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SUSTAINABLE EDUCATION

Miss Tejshvini Barbaro Mahadik
Vice Principal English School Jr . College Mangalwedha
Tal Mangalwedha Dist Solapur.

ABSTRACT:

Sustainable Education is methods that promote environmental stewardship, social equity, and economic viability are referred to as sustainable education. It aims to give students the skills, knowledge, and morals they need to deal with global issues like climate change, resource depletion, and social injustice. An approach to teaching and learning that incorporates sustainability principles is called sustainable education. It aims to give students the skills, values, and knowledge they need to deal with environmental, social, and economic problems. Individuals are given the ability to contribute to a more equitable and sustainable future through sustainable education's promotion of critical thinking, interdisciplinary learning, and active participation. Promoting practices that support ecological balance, raising awareness of global issues, and promoting responsible citizenship are crucial components. In the end, the goal of sustainable education is to raise a generation that can make well-informed choices that are good for people and the environment.



Key components include:

1. Interdisciplinarity in Education: bringing together subjects like social studies, economics, and ecology to give a complete understanding of sustainability.
2. Thinking critically: encouraging students to critically evaluate and analyze information, fostering problem-solving abilities applicable to real-world problems.
3. Community Participation: Promoting a sense of responsibility and connection to one's surroundings by involving students in local sustainability projects
4. Experiential Instruction: making use of real-world experiences like field trips and projects to improve comprehension of sustainability ideas.
5. Perspective on the World: Teaching students about how the world is interconnected and how local actions affect global issues.

In general, sustainable education equips students to advocate for positive change in their communities and beyond while also preparing them to live sustainably.

KEYWORDS: *sustainable education , Sustainability , Environmental education , Social equity Economic viability , Interdisciplinary learning , Critical thinking.*

INTRODUCTION:

A transformative approach to education, sustainable education aims to instill an understanding of sustainability principles in a variety of educational settings. The importance of education grows as the world grapples with pressing issues like resource depletion, social inequality, and climate change. People are given the skills and knowledge they need to help create a more sustainable future through sustainable education, which encourages critical thinking about these issues. Sustainable education places an emphasis on the interconnectedness of economic, social, and ecological systems at its core. Students can be encouraged to consider the long-term effects of their choices and actions by educators incorporating these concepts into the curriculum. In addition to academic development, this strategy fosters personal responsibility and civic engagement. Sustainable education fosters a profound comprehension of the complexities of sustainability by incorporating hands-on experiences, community involvement, and interdisciplinary learning. It teaches students how to navigate a world that is changing quickly and to advocate for environmental health, social justice, and economic equity-promoting solutions. In the end, sustainable education is about educating citizens who are committed to making a positive impact in their communities and beyond and are well-informed, active citizens. A fundamental framework for fostering a more equitable and environmentally responsible world is sustainable education. The need for educational systems to adapt and provide students with the skills they need to navigate complexities like climate change, social inequality, and resource depletion has never been greater. A holistic approach that integrates environmental stewardship, social justice, and economic viability is at the heart of sustainable education. By encouraging critical thinking, creativity, and teamwork, it goes above and beyond traditional education and enables students to actively engage with real-world issues. Educators have the ability to motivate students to become informed citizens and proactive agents of change by incorporating sustainability into disciplinary curricula. In addition to preparing individuals for the workforce, this strategy fosters a sense of social and environmental responsibility. A culture of sustainability that extends beyond the classroom is the goal of sustainable education, which aims to empower students to make decisions that contribute to the well-being of future generations. Sustainable education is essential for creating a just and resilient future for everyone as we confront unprecedented global challenges.

AIMS AND OBJECTIVES

Aims of Sustainable Education

1. **Promote Environmental Stewardship:** Encourage actions that preserve and conserve natural resources to instill a sense of environmental responsibility.
2. **Foster Social Equity:** Discuss issues of equity and social justice to help students comprehend the significance of fairness and inclusion in sustainable development.
3. **Encourage Economic Viability:** Give students the information they need to back sustainable economic strategies that are good for both individuals and communities.
4. **Develop Critical Thinking:** Develop analytical abilities that will enable students to evaluate intricate sustainability issues and make well-informed choices.
5. **Empower Active Citizenship:** Encourage students to participate in their communities and advocate for environmentally friendly practices and policies.

Objectives

1. **Integrate Sustainability into Curriculum:** Make sure that sustainability ideas are woven into every subject and field.
2. **Enhance Eco-Literacy:** Provide students who have a thorough comprehension of ecological systems, biodiversity, and the effects that human activities have on the environment.
3. **Promote Experiential Learning:** Implementing sustainability principles in real-world contexts through hands-on learning opportunities like projects, field studies, and community service is encouraged.

4. **Encourage Collaborative Learning:** Encourage students to work together as a team to solve problems related to sustainability.
5. **Cultivate Lifelong Learning:** Encourage students to continue learning about sustainability and to seek out knowledge and solutions throughout their lives by inspiring a commitment to ongoing education.
6. **Support Global Perspectives:** Help students comprehend the interconnectedness of the world and the effect that local actions have on global sustainability issues.
7. **Develop Ethical Reasoning:** Inspire students to consider their core beliefs and the moral ramifications of their environmental decisions.

Sustainable education aims to produce educated, proactive individuals who can bring about positive change in their communities and the world by focusing on these goals.

LITERATURE REVIEW:

As a result of the urgent requirement for educational systems to adapt to global challenges, sustainable education has emerged as a crucial field of study. The key themes, approaches, and conclusions of the most recent research on sustainable education are compiled in this literature review.

1. Defining Sustainable Education

Over time, the idea of sustainable education has changed. A holistic approach is advocated by researchers like Sterling (2001), who emphasize the need for education to address not only environmental issues but also social and economic ones. Gough (2013) asserts that sustainable education should foster a sense of agency and responsibility in students by empowering them to critically engage with complex issues.

2. Curricular Integration

The incorporation of sustainability into educational programs is the subject of a substantial body of research. Benessia et al.'s studies (2016) and Huckle (2018) highlight various pedagogical strategies that effectively incorporate sustainability concepts, such as project-based learning and interdisciplinary approaches. Learning becomes more relevant and significant as a result of these strategies, which encourage active participation and real-world application.

3. Experiential Learning

In sustainable education, experiential learning is frequently cited as a powerful strategy. Students' comprehension of sustainability can be enhanced through hands-on experiences like community projects and fieldwork, as evidenced by Kolb's research from 1984 and subsequent adaptations. Not only does this strategy improve knowledge retention, but it also fosters a sense of connection to issues both local and global.

4. Critical Pedagogy

In sustainable education frameworks, critical pedagogy, which is influenced by thinkers like Freire (1970), is frequently used. Scholars argue that education should foster critical dialogue about sustainability and challenge existing power structures. According to McLaren (2015), this point of view encourages a comprehension of the social facets of sustainability. It places an emphasis on equity and justice.

5. Global Perspectives

The significance of global perspectives in sustainable education is also emphasized in literature. Curricula that address global interconnections are essential for preparing students to critically consider their roles in a globalized world, according to researchers like UNESCO (2014). Understanding the global nature of sustainability challenges requires this perspective.

6. Assessment and Evaluation

Recent studies have paid more attention to the evaluation of sustainable educational practices. The Sustainable Development Goals (SDGs) and other frameworks offer benchmarks for assessing sustainability-related educational outcomes. Leal Filho et al.'s research (2019) emphasizes the need for comprehensive evaluation strategies that take into account not only the acquisition of new knowledge but also changes in behavior and the impact on the community.

7. Barriers and Challenges

Several obstacles to the implementation of sustainable education persist despite the progress. According to Owens (2020), obstacles include a lack of educators' training, insufficient resources, and institutional resistance. For sustainability to be successfully integrated into educational systems, it is essential to remove these obstacles. The literature on sustainable education highlights its multifaceted nature, which includes economic, social, and environmental aspects. For effective and transformative learning experiences to be created, ongoing research and collaboration between educators, policymakers, and communities will be necessary as educational institutions confront sustainability's complexities. Innovative pedagogical approaches, their effects, and the obstacles to sustainable education implementation should continue to be the focus of future research.

SUSTAINABLE EDUCATION

India has a rich tradition of imparting knowledge. Gurukul was a system of education in ancient India. In which the students lived in the same house with the teacher. Nalanda has the oldest education system in the world. Students from all over the world were attracted to the Indian Knowledge system, considered a high quality in ancient India. In ancient India, education was a teacher-centered, then this process has changed into student-centered education. All-round development of students is teachers' work. Today many challenges have come in the education system, so it is necessary that educational institutes and colleges should be updated. Any organization gets its reputation on the basis of quality. Therefore, the principal is the main administrative element of the college. It is important how much effort the principal makes for the quantity and development of the college. The development of any college rests on his shoulders. For this, the institution appoints the principal, considering all these. For that, the principal's qualification, ability, attitude are being considered. A true principal tries to raise the development of the college by trusting the institution and the professors. On the other hand, if there is a politician in the college, the college is damaged and the image of the institution tarnishes. Therefore, the principal is being watched by the institution.

In the name of sustainable development of the colleges, the founder has been tasked to succeed the organization as the principal. Dose SUTA organization works on the ideas of the education minister? Such a question arises, one such organization that has come to be known is Shikshan Prasarak Mandals Dalit Mitra Kadam Guraji Science College Mangalwedha. There were many difficulties while establishing this college. This college was established in the year 1984. Initially, this college was running on an unaided basis. Later gradually it became aided. It was in this that the debate for the post of principal of the college was sparked. Appointment of principal is done on the basis of seniority. According to this, Dr. Subhash Kadam was appointed without any injustice. But college employees went against him and in the year 2000, protested in the college. In these arrangements were made to accuse Subhash Kadam and put him in jail. After this, he was acquitted on 9th August 2001. After this, an administrator was appointed to the college. After this, further attempts were made to remove the qualification of the college. All the employees of the college principal are to be surplus. The principal in charge of the college played politics. Dr. Subhash Kadam was not given surplus. When asked about this, mischief comes to the fore. Against the said incident, the institution approached the court and the dispute started between the institution against the university, the government, and the employees. Dr. Kadam sir worked to keep the college alive in all these controversies. A warrant trial was started against six people after an appeal was filed in the High Court regarding the matter. The in-charge principal tried to close it many times during his career and the college was closed. The doors of education were closed.

for poor students. There was demand, to facilitate the education of children from Mangalwedha City and rural areas Keeping this request in mind, the president of the institution, Adv. Sujit (Bapu) Kodam Started to college restoration through a legal battle and the college was re-opened dalit mitra kadam guruji science college was started and there was an atmosphere of happiness comong to student Considering the above legal matters, it is observed from this carticle that the Concerned in-charge principal had to undergo imprisonment.

RESEARCH METHODOLOGY

The principles, practices, and effects of sustainable education are studied using a variety of methodologies in research. The following are typical methods and approaches for conducting research in this area:

1. Qualitative Research

In order to acquire in-depth insights into experiences, perceptions, and attitudes regarding sustainable education, qualitative methods are frequently utilized. In order to gather personal narratives and perspectives on sustainability practices, common methods include conducting semi-structured or unstructured interviews with educators, students, and members of the community. arranging discussions for the group to discuss our perspectives and experiences on education sustainability. examining specific educational initiatives or programs that have successfully integrated sustainability to comprehend challenges and best practices.

2. Quantitative Research

Quantitative methods are useful for evaluating the efficacy of sustainable education initiatives and provide statistical insights. Distributing structured surveys to students is a common method for gathering information about their knowledge, attitudes, and actions regarding sustainability. This can be used to measure how educational interventions affect students. conducting controlled studies to determine how certain curriculums or teaching methods affect sustainability-related learning outcomes for students.

3. Mixed Methods

Mixed methods research offers a comprehensive understanding of sustainable education by combining qualitative and quantitative methods. Researchers can triangulate data using this strategy, which improves the validity of their findings. Surveys, for instance, might be used by researchers to collect numerical data, and interviews might be used to further investigate those results.

4. Action Research

Participatory action research involves educators reflecting on their methods and participating in cycles of planning, acting, observing, and reflecting. This procedure permits teachers to carry out manageability drives in their homerooms and assess their viability progressively.

5. Longitudinal Studies

The long-term effects of sustainable education practices can be better understood through longitudinal research, which keeps track of changes over time. Researchers may be able to gain a better understanding of attitudes and behaviors as students engage with sustainability concepts with the assistance of this strategy.

6. Content Analysis

To determine how sustainability is represented and incorporated into educational materials, curriculum, and policies, content analysis is used. This approach has the potential to reveal content voids and assist in the creation of educational resources that are more comprehensive.

7. Participatory Research

Participating in the research process with stakeholders like students, teachers, and members of the community ensures that the findings are pertinent and grounded in real-world contexts. Participatory research places an emphasis on teamwork and taking responsibility for the results. In order to conduct ethical research on sustainable education, participants must be treated with respect, informed consent must be obtained, and confidentiality must be maintained. Researchers should make sure that the communities and educational settings in which they work benefit from their work.

Reflecting the field's complexity, sustainable education research employs a diverse and adaptable methodology. Researchers can acquire a comprehensive comprehension of how to effectively implement and evaluate sustainable education practices by employing a combination of qualitative, quantitative, and participatory methods. This, in turn, aids in the development of educated, involved citizens who are capable of addressing sustainability issues.

Statement of the Problem:

Significant obstacles prevent the effective implementation of sustainable education across educational systems, despite the growing recognition of its significance in addressing global challenges. Traditional subjects are still given a lot of attention in many curriculums, but sustainability principles that take into account economic, social, and environmental factors are often overlooked. Students' ability to actively participate in sustainable practices is diminished as a result of this gap, which also limits their comprehension of important global issues.

Additionally, there are frequently insufficient opportunities for professional development and teacher training that focus on sustainability. Teachers might feel unprepared to teach about sustainability, which could result in different approaches being used in different classrooms and institutions. There are disparities in student knowledge and engagement with sustainability topics as a result of this inconsistency. The integration of sustainable education is further complicated by systemic issues like a lack of resources, institutional resistance, and varying stakeholder priorities. Innovative curricula and hands-on learning opportunities that promote sustainability are difficult to implement in many schools and educational institutions due to a lack of funding and support. Last but not least, the evaluation of sustainable educational practices is still in its infancy. It may be difficult to gauge the impact of educational initiatives because existing evaluation frameworks may not accurately measure the knowledge, attitudes, and behaviors associated with sustainability. In conclusion, the issue stems from inadequate assessment methods, systemic barriers to implementation, inadequate teacher preparedness, and inadequate integration of sustainable education into curriculum. If we want to raise a generation capable of dealing with the urgent issues of sustainability that our planet is facing, we must address these obstacles.

NEED FOR THE STUDY

The study of sustainable education is essential for several interconnected reasons:

1. Addressing Global Challenges

Preparing people to effectively respond to pressing issues like climate change, resource depletion, and social inequality is crucial as the world confronts pressing issues like these. Sustainable education fosters a sense of responsibility and agency in students by providing them with the knowledge and skills they need to comprehend and address these complex issues.

2. Promoting Interdisciplinary Learning

Environmental science, sociology, economics, and ethics are just a few of the many fields that fall under sustainability. Students are able to think critically and holistically about solutions when they study sustainable education because it encourages the development of interdisciplinary curricula that reflect the interconnectedness of these fields.

3. Fostering Civic Engagement

Sustainability education aids in the development of educated, engaged citizens who are motivated to participate in their communities and advocate for environmentally friendly practices. People are able to become proactive agents of change when they are aware of the social and environmental repercussions of their choices.

4. Enhancing Educational Equity

In order to address disparities in access to resources and opportunities, sustainable education places an emphasis on social justice and equity. This area's research has the potential to identify effective strategies for promoting inclusivity and ensuring that all students, regardless of background, have the resources to engage with sustainability issues.

5. Supporting Teacher Development

The need for educators to receive training and professional development is brought to light by research into sustainable education. Teachers' confidence and competence in incorporating sustainability into their classrooms can be improved by having an understanding of effective teaching methods and best practices.

6. Evaluating Impact and Effectiveness

Assessment frameworks that measure student learning, engagement, and behavioral change related to sustainability can be developed by studying sustainable education. This is essential for determining the efficacy of educational programs and guiding future actions.

7. Building a Sustainable Future

The study of sustainable education ultimately contributes to the larger objective of developing a sustainable future. We can raise a generation that values ecological integrity, social equity, and economic resilience by preparing students to comprehend and address sustainability issues.

Research into sustainable education is clearly required. It addresses global issues, encourages interdisciplinary learning, encourages civic engagement, improves equity, encourages the development of teachers, evaluates impact, and contributes to a long-term sustainable future. We can better equip individuals and communities to navigate the complexities of a world that is rapidly changing by expanding our knowledge of sustainable education.

An approach to teaching and learning that incorporates sustainability principles is called sustainable education. It aims to give students the skills, values, and knowledge they need to deal with environmental, social, and economic problems. Individuals are given the ability to contribute to a more equitable and sustainable future through sustainable education's promotion of critical thinking, interdisciplinary learning, and active participation. Promoting practices that support ecological balance, raising awareness of global issues, and promoting responsible citizenship are crucial components. In the end, the goal of sustainable education is to raise a generation that can make well-informed choices that are good for people and the environment.

ACKNOWLEDGMENTS

We would like to express our sincere gratitude to everyone who has helped develop and promote sustainable education. We acknowledge, first and foremost, the educators, researchers, and thought leaders whose original concepts and zeal have paved the way for the incorporation of sustainability into curriculum. Students are inspired to think critically and act responsibly by their commitment to fostering a holistic understanding of environmental, social, and economic issues. We also want to express our gratitude to the students and members of the community who participate in sustainable education initiatives. Their enthusiasm and insights demonstrate the impact of education on real-world issues and drive meaningful change. We would like to express our gratitude in particular to the establishments and organizations that provide platforms for collaboration, training, resources,

and support for sustainable educational practices. Their efforts are crucial to the development of a sustainable educational ecosystem. Last but not least, we acknowledge the global community and upcoming generations. Our collective responsibility is to ensure that education is a catalyst for a world that is more resilient, equitable, and sustainable. We can cultivate the knowledge and abilities required to face today's challenges and create a brighter future for everyone together.

SUMMARY

Sustainable education is a method that aims to give students the knowledge, skills, and values they need to deal with global issues by incorporating sustainability principles into teaching and learning. It is centered on three main pillars: economic viability, social equity, and environmental stewardship. Students are encouraged to comprehend and engage with complex issues like climate change, social justice, and resource management through sustainable education's promotion of critical thinking, interdisciplinary collaboration, and active participation. In addition to preparing individuals for future careers, this strategy fosters a sense of responsibility for society and the environment. In the end, sustainable education aims to make citizens who are well-informed and empowered to make decisions that are in the best interests of both current and future generations, thereby contributing to a world that is more just and sustainable. We can cultivate a culture of sustainability that extends beyond the classroom and into global communities through this transformative educational framework.

RESULTS

In a variety of educational settings, the implementation of sustainable education practices has resulted in a number of positive outcomes. Key outcomes include:

- 1. Increased Environmental Awareness:** Environmental issues like biodiversity loss and climate change are better understood by students. Assessments and surveys demonstrate increased awareness of ecological impact and sustainable practices.
- 2. Enhanced Critical Thinking and Problem-Solving Skills:** Students are encouraged to examine intricate issues and devise novel solutions by incorporating interdisciplinary methods. A greater level of confidence in addressing sustainability issues is reported by many.
- 3. Greater Community Engagement:** Students are more likely to participate in initiatives that promote sustainability and community service. Increased involvement in local environmental initiatives is frequently the result of programs that involve hands-on projects.
- 4. Development of Ethical and Social Responsibility:** Learners have a stronger sense of responsibility for societal issues, which leads to more advocacy for environmental equity and social justice. A lot of students become active campaigners for improvements to the community and new policies.
- 5. Behavioral Changes:** Students influenced by sustainable education have changed their personal behaviors, such as recycling more, using less energy, and making more sustainable lifestyle choices.
- 6. Enhanced Academic Achievement:** According to some studies, students who participate in sustainability-focused curricula are more engaged and perform better academically, particularly in science and social studies.

These findings emphasize the transformative potential of sustainable education in forming citizens who are well-informed and responsible, ready to contribute to a sustainable future. These educational methods will become even more effective and accessible as they are continuously evaluated and improved.

DISCUSSION

Sustainable education is becoming more and more recognized as a crucial part of preparing people to deal with and navigate the complex issues of the 21st century. The significance, challenges, and future directions of this discussion are examined.

- 1. Interconnectedness of Issues:** The interconnectedness of social, economic, and environmental systems is emphasized in sustainable education. Students are able to recognize how their choices affect global issues like climate change and social inequality by cultivating a holistic understanding.
- 2. Empowerment of Learners:** Sustainable education empowers students to take initiative and participate in solutions by engaging them in active learning and critical thinking. In order to raise a generation that is not only educated but also motivated to effect change, this empowerment is essential.
- 3. Relevance to Modern Society:** Students are better equipped to deal with the realities of climate change, resource scarcity, and social injustice as a result of sustainable education. It makes learning more relevant and effective by aligning education with real-world requirements.

Integrating sustainability into existing curriculum without overwhelming teachers or students is one of the main obstacles. It can be hard to come up with interdisciplinary strategies that work within the current educational framework. When it comes to putting sustainable education initiatives into action, numerous educational establishments are constrained by a lack of funding, resources, and training. Programs' scope and effectiveness may be limited as a result. Stakeholders, administrators, and educators who are accustomed to conventional teaching methods may resist. Advocacy, training, and support for innovative teaching methods are necessary to overcome this inertia.

FUTURE DIRECTIONS

- 1. Collaboration and Partnerships:** Resources and support for sustainable education can be enhanced through the establishment of partnerships between educational establishments, communities, and organizations. A sense of shared responsibility and increased impact are both possible outcomes of collaborative projects.
- 2. Curriculum Development:** It is essential to make ongoing efforts to create and refine curricula that incorporate sustainability principles. This includes developing resources that are adaptable and simple for educators to use in their classes.
- 3. Assessment and Evaluation:** It is essential to establish metrics to evaluate the impact of sustainable education initiatives in order to comprehend their effectiveness and potential areas for improvement. Strategies can be improved through continuous evaluation, which can also demonstrate the value of sustainability education.
- 4. Global Perspective:** Students are encouraged to critically consider diverse cultural contexts and solutions when sustainable education is expanded to include global perspectives, fostering a more inclusive understanding of sustainability.

In conclusion, sustainable education is essential for the development of educated, responsible citizens who are capable of confronting urgent global issues. We can ensure that future generations are equipped to create a world that is more sustainable and equitable by overcoming obstacles and actively promoting novel methods.

CONCLUSION

A transformative approach to education, sustainable education equips students with the fundamental knowledge, abilities, and values they need to deal with the complex issues of our time. We foster environmental stewardship, social responsibility, and economic awareness by incorporating sustainability principles into curriculum, empowering individuals to make educated choices that benefit society and the environment. The positive outcomes of sustainable education, which include enhanced critical thinking, community engagement, and environmental awareness, demonstrate its effectiveness in forming responsible citizens. We must, however, address obstacles like curriculum integration, resource limitations, and resistance to change in order to fully realize its potential. In the future, sustainable education initiatives will be promoted and expanded through collaboration between educational institutions, communities, and organizations. We can cultivate a culture of sustainability that extends beyond the classroom and motivates future generations to lead efforts toward a more equitable and sustainable world by continuing to innovate and refine our methods. In conclusion,

sustainable education is more than just an improvement to the curriculum; It is a necessary change in the way we prepare students for a future in which their actions will have significant effects on society and the environment. We can contribute to a healthier planet and a more just society for all by adhering to this educational model. An approach to teaching and learning that incorporates sustainability principles is called sustainable education. The following are some important sources and references for sustainable education:

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