of the survey respondents, while the open-ended questions of the survey are used to collect respondent perception feedback on questions relating to sustainable environmental education. Table 1 shows the items in the open-ended questions section of the designed questionnaire of this study.

Table 1: Items and source of the survey questionnaire

Item	**Reference**
What do you understand by environmental sustainability education? (*Please elaborate*)	Ilovan et al., (2019)
Do you think environmental sustainability education is important and useful? (Please explain why)	Georgiou et al., (2021)
In your opinion, what kind of impact if any does environmental sustainability education were on individuals?	Marpa (2020)
In your opinion, what can be done to improve environmental sustainability education to be more effective?	Ilovan et al., (2019)
Have you ever taken environmental sustainability education? (If yes, how has it benefited you as an individual?)	Ilovan et al., (2019)

Data Analysis

This study approaches the analysis of collected data using a hybrid data analysis approach. This study combines the use of content analysis and thematic data analysis, where the content analysis is carried out for each respondent to enable a more adequate thematic coding of the entire collected response survey data (Guest et al., 2020). This data analysis approach is chosen to enable our investigation to carry out an individual-level analysis of the perceptions of the respondents as well as a thematic-level analysis of response data.

The process of data analysis in this study begins with the collection and collation of the survey data. For adequate data analysis and to ensure the privacy of respondents, each respondent is coded using R1 through R30 for all 30 survey respondents in the study. Frequency analysis is then applied to the demographic data of the survey respondents to enable an insight into the demography of the respondents based on each demographic indicator of the survey. The open-ended question is then analyzed and used to create a coding scheme based on the given responses (Lindgren et al., 2020). The coding scheme is done based on the identified themes and patterns in the survey data. The coded themes are then analyzed for consistency and meaning with respect to the aims and objectives of the study.

Study Sample

The questionnaire used in this study was applied to a sample target consisting of university teachers. The study used a convenience sampling technique to target teachers in North Cyprus universities. A total of 30 respondents were surveyed, and a distribution analysis shows the following demographic data distribution: 76.67% of the respondents are male, and 23.3% are female. Respondents with a master's degree made up the majority of the respondents with a total of 50%, while bachelor's and Ph.D. degrees consisted of 13.3%, and 36.7% respectively. Frequency analysis on the years of teaching experience of the teachers showed a majority of the teachers had 0 to 5 years of teaching experience with 70%.

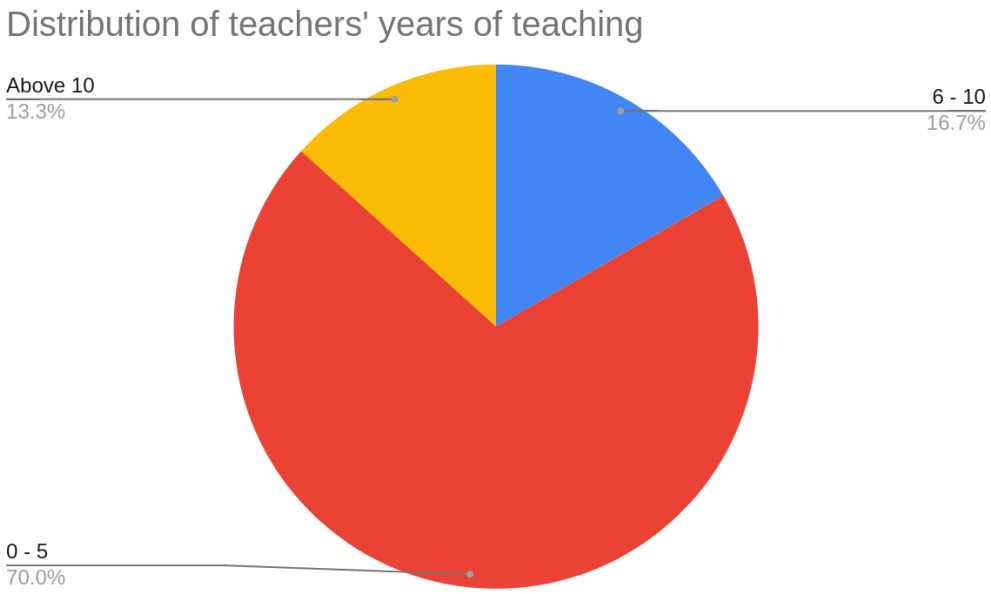

Figure 1: Distribution of respondents' years of experience

3. Results

The design of this research has been used to collect response data from an open-ended questionnaire survey. Thematic analysis was carried out using content analysis and coding, the following sections present the findings of the analysis. Table 2 shows the list of the research themes, codes, and frequency analysis results.

Table 2: Research themes, responding codes, and their frequency analysis

Theme	Code	Frequency	Percentage
SEE's Meaning	Educating individuals on environmental sustainability	25	83.3%
	A sense of ecological and social equity	1	3.3%
	Education on environmental challenges	2	6.7%
	Ability to protect the environment	2	6.7%
SEE's Importance	Yes: To protect the future	23	76.67%
	Yes: To protect the environment	1	3.3%
	Yes: To teach responsible decision making	2	6.7%
	Yes: Important for student personality	1	3.3%
	Yes: To balance social justice and economic growth	1	3.3%
	Yes: For successful education	1	3.3%
	Yes: To make us feel safe	1	3.3%
SEE's Impact	Promotes environmental sustainability	17	56.7%
	Creates environmental awareness	5	16.7%
	Positive impact on an individual.	2	6.7%
	Good for the environment, economy and society.	1	3.3%
	Improves individual well-being	1	3.3%
	Provides opportunities	1	3.3%
	Beneficial for education	1	3.3%

	Provides skill to address complex issues	2	6.7%
SEE's Improvement	Adequate training of teachers	6	20%
	Experiential learning methods	9	30%
	Encourage students	3	10%
	Making it mandatory	4	13.3%
	Societal integration	3	10%
	Incorporating more technology	1	3.3%
	Teaching eco-friendly consumption.	1	3.3%
	Educating from childhood	1	3.3%
	Public sensitization	2	6.7%
SEE Background	Yes, It was	19,	63.3%
	No, I have not	11	36.7%

Theme 1: Meaning of See

When the survey respondents were asked what they understood about the meaning of sustainable environmental education (SEE), 25 respondents responded that SEE to them means educating individuals on the sustainability of the environment; 83.3%. This shows the majority of our research respondents have an adequate understanding of SEE as it objectively is. Figure 2 shows a distribution chart of the responses gotten from the survey respondents.

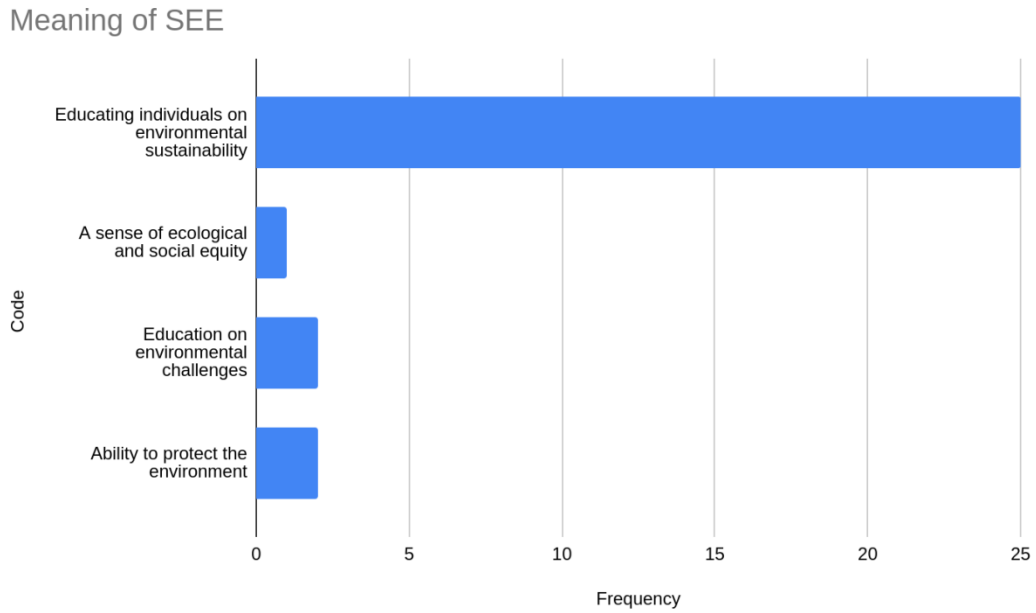

Figure 2: Distribution of response to the meaning of SEE

Theme 2: Importance of See

When the survey respondents were asked if they perceive SEE as important and why they think it is important if they perceive it as important. 100% of the respondents agreed SEE is important, however, their reasons and perceptions of why it is important differed. The majority of the respondents perceived the importance of SEE to be mainly To protect the future; 76.7%. Other respondents perceived the importance of SEE as a way to protect the environment, a way to build students' personalities, and a way to achieve successful education. Figure 3 illustrates the research survey response on the perceived importance of SEE.

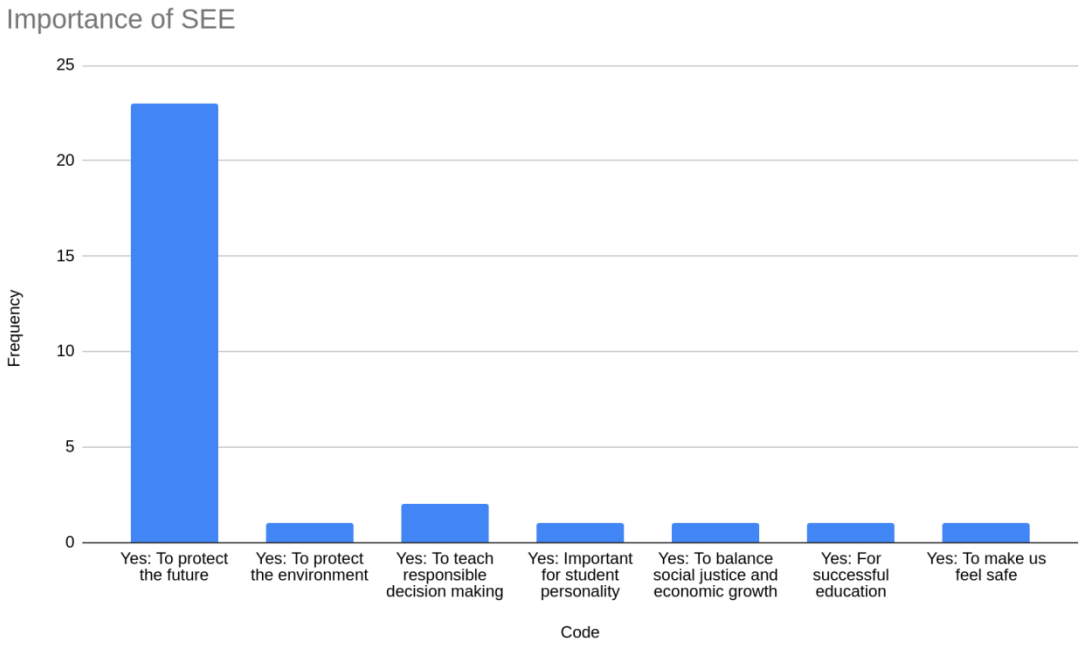

Figure 3: Distribution of response on the perceived importance of SEE

Theme 3: See's Impact

When the survey respondents were asked about their perceived impact of SEE, the majority of the respondents answered SEE has an impact on the promotion of environmental sustainability; 56.7%. Also, among the respondents; R3, R22, R23, and R27, perceived the impact of SEE as being primarily the creation of awareness about the environment, this makes up 16.7% of the survey respondents. Figure 4 illustrates the perceived impact of SEE by the survey respondents.

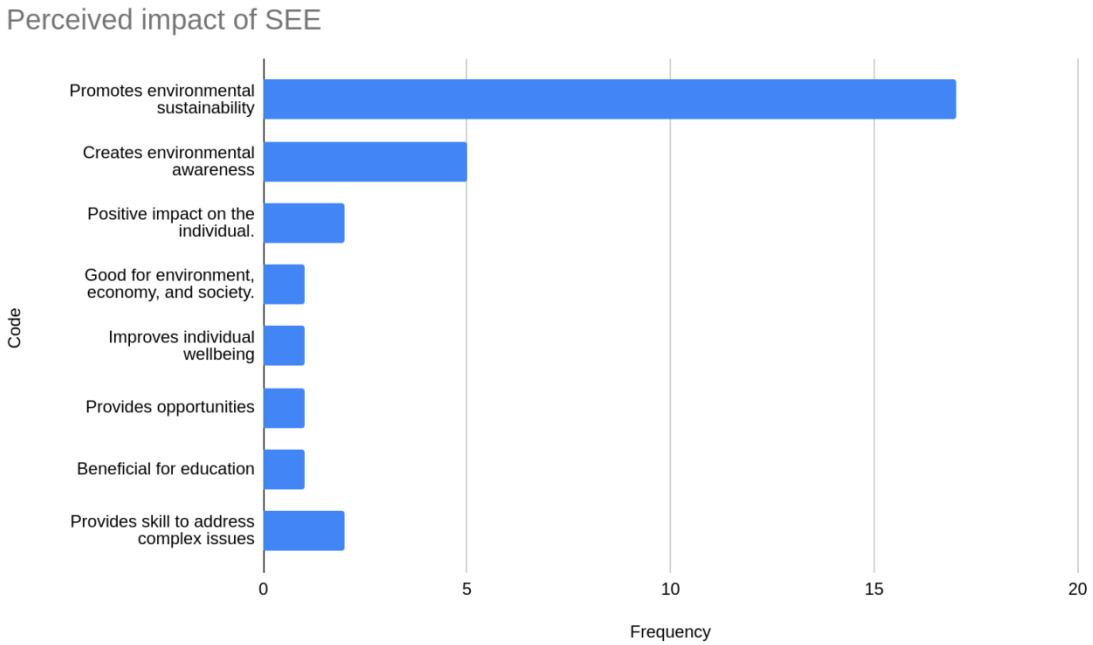

Figure 4: Distribution of response on the perceived impact of SEE

Theme 4: See's Improvement

The survey carried out in this study questioned the respondents on their perceived way to improve the current state of SEE as they know it. This survey question has the most diversity in perceived responses from the survey respondents. Respondents R5, R6, R9, R12, R14, R20, and R24 answered their perceived way to improve SEE is by applying more experiential learning methods in SEE, this group of respondents makes up 30% of the survey respondents. A close majority is the group of respondents that perceive SEE can be improved with the provision of adequate learning and training to the teachers teaching SEE to students; 20%. Figure 5 illustrates the distribution of respondents' perceived methods of improving SEE from its current state.

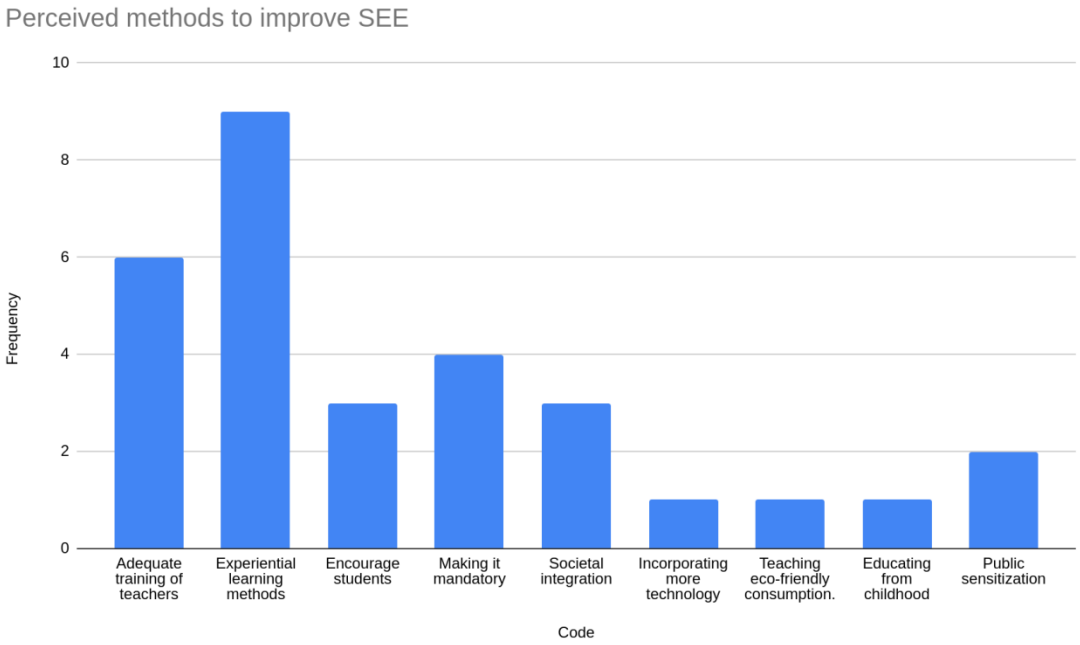

Figure 5: Distribution of responses on the perceived methods to improve SEE

Theme 5: See's Background

The survey respondents were asked if they have ever had any form of environmental sustainability education, and if they did have SEE has it benefitted them as individuals. Of the 30 respondents surveyed in this research, 19 respondents answered yes they have been through SEE and they have found it beneficial to them this makes up both the majority and 63.3% of the survey respondents. 11 respondents surveyed in this study expressed they have never been through any form of environmental sustainability education making up 36.7% of the survey respondents. Figure 6 illustrates the frequency distribution of the survey respondents' background in SEE.

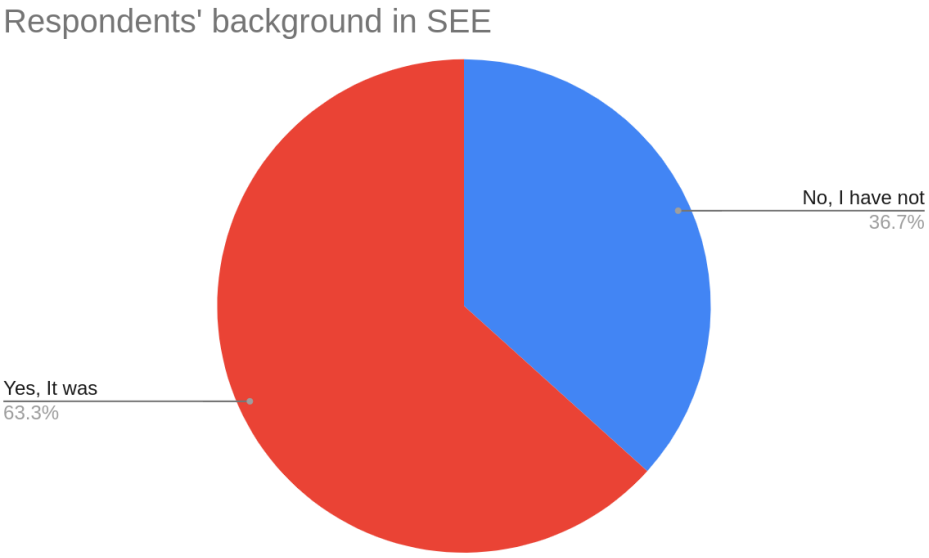

Figure 6: Distribution of responses on their background in SEE and perceived benefit

4. Discussion

The findings in this study have indicated the majority of the teachers have a clear understanding of the meaning of Sustainable Environmental Education (SEE). the majority of the respondents in this study have a perception of SEE being a form of education that is aimed at ensuring a sustainable environment. The perception of SEE as a form of education ensuring the sustainability of the environment indicates there is adequate awareness about the use of SEE among the teachers in North Cyprus. It is also noteworthy to mention even a few percent of the respondents who indicated a different perception about their understanding of SEE indicated perceived SEE within the context of the awareness about the environment. A significant majority of the survey respondents also have a perception of SEE with respect to the importance of being an important factor to ensure the protection of the future of the planet. 76.6% of the teachers surveyed in this study perceived SEE important for the protection of the future of the planet, other respondents also agreed SEE to be important in other dimensions such as educating individuals on responsibility, decision making, etc.

Perceived impact of SEE by the respondents on this study have been positive. All the respondents in this study indicated they perceive SEE as impactful and 56.7% of the respondents indicated SEE as impactful in promoting environmental sustainability. Other respondents indicated SEE as being impactful for individuals and the environment in different dimensions. The perception of the perceived impact of SEE in the surveyed teachers in this study is also in line with the findings of Goller and Rieckmann (2022). The most diverse

perception in this study was observed in the respondents' opinion on how they think SEE can be improved, all respondents gave really insightful methods of improving SEE. the majority of the respondents however indicated SEE can be improved from its current state using experiential methods of teaching SEE, whereby students will be involved in practical methods of SEE. This study has also observed a significant number of the research respondents have never undergone any form of SEE in their lives.

5. Conclusion

This study was designed and implemented for the investigation of the perception of North Cyprus teachers on Sustainable Environmental Education (SEE). The findings of this study have indicated there is adequate awareness and knowledge of the improtance of SEE among the teachers in North Cyprus. The findings in this study also show a very constructive feedback from the teachers in North Cyprus for methods to improve SEE in North Cyprus, with suggestions of SEE to be more experientially oriented, involving children in SEE at a very young age, integrating SEE in every aspect of the societ, and making SEE mandatory at every level of education.

Recommendations

Following the findings in this study, this study recommends the following: this study has observed a significant number of teachers in North Cyprus not having any form of SEE in their entire lives. Hence, this study recommends SEE programs for teachers as well as it is done for students. This study also receommends the SEE programs in North Cyprus be improved to consider experiential methods of learning, and also involving all levels of education in North Cyprus in SEE programs to ensure adequacy and performance.

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