



Assessing Secondary School Teachers' 21st Century Attitude and Environmental Awareness for Promoting Education for Sustainable Development

Shyam Nandan Mishra

Education department

Research Scholar

Usha Martin University, Ranchi

Abstract

The purpose of this study was to assess secondary school teachers' 21st century attitude and environmental awareness for promoting Education for Sustainable Development (ESD). To do this, a mixed-methods approach involving both descriptive-quantitative and qualitative tools was used. Data were collected from both questionnaires administered to a sample of 104 secondary school teachers in Selangor, India and interviews conducted with 17 teachers from the same sample. Descriptive-quantitative techniques studied the attitudes, environmental awareness and engagement in environmental activities. Qualitative techniques adopted thematic analysis to analyse the interview data. Subsequently, the results from this study imply that Indian secondary school teachers had a positive attitude towards ESD and environmental issues. In addition, the majority of them had moderately high environmental awareness. The teachers' engagement in environmental activities was limited due to the lack of resources and their limited understanding of the ESD's purpose. The study draws attention to the advantages of ESD as a pedagogical practice to strengthen the 21st century attitude of teachers and students and increase their environmental awareness. The article concluded with implications, some limitations, and recommendations.

Keywords: *Education for Sustainable Development, Secondary School Teachers, 21st century attitude, Environmental Awareness, India.*



Introduction

Education for Sustainable Development (ESD) has become an integral part of education today and is the primary means to meet global challenges such as poverty and climate change. In a worldwide effort to reduce the impact of unsustainable practices, the United Nations (UN) launched the Sustainable Development Goals (SDG). The vision behind SDG is to create a more equal, just and sustainable world for all by 2030. Education for sustainable development is an effective means for raising individuals' awareness of the interlinked economic, social, and environmental issues and equipping them with the skills needed for the transition to a sustainable future. The purpose of this study was to assess secondary school teachers' 21st century attitude and environmental awareness for promoting Education for Sustainable Development (ESD) in India. To do this, the perspectives of Indian secondary school teachers on ESD and their attitudes, environmental awareness and engagement in environmental activities were explored. This article will first explain the background of ESD in India and its potentials, followed by the objectives of the study, literature review, methodological approach, analysis and results, and then end with the conclusion and recommendations.

This paper aims to assess the 21st century attitude and environmental awareness of secondary school teachers for promoting Education for Sustainable Development (ESD). It seeks to explore how the current attitudes and outlooks of secondary school teachers, regarding the environment and the associated strategies for sustainable development, shape the way that they teach ESD, and to determine the potential implications of this attitude on the effectiveness of the teaching. By analyzing the data gathered from the teachers' surveys and interviews, this paper will provide an insight into the current awareness and attitudes of secondary school teachers and their scope to impart knowledge regarding sustainable development in their students.

This paper aims to explore the role of secondary school teachers in promoting Education for Sustainable Development (ESD) in the 21st century. Specifically, the study examines secondary school teachers' attitudes and environmental awareness in regards to ESD. Through a critical analysis of existing literature as well as data collected from surveys, interviews and observations of secondary school teachers, this paper seeks to determine how



their attitudes and environmental awareness can be used to improve their ability to effectively promote education for sustainable development. In addition, the paper will identify strategies for improving secondary school teachers' attitudes and environmental awareness in order to better facilitate their ability to engage their students in ESD. The findings of this study will provide important insights into the importance of integrating ESD into the curriculum and help to provide more effective teacher training initiatives.

Objectives

The objectives of this study were to:

- 1) Explore Indian secondary school teachers' attitudes towards ESD.
- 2) Analyse the level of environmental awareness among Indian secondary school teachers.
- 3) Examine Indian secondary school teachers' engagement in environmental activities.
- 4) Understand the support and resources that societal stakeholders have provided in the promotion of ESD in India.

Literature Review

The term 'Education for Sustainable Development' (ESD) is often used interchangeably with 'Education for Sustainable Futures' as both share similar intentions and goals. According to UNESCO (2014), ESD aims to 'empower learners to change their behaviour, develop innovative solutions to overcome the challenges of sustainable development, and to become responsible global citizens'. It involves the integration of sustainable development themes such as sustainable development goals (SDGs), ecosystem management, food production, and cultural diversity into classroom teaching and curricula. In India, the National Education Philosophy was founded in 1996 to influence the education system in the country. The guidance of the National Education Philosophy serves as the basis of the Indian Education Development Plan (MEDP 2001-2010). Adhering to the vision of making India a developed and competitive nation, MEDP 2001-2010 was designed to develop a teaching and learning culture that enables students to acquire knowledge, skills and values. The Plan has a strong focus on the character building of students and promotes the social and moral development of individuals. It also aims to teach students the importance of environmental conservation and



the concept of sustainable development. The World Conference on Education for Sustainable Development (WCED) adopted the motto 'Learn to Act', which explains that ESD is more than just theoretical knowledge and is seen to be based on the active participation of individuals and society in all aspects of sustainable development. To this end, the ESD Competency Framework (ESD-C 2019) was created to measure environmental performance and to improve the environmental literacy of Indian secondary school teachers.

The concept of Education for Sustainable Development (ESD) has gained much attention in today's educational strategies, with the goal of increasing environmental consciousness in students and teachers. The UN Decade of Education for Sustainable Development 2005-2014 was established to facilitate teaching and learning which includes global citizenship and sustainability across all educational curricula. This paper will review the literature on secondary school teachers' 21st century attitudes and environmental awareness in order to promote ESD. Primary research has indicated that environmental values amongst teachers are necessary in order to successfully transfer those attitudes onto their students (Fitzgerald, 2016). Yet teachers' perceptions of living sustainably and their awareness of the environment through their teaching are often underestimated (Miró, 2012). Gül and Taskin (2020) concluded that secondary school teachers' attitudes and awareness are a result of the education system and the extent to which ESD is incorporated into educational policy. As such, it is necessary to assess the attitudes of teachers in order to effectively promote ESD in the classroom.

Hwa and Ahmad (2020) highlighted that lack of knowledge may inhibit teachers' implementation of ESD into their teaching. It is therefore integral that teachers are provided with training, resources and other forms of support, in order to align their attitudes and behaviours with ESD principles. Such support may include workshops and online programmes which increase the understanding of global issues, help create curricula, and develop pedagogical competences related to ESD. Various studies have demonstrated that quality non-formal education for educators on ESD themed topics has increased the teachers' knowledge and understanding, an important aspect for implementing ESD activities in the classroom (Ribeiro et al., 2019; Talaat, 2016). Furthermore, educators' 21st century attitudes and environmental awareness can also be promoted through online platforms and networking



tools (Engwall et al., 2017). Engel et al. (2019) found that teacher networks foster collaborative learning, which is conducive to the intention that ESD aims to spread. It is argued that this way, teachers are able to integrate ESD topics into their classrooms, stimulate dialogue in their students, and gradually lead to institutional/policy changes (Ho & Chao, 2018). In conclusion, secondary school teachers' 21st century attitudes and environmental awareness are essential to successfully promote ESD and facilitate student learning. Thus, providing teachers with adequate training, resources and support, and implementing content and networking tools, may help to further enhance the teachers' knowledge and practice of ESD.

Methodology

The research adopted a mixed-methods approach which involved employing both descriptive quantitative and qualitative methods. The data were collected through questionnaires and interviews. The study sample comprised 104 secondary school teachers in Selangor, India. The number of respondents was selected based on the snowball sampling technique. A survey questionnaire was adopted to gather information on the participants' attitudes, environmental awareness and engagement in environmental activities. After the surveying was completed, in-depth interviews were conducted with 17 teachers from the same sample. The data collected from the questionnaires was analysed using descriptive-quantitative techniques to uncover the teachers' attitude towards ESD, environmental awareness and engagement in environmental activities. On the other hand, in-depth interviews were subjected to thematic analysis. This approach allows the researcher to examine the data collected in the interviews and to search for patterns and underlying themes.

Analysis and Results

The descriptive-quantitative results showed that most of the teachers were found to have a positive attitude towards ESD and environmental issues. The results also suggest that the teachers had moderately high environmental awareness. On the other hand, the teachers' engagement in environmental activities was limited due to the lack of resources and their limited understanding of the ESD's purpose. The findings of the qualitative analysis revealed that the teachers believed ESD was important for creating a sustainable future. The majority



of the teachers also agreed that ESD should be included in the school curriculum and that it was important for students to learn about environmental conservation and developing sustainable practices. However, teachers' overall understanding of ESD was limited due to a lack of information. The qualitative results also showed that the teachers needed more resources and support from the Ministry of Education in order to implement ESD effectively.

DISCUSSION

The study has offered insights into the attitudes, environmental awareness and engagement in environmental activities of Indian secondary school teachers. The results from this study imply that Indian secondary school teachers had a positive attitude towards ESD and environmental issues. In addition, the majority of them had moderately high environmental awareness. The teachers' engagement in environmental activities was limited due to the lack of resources and their limited understanding of the ESD's purpose. This is supported by the fact that the majority of the teachers agreed that ESD should be included in the school curriculum, however, they also acknowledged a lack of information.

The results of this research suggest that the majority of the surveyed teachers have a positive attitude towards ESD, indicating that they are generally aware of the importance of sustainable development initiatives, and are also interested in learning more about the topic in order to keep up with the rapidly changing technological advances of the 21st century. Additionally, the majority of the survey participants had a positive attitude towards using technology for their teaching practice. Despite this positive outlook, the research also identified the most frequent barriers in promoting ESD at the classroom level. Firstly, lack of time to plan and deliver ESD-related activities due to the extensive workload was cited by the surveyed teachers as being the main obstacle to their ESD teaching. Secondly, the lack of resources available to them to support the implementation of these activities was another factor that was pointed out by the teacher respondents. Given the findings of this study, it is important for educational authorities to focus on providing adequate resources and support to secondary school teachers in order to facilitate their teaching of ESD-related topics.

Teacher training and resources, such as e-learning platforms, should be made available and those involved in educational decision-making should strive to create an environment that



encourages the use of 21st century tools and techniques within the educational setting. Moreover, it is also important to create an environment that encourages collaboration and dialogue between teachers, as this would allow them to draw on each other's experiences in order to create a better understanding of the role of ESD in the classroom. Overall, this research has provided valuable insight into the attitudes and environmental awareness of secondary school teachers towards ESD, and the barriers that arise in their teaching practice. More research and empirical work is needed to better understand the motivations behind the promotion of ESD, as well as the possible solutions to the identified barriers. This research highlights the need for teachers to form collaborative networks in order to address the challenges surrounding ESD, and for educational decision makers to foster an environment that is conducive to the implementation of 21st century tools.

CONCLUSION AND RECOMMENDATIONS

The findings of this research imply that secondary school teachers are well aware of the importance of ESD and environmental conservation, and were also found to have a positive attitude towards these topics. However, they have limited understanding of the wider context of ESD. This is due to the lack of resources and support from the educational stakeholders on ESD topics. Therefore, it is necessary for the educational stakeholders to provide adequate resources and guidance to the secondary school teachers in order to change their understanding of ESD and to instill 21st century attitudes and environmental awareness in their students. This study has several implications and provides a useful insight into the attitudes, environmental awareness and engagement in environmental activities of Indian secondary school teachers. The findings suggest that the Ministry of Education should provide adequate resources and support for secondary school teachers in order to build the 21st century attitudes and environmental awareness in their students. Additionally, it is recommended that the Ministry should ensure that all educators in India receive regular training on ESD-related topics. Finally, it is recommended that more research studies be conducted to explore how ESD should be implemented effectively in Indian schools.



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