



POLICY PERSPECTIVES OF ENVIRONMENTAL EDUCATION IN SCHOOL AND TEACHER EDUCATION CURRICULUM IN KERALA

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Abstract

The teaching of infused environmental concepts in the secondary school curriculum follows the recommendations of the NCF(2005) followed by KCF(2007) with respect to Kerala State while Teacher Education curriculum follows that of NCFTE(2009). The process of turning aspirations into realities and objectives into actions is greatly aided by policy texts. The policy documents gives motivation and direction to the educational programmes and finally leads the programmes into success. Therefore it seems logical to analyze these documents since the fate of Environmental Education (EE) hangs on how well it is reflected in the 'Bible' for education. These texts aim to support teachers, administrators, and other organizations participating in the design of curricula, textbooks, and examination reform, rather than to dictate. The present study make use of qualitative analysis of the national documents which was done with an intention to analyze how EE had been incorporated through the lens of infusion approach at secondary and teacher education level in Kerala. The findings that emerged from the analysis of the documents revealed awareness of environment as the key intend of education of the state. Further the reflections stemming from the review highlights that there exists a sort of discomfort between the curriculum frame work for students and curriculum framework for teachers in terms of EE.

Keywords: *Environmental Education, National Curriculum Framework, Kerala Curriculum Framework, National Curriculum Framework for Teacher Education, Infusion.*



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1. INTRODUCTION

The early sincere attempt to connect instruction on local environmental issues in schools requirements was the campaign of Basic Education, which Mahatma Gandhi launched in 1937. The core components of Basic Education are constructive action in the classroom, curriculum alignment with productive work and a supportive environment, and close ties between the local community and the school. The national objectives and guiding principles

established by the constitution serve as the foundation for the broad framework of educational goals, policies, and programmes. On the basis of this, the National Policy on Education was initially presented in 1968 in the newly independent India.

The Report of the Education Commission (1964-1966) served as foundation for the current status of EE in formal education. The best of what Basic Education had to offer was included into the report in order to connect it to the needs, goals, and way of life of

the country. The report said that the primary school's goal for scientific instruction have to be to help students develop a proper grasp of the key concepts, facts, principles, and processes relating to the physical and biological world. Only when the 10+2+3 curriculum was developed by National Council of Educational Research and Training at the nationwide level and presented in the 1975 publication "The Curriculum for the Ten-year School: A Framework" was the recommendation able to be put into practice. In order to create the National Curriculum Framework in 1975, **NPE (1968)** served as the foundational document. The National Curriculum Framework for School Education (**NCF, 2000**) and subsequent curriculum frameworks National Curriculum for Elementary Education and Secondary Education: A Framework (**NCF, 1988**) and National Policy on Education later reaffirmed the significance of EE in school education. Consequently, in all curriculum development programmes, one of the main areas of worry has been EE. There was enough information on the environment in the science and social science curricula, as well as to some extent in the language and mathematics curricula, to achieve the required goals. At the senior secondary level, those books for biology, chemistry, physics, geography, sociology, and mathematics also included enough information on the surroundings to deepen the information, comprehension, and abilities already attained.

The National Curriculum Framework (**NCF**) was issued in 2005 as a result of a state wide curriculum review conducted by NCERT in 2004. As a result the **NCF (2005) and KCF (2007)** guidelines with regard to Kerala State are implemented when teaching environmental themes in the current secondary school curriculum. The main factor in raising educational standards in schools is teacher preparation. Given that the policies prepared for schools are to be executed by teachers, successful implementation of EE in the classroom entails effective teacher preparation. Hence EE in the existing teacher education curriculum too bear utmost importance. The present teacher education curriculum follows that of National Curriculum Framework for Teacher Education (2009). Policy texts have a significant role in the process of converting goals into actions and aspirations into realities. They give motivation and direction to the educational programmes and finally leads the programmes into success. Therefore it seems reasonable to analyze these documents since the destiny of Environmental Education (EE) dangle on how well it is reflected. These manuscripts aim to support teachers, administrators, and other organizations participating in the design of curricula, textbooks, and examination reform, rather than to read aloud.

2. RESEARCH QUESTIONS

The study is intended to gain insights into how EE was captured in the national documents such as **NCF (2005), KCF (2007) and NCFTE (2009)**. Since the study give emphasis to the qualitative dimensions the research questions would come in naturally than the formulation of precise hypotheses to be tested. Thus based on the back ground and need for the study the initial questions raised by the investigator are

- 1) How EE is captured in the policy frameworks for School and Teacher Education level?
- 2) Is there any coherence between the curriculum framework for schools and curriculum framework for teachers in terms of Environmental Education?

3. ASSUMPTIONS

The study is based on the supposition that if the final goal of Environmental Education is to maintain our environment and its resources for future generations, then the related aim must be to provide an education which encourages people to strive towards that goal. In this juncture, the investigator thinks that by appropriately integrating EE with the school and teacher education curriculum can serve the purpose. It is on the basis of this supposition and literature review the following assumptions are made:

- 1) Environmental Education has been adequately reflected in our national educational documents
- 2) There exists coherence between the curriculum framework for schools and curriculum framework for teachers in terms of Environmental Education.

4. OBJECTIVE

The objectives of the present study are:

- 1) To review the national documents for the recommendations regarding the incorporation of EE at secondary and teacher education level.
- 2) To explore the coherence between the curriculum framework for schools and curriculum framework for teachers in terms of Environmental Education.

5. METHODOLOGY

Qualitative Document Analysis privileges the researchers' role in the analysis by using a "constant comparative" approach and is concerned with identifying meanings, patterns, and themes in texts rather than frequencies and quantitative statistical inferences. (**Altheide, 1996**). In the study qualitative analysis of the national documents was done with an intention to analyze how EE had been incorporated through the lens of infusion approach at secondary level. The qualitative data was collected by assembling

information from curriculum frameworks and related sources. The researcher read through the NCFs and carefully listed all the information explicitly stated in the documents with regard to the schooling of EE through infusion approach in a cross curricular framework. In the present study the [NCF \(2005\)](#), [KCF \(2007\)](#) and [NCFTE \(2009\)](#) are analyzed for the inclusion of comprehensive content on concerns related to EE in a holistic and systemic framework.

6. ANALYSIS AND INTERPRETATION

6.1. Findings from the Analysis of National Curriculum Framework (NCF-2005)

The National Policy on Education-1986 (NPE-1986) provided a strong base to incorporate EE in the school curriculum and can be considered a landmark for EE since all the programmes and projects related to EE till today have in some way emerged and are being implemented based on this document. All the curriculum frameworks brought out subsequent to NPE-1986 highlighted environmental concerns more evidently. Environmental Education was listed as "Habitat and Learning" as one of the subject areas in the National Curriculum Framework (NCF), which was issued in 2005 as part of the NCERT's mandate. In twenty-one Focus Groups, the National Curriculum was evaluated. One of them covered "Habitat and Learning," a topic that, in both substance and spirit, was akin to environmental education. Position papers from the focus groups were included in the National Curriculum Framework Package. The NCF-2005 extensively covered environmental concerns throughout the text, taking into account the significant environmental degradation seen in recent years as a result of the development of new technological options and lifestyles. According to the declaration, humanity must try to understand its origins, reestablish connections with its ecosystem, and comprehend and properly care for it. ([NCF -2005](#)).

The curriculum framework took into account fostering children's environmental awareness and making the need for its conservation a key curricular concern, reinforcing the NPE-1986 guidelines. It was thought that education could offer a crucial viewpoint on how to reconcile human life with the environmental catastrophe such that survival, growth, and development remained feasible. Therefore, the environmental document should be covered in every subject and through a variety of outdoor project-based activities. For instance, in addition to learning from books, kids should look at water sources and bodies to learn about water contamination. Thus, when deciding what should be included and what real-world examples should be used in planning for their interaction in the classroom, the local environment must be given priority. The agreement did not, however, confine EE to

"environmental protection." It states that the key objectives of EE should be to familiarize students with their social and environmental contexts, to give them the tools they need to analyze, assess, and draw conclusions about environmental issues, to contribute, whenever possible, to our understanding of those issues, and to encourage environmentally friendly behaviour in bid to accelerate the transition to a better future. To achieve these goals, the curriculum may be designed around education about, through and for the environment. Another recommendation in text is to integrate ideas from different fields and highlight how knowledge is interconnected. The entire educational curriculum must incorporate environmental awareness. Environmental validity was one of the validities that needed to be ensured for science education. In order to understand the problems at the intersection of science, technology, and society, it is necessary to position science in the larger context of the learner's surroundings, both local and worldwide.

The document identifies that one of the most important issues of the new millennium is providing for the needs of the human habitat, or the ecosystem that supports humans. It seems obvious that a new paradigm for education is necessary if humanity is to pursue sustainable progress as it enters the Information Age.

6.2. Links that is holistic and systemic across the curriculum

The document promotes an integrated and systematic approach to environmental education. Systemic thinking focuses on the linkages, interconnections, and context of the dimensions, elements, and/or activities within a given system, emphasizing the system as a whole rather than merely individual components. As its emphasis is not just on finding solutions to a problem but rather on creating awareness and understanding that a particular problem can also have multiple causes, it encourages different perspectives on problem solving. Since multidisciplinary thinking would replace sectoral thinking in the new paradigm because holistic thinking is at the core of EE.

6.3. Infusion of Environmental Education across the Subjects

The Hon'ble Supreme Court emphasized the need to teach environmental concerns as a required subject at all levels of schooling, but the document suggested that these important concerns are best realized by incorporating environmental education components into various disciplines while making sure that enough time is set aside for pertinent activities. Additionally, this would assist in addressing the NCF-2005's concern about the load of the curriculum. The document also included a list of activities that would be crucial to learning about the habitat and dealt with the

natural and to varying degrees modified physical, biological, as well as social environment. Since this theme touches, EE can and should be implemented on many facets of life incorporated into every subject taught in schools. This may be the rationale behind the strong suggestion that EE be infused into every discipline as a proactive undertaking. This would be much more beneficial than teaching it separately in the traditional bookish manner. Under appendices, the text includes a collection of activities showcasing instances of integrating environmental principles across multiple areas. It allows for the integration of EE in physics, mathematics, computer science, biology, geography, history, political science, languages, music, art, craft, scheduled castes/tribes issues, work experience, physical education, and gender issues.

6.4. Implementation Strategy

The Focus Group suggests that in order successfully implement reforms to the school education system with respect to EE, It will be necessary to simultaneously work on six major components: curriculum review, materials development for conventional media, utilizing ICT, teacher preparation, evaluation system, and the physical environment of the school. The curriculum sets the standards for what is taught and how it is taught. Setting EE goals for the educational stage and translating them into curricula, textbooks, and teaching-learning methods require careful consideration. It will be necessary to create teacher, student, and classroom resources that are specific to the area for EE. At the heart of this effort are "greened" books that to be produced as of a comprehensive environmental outlook in terms of both their content and pedagogy and which promote elasticity to incorporate location specificities. There needs to be a significant reconsideration of the methodology for textbook writing in order to provide such instructional material. Books for teachers are necessary so they can successfully teach the texts. Workbooks for the students and teacher guides are necessary for the hands-on portion of EE. There is also a need for charts, reference materials, etc. This would include new electronic media as well as audio and video content in addition to print media. For the practical portion of EE, student workbooks and instructor guides are required. It should be built to encourage the provision of excellent material locally and regionally. There is also a need for charts, reference materials, etc. This would include new electronic media as well as audio and video content in addition to print media. For the active portion of EE, student workbooks and instructor guides are required. It must be intended to allow the expansion of excellent material regionally and nearby. There is also a need for charts, reference materials, etc. This would include new electronic media as well as

audio and video content in addition to print media. The strategy should not have all the content created centrally; rather, it should be built to encourage the creation of excellent local and regional content.

Taking advantage of ICT, EE could pave the path for transforming the paradigm of education by utilizing the myriad potential of the new media. Many students already use computers to access course content, particularly in urban institutions. Additionally, they use the internet to access relevant information, particularly when working on projects. The document advises going beyond current initiatives and using these media as instruments to increase environmental awareness in India by engaging students in the process of knowledge creation. This necessitates the creation of software to assist students in their EE project work by explaining appropriate data gathering procedures, validating the recognition of living organisms, and organizing documentation. It is necessary to create websites that are appropriate and to set up systems for content monitoring. The proposal also recommends setting up discussion groups with professionals and regular citizens to offer feedback on and raise the caliber of the information on this website.

How something is taught and what is taught is determined by the evaluation. Improvements must be made to the evaluation process in order for us to be able to make the desired improvements, including modifications to the assessment scheme, appraisal of projects, fieldwork, and actions, judgment of teachers, and assessment of schools. The project completion, high quality, and site-specificity of the projects must all be guaranteed through the evaluation method. This requires a lot of work, testing, and investigation. Similar to this, EE goals must also be reflected in how instructors and schools are evaluated. Currently, either a small group of individuals or a machine performs the examination. A creative and inclusive system of evaluation might be established by setting up a scheme of putting the outcomes of Environment based ventures on a freely available website with due recognition given to the students and teachers involved.

The final recommendation made in the document is that the school should serve as an example of the ecological principles that the educational system aspires to promote. Whether the context is one of broadsheet, power use, waste managing, composting, or greening, the school needs to provide an example of good practices and communicate these through demonstration to the community as well as to the pupils. The community and numerous other stakeholders must be involved in the development of these resources. Locale-specific norms must be established for this, although caution must be exercised to prevent the spread of centralized models. The

knowledge, use, and upkeep of this infrastructure must be supported in the classroom.

The Group has also outlined a plan on how to organize this endeavor over the course of five years, with substantial work starting in the first year. The document ends with the hope to highlighting the importance of schooling environmental studies as an obligatory subject at all levels will highlight the importance of the issues raised by the focus group and serve as a significant catalyst for enacting the necessary changes. The Group honestly believes that, should the recommendations be followed, the subsequent measures would adhere to the Honorable Supreme Court judgment both in text and in spirit.

6.5 Findings from the Analysis of the Kerala Curriculum Framework

The National Curriculum Framework (NCF-2005) suggestions served as the foundation for the conceptualization of Kerala's curriculum revision initiative. It was prepared by SCERT of Kerala in 2007. In the overview of the Kerala's educational scenario the document highlights the need to initiate learners to righteous ideas like sense of collectivity, equality, gender equality, awareness on environment and nationalism to an extent. It further states that Globalization has put forth its pressure on environment, health and resource management

6.6. Issue Domains that are felt throughout the state

Kerala is dealing with a number of difficulties related to globalization in all aspects of life. A closer examination reveals a number of issues, including the absence of a vision of universal humanism, a lack of human resource development, a failure to comprehend the unique characteristics of cultural identity and the need for it to develop freely, a failure to recognize agriculture as a component of culture, a lack of a scientific approach to health and public health, a failure to give marginalized groups due consideration, a lack of scientific management of land and water, and a host of other problems.

6.7. Awareness on Environment

The document included environmental awareness as one of the goals of education when drafting them with regard to the state. It claims that the urgent necessity for environmental protection calls for widespread awareness. It is crucial to instill in our students the mindset that all developing activities should be in harmony with the environment, maintenance in mind the aim of sustainable development. Additionally, they ought to learn how to use and preserve all of the natural resources that are at their disposal. It aspires to a curriculum that can aid in instilling in the next generation values like nationalism,

a democratic and secular worldview, a sense of equality, pride in one's own cultural identity, environmental awareness, and compassion for the oppressed. In order for the learner to come to a realization, the experience should provide insight into the current social concerns. For instance, in order to raise students' knowledge of environmental issues, it is necessary to help them learn about the modern issues that contribute towards environmental degradation and to motivate them to get involved in these problems in order to find a solution.

6.8. Approaches to Subjects

The framework for the curriculum is developed based on societal issues, which necessitates an issue-based and problem-oriented approach. The scientific method and ideas it has advanced may have been utilized to discover and examine these problems. When topic methods are taken into account, maths can be used to analyze problems logically and quantitatively. Social sciences could be used to analyze the social aspects of the problems. Languages serve as tools for identifying and communicating difficulties. Work experience, physical education, and art classes all offer opportunities for experience-building, personal expression, and problem-solving. The top priority is creating textbooks that address specific issues. The manifesto made several important recommendations, one of which was that knowledge shouldn't be viewed as a finished good. The basic knowledge needed to identify a solution must have room alongside the context that describes the problem. If not, there should be a way to collect this data. The learner's personal experiences in their local area play a significant role in an issue-based curriculum. When the learning materials and the classes effectively represent the local challenges, the curriculum has a greater sense of purpose. Science shouldn't be used to perturb the natural order of things. It should be used with consideration for social, environmental, and societal wellbeing. It is crucial to consider both the immediate and long-term demands of society when choosing curriculum approaches, teaching methods, and material. The statement emphasizes the necessity of raising a generation capable of learning new things and finding solutions to problems in a variety of domains, including farming, industry, health, communication, information technology, etc. By tying together the resources and human capacity that are already present in our society, new production sector advancements should be made while keeping in mind the idea of Kerala society's development. The scientific view of the cosmos, the scientific method of inquiry, environmental awareness, the idea of sustainable development, value consciousness, etc. are to be integrated into civil society in this context. The study of topography should provide the student a larger

environmental viewpoint that supports the notion that the earth is a priceless resource that our ancestors have left for us and that it should be appropriately preserved for future generations.

6.9. Liaison between Teacher Education and School Education

A comprehensive reform of teacher education is the key component of an understandable curriculum modification that will improve the standard of education. The demands of the school system are constantly changing, and teacher education must adapt as well. Programmes for teacher education need to be updated. The statement made it clear that initiatives to improve school curricula currently show a gap between forms in Teacher preparation. Teacher tutoring ought to be the one to critically embrace the newest developments in education. The newest educational trends shouldn't be adopted in classrooms until future teachers are familiar with them. Centres for teacher education should be active. To establish a connection between the teacher education curriculum and the school curriculum, SCERT's role in curriculum development for teacher education should be ensured.

6.10. Findings from the Analysis of the National Curriculum Framework for Teacher Education (NCFTE, 2009)

Two significant developments particularly; the National Curriculum Framework 2005 and the Right of Children to Free and Compulsory Education Act 2009 as well as the fundamental tenets enshrined in the Constitution of India have guided the development of **NCFTE(2009)** Framework. The document elaborately discussed the context, concerns, and vision for Teacher Education. . The document assured for an integrated education which promote equitable and sustainable development for all segments of society and respect for all. Educators and students need to be educated to adjust their consumption patterns and the way they view natural resources in light of the current ecological problem, which is being fueled by excessively commercialized and competitive lives. **(NCFTE, 2009)**.

Given its critical perspective in preserving a democratic social order, EE is discussed in the document as a component of contemporary studies under the foundations of education. The text also emphasized the significance of bridging community and formal school knowledge in education and the inclusion of locally adapted curriculum and pedagogy, all of which are essential elements of EE. In this context, community knowledge is understood to be the knowledge that people creates, develop, and assemble as a result of their personal and environmental experiences. For instance, it is valuable and legitimate knowledge when a community is aware of its land, soil, herbs, and other ecological aspects that affect

agricultural practices. It is crucial to view such native and neighborhood knowledge as lawful in as much as it adheres to constitutional principles.

The curricular framework also recommended including environmental hygiene as a key topic in teacher education curricula. Regarding pedagogic studies, this document advocated a shift away from traditional teacher education, which concentrated on a strictly disciplinary approach to teaching individual school subjects like physics, chemistry, biology, history, and geography, in favour of a more integrated approach that included both the social and natural sciences. Due to the necessity of EE, all theory courses will need to maintain "field-based units of study" and an "interdisciplinary" organizational structure.

According to the document, an environmental studies (EVS) pedagogy course should cover the following topics: the philosophical and epistemological underpinnings of EVS as a field of study that combines the sciences, social sciences, and environmental education; familiarizing student teachers with children's perceptions of their physical and social environments so that these can later be interpreted for classroom instruction; and assisting student teachers in developing their planning skills. In order to create strong pedagogical understanding, it was also advised that elementary school instructors should conduct study on several elements of young children's learning; including environmental education Workshops and course work are examples of practical activities that are included in the curriculum. The document's final chapter highlights the importance of teacher educators' education, stating that it is obvious that prospective teachers' education and training will be successful to the extent that it has been provided by teacher educators who are qualified and equipped professionally for the position.

After seen the effects that a policy document may have, it is more crucial than ever that these documents provide detailed information on EE-related issues. This is essential to avoid misunderstandings of the concepts and philosophies expressed in the document when various stakeholders start "deciphering" and "decoding" it during the implementation phase. In large part, the Hon'ble Supreme Court's ruling from 1991 making EE a required topic in schools promoted EE in the nation and helped to mould EE into its current stature. Almost all of the national documents that have been published to date contain implicit or explicit references to EE.

6.11. Coherence between the curriculum frameworks for School and the Teacher Education with regard to EE

The **NCF (2005), KCF (2009), and NCFTE (2009)** documents all address various EE-related topics. It is frequently observed that each time a novel

national curriculum framework for school education is released, new learning objectives or special problems are raised. The NCF-2005 discusses the infusion strategy as a means of achieving EE goals through the academic programme. Since this is unique, teacher education courses should pay particular attention to it. The way teachers are prepared will determine how well EE is implemented. The National Curriculum Framework for School Education from 2005 appears to differ somewhat from the **NCFTE (2009)** document's recommendations for EE. The most notable is the absence of any reference to the EE infusion technique in the curriculum or the pedagogy section of National Curriculum Framework for Teacher Education (2009). Pre-service training programmes should address the present curricular issues in education. Any deficiencies and gaps in the pre-service courses could have a negative impact on the quality of the educational experience. The fact that Environmental Education itself, much alone the infusion strategy, is not effectively represented in the National Framework for Teacher Education 2009, which was created by the nation's top body for teacher education, NCTE, is rather disturbing. The understanding of the infusion strategy is crucial to the implementation of EE's success. In the **NCFTE (2009)** publication, the word "infusion" or the "infusion approach" of EE are not even mentioned. The **NCF (2005)** emphasized EE's significance and urgency as a means of facilitating the transition to sustainable development. However, rather than emphasizing all the elements of sustainable development, namely society, economy, and environment, the focus remained on addressing environmental issues at various levels. So, a closer look revealed that the document was lacking the true essence of sustainable development. The **KCF (2009)** statement also very briefly talks about the thought of sustainable development, and the phrase environmental awareness was used in place of environmental education. The **NCFTE (2009)** which distinguished itself from the other two documents by emphasizing the need to educate future generations throughout perspectives of the current ecological crisis to promote equitable and sustainable development, did so succinctly but precisely. Instead of expressing the issues in patches, it is believed that a more explicit and clearer representation of EE would have been more appropriate. Concerns over the creation of the curriculum and instructional materials in EE are another key issue. First, it is necessary to determine what needs to be accomplished with regard to EE through the school curriculum. The objectives must be made clear. The Teacher Education curriculum will be created in light of this. It is crucial that sufficient environmental concepts are incorporated into all academic fields of study if EE is to be integrated across subject areas. Teachers should be able to recognise

what has been injected, where it has been infused, and how it has been infused at the same time. As a result, the curriculum at teacher education and school level ought to complement one another. However, it has been noted that while Teacher Education courses do not at all reflect such suggestions, school curricula do make some recommendations. In the case of infused environmental notions, this is accurate. In Teacher Education courses, there is no emphasis placed on taking any steps to identify the infused concepts while lesson preparation or training in the teaching of those infused environmental concepts. The lack of networking is a significant contributor to the current miserable state of affairs in EE. What is suggested for the school curriculum and what is put into practice in professional development courses, as well as by various school systems and boards of education, are completely incompatible. As a result of these, the actual practices do not reflect any elements of EE.

7. DISCUSSION

The National Focus Group on Habitat and Learning's position paper, which is about EE, was put into the curriculum framework (**NCF-2005**). Analysis of the fundamental flaws in the current state of EE in school education at different stages revealed the demand for a new paradigm shift. The implementation strategy, components, and methodology for producing those components for the new paradigm shift were all thoroughly addressed. The primary basic human need, according to the paper, is to live in harmony with one's own being as well as with the natural and social world. Regarding the inclusion of EE as a separate subject, the focus group on Habitat and Learning had a different viewpoint. The committee was worried that include EE as a separate subject would increase the workload on the curriculum. The committee suggested that the ideal way to implement EE would be to strategically integrate concepts linked to the environment into other topics. This method could be effectively used to teach subjects like health and physical education, art, music, and information technology, as well as physics, chemistry, biology, mathematics, geography, history, and political science. A basket of activities exhibiting the integration of environmental themes in all the school disciplines was offered in detail. Activities designed for real-world circumstances become a meaningful way for engaging students. Environmental Education (EE) is a fairly new idea that requires teachers to move further than the confines of their conventional subject specialisation. Educators are the primary agents for the accomplishment of curricular restructuring in school teaching-learning. The effective planning and implementation of teaching strategies, which call for specialised knowledge on the part of instructors, are also necessary for the sustained growth of the needed outlook and abilities and the instillation

of EE-related values. Therefore, it is crucial to furnish teachers with the necessary information, abilities, and skilfulness. This can be done by implementing well-structured pre-service and in-service training programmes. The problem domains listed by KCF (2007) also fall under the general definition of EE. According to the agreement, one of the objectives of education with regard to the state is environmental awareness. The utilization of all academic courses in the implementation of an issue-based curriculum allows for the identification and analysis of problems from many angles, which calls for the integration of an approach across all curricular areas. The achievement of EE as a cross-curricular issue at the secondary level calls for a strong liaison between teacher education and school education, which is very essential. The provision of high-quality education is greatly aided by teacher preparation. An educational system cannot function without teacher preparation programmes. It is closely related to society and is governed by a country's ethos, culture, and character. The NCFTE (2009) established the central idea of a learner-friendly, compassionate teacher as its cornerstone, basing it on concerns with inclusive education, perspectives for equitable and sustainable development, gender perspectives, the use of community knowledge in education, and ICT in learning. Thus, NCFTE (2009) recommended integrating environmental studies pedagogy in teacher preparation, in line with the broad vision of school education presented in NCF 2005 and reflecting the significance of developing environmental awareness and problem-solving in schoolchildren. Almost all of the national documents that have been published to date contain implicit or explicit references to EE.

8. CONCLUSION

The results of this research have highlighted policy concern that currently impedes the teaching and learning of EE in Kerala context. The NCF-2005 discusses the infusion strategy as a means of achieving EE goals through the academic programme. Since this is unique, teacher education courses should pay particular attention to it. The way teachers are prepared will determine how well EE is implemented. Pre-service training programmes should address the present curricular issues in education. It is important to determine this so that the policy makers can address the gaps and issues related to providing clear direction for preparation and presentation of EE in both levels of education.

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