

**Development of Module: Education for Sustainable Development
in Early Childhood Care and Education**



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A Dissertation Submitted in Partial Fulfilment of Requirements for the Degree of Masters of
Family and Community Sciences

(M.Sc.) (F.C.Sc.)

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Vadodara, Gujarat

April, 2023

CERTIFICATE

This is to certify that the dissertation titled “**Development of Module: Education for Sustainable Development in Early Childhood Care and Education**” has been carried out independently by Ms. Fatema Sadriwala under the guidance of Dr. Jigisha Gala, in partial fulfillment for the degree of Masters in Child Development and Education for Sustainable Development from the Department of Human Development and Family Studies. This research is her original bonafide work carried out from April 2022 to May 2023.

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This is to certify that Fatema M Sadriwala's study titled, "Development of a Module: Education for Sustainable Development in Early Childhood Care and Education" has been approved by the Institutional Ethics Committee for Human Research (IECHR), Faculty of Family and Community Science, The Maharaja Sayajirao University of Baroda. The study has been allotted the ethical approval number IECHR/FCSc/M.Sc./2022/50.

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Acknowledgement

I take this opportunity to convey my sincerest and most profound gratitude to my research mentor, Dr. Jigisha Gala, for her extensive guidance, valuable insights, and unwavering support throughout my academic journey. Her exceptional expertise, constructive feedback, and consistent encouragement played an indispensable role in the development of this interesting thesis. Moreover, her mentorship has contributed significantly to my overall growth.

I extend my heartfelt gratitude to Prof. Shagufa Kapadia for her invaluable guidance in improving my scientific writing skills, which greatly enhanced the presentation of my work. Furthermore, I am grateful to all the teachers in the department for their unwavering motivation and recommendations during the seminars, which have been helpful in shaping the study.

I would like to express my sincere gratitude to the preschools, the principals, teachers, and children who participated in this study. Their positive interest and active involvement were instrumental in the success of this research. I greatly appreciate their willingness to assist and their invaluable contributions of detailed information, which have proved to be extremely useful in this study.

I am appreciative towards my research mates, Farha and Samreen, for their exceptional contributions to this project. Farha's assistance with writing formats and proofreading were of tremendous help in enhancing the quality of my work. Samreen's creative insights added a unique perspective to the research and enriched the overall content. Their unwavering support, presence, and encouragement throughout the research process were invaluable. I am immensely grateful to my roommates Akanksha and Mariyah for their exceptional support in

maintaining a light, cheerful, and stress-free atmosphere throughout the research process. Their positive attitudes and uplifting spirits made the experience enjoyable. Furthermore, I would like to thank my classmates for creating an exciting and enriching peer learning experience. Their insights, discussions, and interactions have been instrumental in shaping my academic pursuits, and I am grateful for the knowledge and experience that I have gained from them.

I would like to express my deepest and most sincere gratitude to my beloved parents, Mr. Murtaza Sadriwala and Mrs. Samina Sadriwala, and my dear brother, Taher, for their love, encouragement, and support throughout my academic journey. Their consistent presence and support have been a source of strength, motivation, and inspiration for me. I am forever indebted to them for their contributions to my success.

Lastly, I am grateful to the almighty to help me learn and grow every day.

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Abstract

Sustainable Development is the development that meets the needs of the present without compromising the needs of the future. It is required to educate young minds about sustainability and inspire them to become responsible, pro-sustainable citizens. Education for Sustainable Development is the development of values, knowledge and skills required to create a sustainable future. Early childhood is the foundation for lifelong learning and young children have the greatest capacity to learn. The purpose of this study is to identify how do young children (preschoolers) respond to the complex ideas of sustainable development. The study also aims to identify teachers' beliefs and attitudes towards sustainable development and the involvement of preschools in sustainable practices. A mixed method exploratory design was used including quantitative and qualitative measures to collect data from the teachers and an activity-based module was constructed and implemented to observe the readiness of the preschoolers in understanding sustainability within the domains of environment, economy and culture. The study comprised of six preschools teachers and thirty-nine senior kindergarten students from two preschools in the city of Vadodara. The results reveal that sustainability is commonly understood as environmental care and identifying age-appropriate content for the children and teacher efficacy to deal with the content is a challenge. The study found that children show readiness and develop competencies like critical thinking, problem solving along with values like empathy and respect when they are exposed to the concepts of sustainable development. For children to reflect sustainable behaviors, optimal opportunities and experiences can be created by the instructive forms of curriculum and upskilling teachers to integrate sustainable practices into their teaching.

Introduction and Review of Literature

Development of Module for Education for Sustainable Development in Early Childhood Care and Education

In today's time, due to the increase in individuality and the pace of development, which is a product of globalization, promoting a common system of values appears unattainable. Fortunately, in many societies like India, religious, spiritual and cultural traditions are pervading. Sustainability values are intimately linked with the role of knowledge in these fine traditions.

Amartya Sen redefines sustainable development as “development that promotes the capabilities of present people without compromising capabilities of future generations” (Sen 2000, p. 5). People are the continuous producers and reproducers of their social and cultural practices and support is to be given to "think, appraise, evaluate, resolve, inspire, agitate, and via these methods, transform the world" (Sen 2000, p. 1).

Education is essential in developing both individual and collective knowledge, skills, values, and attitudes, which empower people to go along pathways toward sustainable development. It also serves as a catalyst for growth itself. There is an immediate need to educate young minds and enable them to understand sustainability issues, so they can grow up to take the role of a responsible pro-sustainable citizens, caring for the planet and understanding the need towards conserving and preserving the planet for future generations. Thus, this makes Education for Sustainable Development an essential global effort for human resource development. Education for Sustainable Development includes teaching and learning the interrelated concepts of environment, economics, energy, and society in consideration of human behavior.

Academics should create curricula and modules geared toward imparting lessons on sustainability and use innovative teaching methods that integrate relatable topics.

International corporations and institutions are leading the way in advancing education toward a thorough and in-depth comprehension of and practise in sustainability. Global agencies concerned with issues of sustainable development have emphasized including sustainability education in the curricula.

Importance of Education

Education is a process of acquiring knowledge, skills, and values that contribute to personal growth and development. It involves a systematic and structured approach to learning, typically through formal institutions like schools, colleges, and universities.

Education, is not a matter of dispensing information; it is the process of assisting in the growth of the whole individual (Lipman et al. 1980). Education is not just limited to academic knowledge; it also includes practical skills, social values, and ethical principles. Through education, individuals can enhance their intellectual capacity, critical thinking, and problem-solving skills, which can enable them to make informed decisions and contribute positively to society.

Education plays a crucial role in shaping an individual's personality, promoting cultural diversity, and fostering economic growth. It provides individuals with the necessary tools to explore their potential and achieve their aspirations. Ultimately, education is a fundamental human right that helps create a more equitable and just society.

In the 21st century, there has been a lot of emphasis placed on the critical role that education plays in the path toward Sustainable Development.

The Sustainable Development Goal 4 (SDG4) calls for quality education for all people, which is rooted in numerous international declarations, including the Universal Declaration of Human Rights, the Convention on the Rights of the Child, the World Declaration on Education for All, the Dakar Framework for Action, and the Millennium Development Goals. As a result, it sees education as being of utmost importance for the welfare of people, countries, and the entire world (UNESCO, 2005 cited in Mohanty 2018). Target 4.7 of the SDGs by UNESCO (2017) signals the need to ensure that individuals contribute to sustainable development through enhancing their competencies across the learning phases:

By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

Education for Sustainable Development

Education for Sustainable Development (ESD) is commonly defined as the development of knowledge, skills, values and behavior required to create a sustainable world. ESD seeks to encourage sustainable behavior, communicate principles related to sustainability, and raise awareness of Sustainable Development.

Education for Sustainable Development is grounded in the belief that the formal education has a significant role to play in establishing beliefs and practices that will promote more sustainable approaches to patterns of living and development in future generations. Early childhood education for sustainability (ECEfS) means the implementation of transformative, empowering and participatory education around sustainability concerns, concepts, and experiences within an early childhood setting (Davis, 2007).

The sustainability issues, duties and rights, vary according to structures which are based on individual choices and organizational structures. (Şeker & Aydinli, 2021). The term "sustainability" has gained popularity for many years and is now being used to refer to a wide range of issues, including the definition of citizenship, the fair distribution of goods and commodities, and environmental impact studies of various technological processes and their effects on the environment. This needs understandable models for people to envision sustainability (Iwaniec et al, 2014). The SD concept has already been inserted into the fundamental goals of national education programs. However, the curriculum still needs to be

transformed to satisfy the requirements of the fundamental need for SD (Nousheen et al., 2020; Vargas, 2000).

Education for Sustainable Development in Early Childhood Care and Education

Since sustainability is compatible with the early childhood heritage, such as the teachings of Froebel, Montessori, Steiner, Freire, and Malaguzzi, who all encouraged children to be exploring nature and caring for the natural world, early childhood pedagogy has embraced it. The first step in achieving sustainability as a primary educational objective is the development and execution of module programmes at various levels of scope and depth.

As early childhood education and care (ECCE) is the foundation of lifelong learning, there is an urgent need for capacity building among practitioners and other members of society to create strong safety nets and communities for young children. This includes enhancing the abilities of parents and other primary carers in a culture that values sustainability. As Hart (1997) proposed and others have shown, young children in the pre-primary period are already competent, active agents in their own lives, and they are impacted by, both capable of and often needed by circumstance, to deal with complicated environmental and social problems.

All children have the right, as well as a responsibility, to be educated for sustainable development, and overwhelming research evidence shows that it is in the early years that children have the greatest capacity to learn. It is also in early childhood that the foundations of many of our fundamental attitudes and values are first put into place (Samuelsen & Blatchford 2015).

Children should have access to learning opportunities that expand their understanding of the planet they inhabit, in a variety of settings, including natural ones, and that give them the confidence to affect change in their surroundings. The primary goal of ESD should be to

instil in kids a feeling of wonder and joy in their connection to the natural environment (Coral & Speldewinde, 2022).

Education for sustainable development (ESD) is UNESCO's education sector response to the urgent and dramatic challenges the planet faces. ESD gives learners of all ages the knowledge, skills, values and agency to address interconnected global challenges including climate change, loss of biodiversity, unsustainable use of resources, and inequality. It empowers learners of all ages to make informed decisions and take individual and collective action to change society and care for the planet. ESD is a lifelong learning process and an integral part of quality education. It enhances the cognitive, socio-emotional and behavioral dimensions of learning and encompasses learning content and outcomes, pedagogy and the learning environment itself. UNESCO is the United Nations leading agency for ESD and is responsible for the implementation of ESD for 2030, the current global framework for ESD which takes up and continues the work of the United Nations Decade of Education for Sustainable Development (2005-2014) and the Global Action Programme (GAP) on ESD (2015-2019). UNESCO's ESD for 2030 education programme aims to bring about the personal and societal transformation that is necessary to change course.

Recently, the UNESCO report (2018) calls for ESD to play a significant role (in every nation) worldwide to enable all students to make informed decisions and take responsible actions for environmental integrity, economic viability, and a just society for the present and future generations, while respecting cultural diversity (Leicht et al., 2018).

It is important to investigate the bigger causes and effects in order to comprehend global concerns. This aids young people with mapping as many causes, if not all, of a problem and its effects. The KEY pillars of ESD to be emphasised when examining global challenges are:

1. **Environmental** - The study of ecology puts a local context and emphasis on the variety of landscapes, plants, and wildlife, which encourages young people to connect with nature and natural resources.
2. **Economic** - Despite the fact that most young people are not exposed to economics, understanding the fundamental economic principles that underpin modern society, what drives a large population to continue growing, and what the current growth models' limitations are can help us understand the problems that humanity is currently facing from a global perspective.
3. **Social / Cultural Education** - Understanding social behavior, societal priorities, and cultural contexts is crucial for addressing the world's problems.

According to Feine (2012), for development processes to be truly sustainable, they must account for and maintain a balance between the social, economic, environmental, and cultural elements of sustainable development, all of which interact and rely on one another (Samuellson & Blatchford 2015).

The guiding principles for Global Development Education/ESD in order to develop competencies in children and youth to acquire sustainability skills for their own lives, the environment, and their perspectives on the future of work and society are:

- Orientation towards the principle of sustainable development
- Analysis of development processes on different levels of action
- Appreciating and handling diversity
- Ability to change perspective
- Context- or lifeworld -orientation

This overall orientation towards the principles of sustainable development is based on a global consensus existing for more than 20 years (Schreiber et al., 2016).

In order to foster sustainable education at all levels and across the dimensions, Branden (2012) proposes a complete reform of the educational system through some sustainable strategies for decision-makers and insists on Fullan's (2011) 4 drivers: intrinsic motivation, instructional improvements, teamwork, and results (socio, economic and environmental).

According to a survey, between 25 and 100% of preschools in different countries include environmental education as one component of ESD. The range of social education was estimated to be between 25 and 75 percent, and economic themes were thought to have received even less treatment. In response to our inquiry, our experts told us that between 25 and 50% of pre-primary schools in each country currently involve children in the creation of their ESD curriculum activities (Blatchford & Samuelsson, 2015).

The success of any ESD would depend on the staff and educators who are passionate about the development of the socio-environmental domain of the early learners.

The "Whole School Approach" is advocated in contemporary ESD literature on SDGs for 2030 in order to bring about sustainable change in the schools' mission, daily schedules, institutional structures, professional knowledge generation, and instructional methods (Mohanty, 2018).

A critical analysis of the literature revealed that, regardless of the discipline, incorporating ESD at all levels of education was widely accepted. Teachers serve as bridges across all levels of education because of this symbiotic relationship, hence it is essential to address sustainable development in teacher education programmes before bringing sustainability into any level of education. (Jetly & Singh, 2019).

Integrating Values for Education for Sustainable Development

High levels of poverty, human rights abuses, environmental degradation, and climate change are all signs that humanity is experiencing a sustainability crisis. In such a situation, it

is vital to find ways to nurture and empower individuals of all ages with ideals that will aid in the transformation of unsustainable behaviors and assist individuals in learning to coexist sustainably (Makrakis, 2014).

Sustainable development requires, therefore, an ethos of compassion, respect for difference, equality and fairness.

Values guide human behavior and can serve as a crucial entry point to assess and repair our nation's educational system in the three well-known sectors of environment, society, and economy. A fresh perspective on education is one aspect of sustainable development that may help people of all ages take on responsibility for building a sustainable future and enjoy its advantages in the generations to come (Alelaimat & Taha, 2013).

There is no stronger social organisation than a school, in all of its pedagogical and instructive forms, for fostering uniting principles. Noble ideals that serve as a point of reference for all students are necessary for growth. Due to accelerating globalisation and the changes in technology, communication, and media, this value education for sustainability is more important than ever. In order to fulfil the educational goals for sustainable development, school curricula are crucial. Through it, the student is trained how to conduct morally and responsibly (Alelaimat & Taha, 2013).

The challenge is How to structure and implement quality education for sustainable development?

Awareness related to Education for Sustainable Development in Teachers in the ECCE Setting

According to Belgian researchers improving students' "sustainability consciousness" by schoolteachers is necessary to achieve the desired ESD learning results. (Pauw et al. 2015). In order to foster sustainable education at all levels and across the dimensions, Branden (2012) proposes a complete reform of the educational system through some

sustainable strategies for decision-makers and insists on Fullan's (2011) 4 drivers: intrinsic motivation, instructional improvements, teamwork, and results (socio, economic and environmental) (Mohanty 2018).

ESD is typically covered during an educator's in-service training rather than as part of their original training. Some nations stressed that this training focused mostly or entirely on environmental-related subjects. Most of the nations did not claim to have included ESD in the curriculum for leaders and administrators of educational institutions. One significant problem is that the initial training and re-training of current educators, executives, and decision-makers in the education sector have not yet included the development of ESD competency as an integrated concept weighing the use of indigenous and local knowledge and awareness of new global challenges including human rights, climate change, health security, biodiversity loss, and the introduction of organisms. (UNECE-UNESCO, 2007)

Importance of reorienting teacher education to emphasise key aspects of sustainable development, such as the growth of systems thinking and citizen engagement, as part of Education for Sustainable Development is required.

Education for sustainability (EfS) also referred as ESD is a new paradigm that Santone et al. (2014) introduced in order to train new prospective teachers by teaching, learning, and developing group problem-solving skills to address important environmental, social, and economic issues and transfer these EfS proficiency to the students through content knowledge, skills, behaviors and dispositions (Mohanty, 2018). Education for Sustainability is a paradigm of education that puts citizenship and the creation of resilient, secure and prosperous communities at the centre of teaching practice. Focus is on defining the proficiencies new teachers being prepared today need in order to be able to lead in educating for sustainability (EfS) (Santone et al. 2014).

According to the Education for Sustainable Development: Learning Objectives (2017)

a few learning objectives for teachers to promote ESD are:

- Learn about the different SDGs, sustainable development, and the issues and concerns they raise.
- Recognize the local, national, and international contexts of the discussion and use of ESD.
- Create their own integrative understanding of the problems and difficulties associated with sustainable development by considering the social, ecological, economic, and cultural facets from the viewpoint of the guiding principles and values of sustainable development, such as intergenerational and global justice.
- Reflect on the concept of sustainable development, the challenges in achieving the SDGs, the importance of their own field of expertise for achieving the SDGs and their own role in this process
- Practice an action-oriented transformative pedagogy that engages learners in participative, systemic, creative and innovative thinking and acting processes in the context of local communities and learners' daily lives
- Act as a change agent in a process of organizational learning that advances their school towards sustainable development.

Despite many proposals and initiatives, serious questions arise: Are teachers themselves interested, willing or committed towards ESD? Have they been sensitized to such an extent that they can become role models of sustainability? (Jetly & Singh, 2019).

A survey of 578 student teachers from seven different teacher education in Europe was conducted to assess the students' confidence in their capacity to function as educators and their capacity to impart sustainable values and ecologically friendly lifestyles. According to the survey's findings, student teachers feel well equipped to manage many areas of

professional teaching, but less so when it comes to educating for sustainability. According to the report, student teachers' training in teaching for sustainability is typically not incorporated into their other training but rather is given as an afterthought (Dahl, 2019).

Education for Sustainable Development in India

Many studies have been undertaken in Australia and in select groups of developing nations, but they are primarily centred on environmental education and have only a tenuous relationship to sustainability. There are very few studies showing the status of Education for Sustainable Development (ESD) in Primary, Secondary, and Tertiary education in India, but nothing much including ECCE.

According to literary studies, the start of the Decade of Education for Sustainable Development (DESD) sparked an ESD movement in India (Chokkar, 2010). However, it had little to no effect on how well ESD was integrated into formal courses. The literature assessment revealed that most initiatives were focused on the environment, concentrating more on greening campuses and schools and ignoring the social, economic, and cultural elements of ESD (Iyengar & Bajaj, 2011).

In 2003, The Honourable Supreme Court of India ordered that all educational levels must include Environment Education as a required topic. It additionally instructed the NCERT to create a standard syllabus for grades 1 to 12, which each state had to implement in their own schools. The Pacific Education for Sustainable Development Framework (2006) has identified formal education and training as a priority area, focusing on structured learning initiatives for better knowledge and understanding to support the implementation of sustainable practises, with the goals of promoting quality education in all member countries being given focus.

India's National Education Policy (NEP 2020), aiming to transform India's education system is timely in its release and response to the global goals and momentum on SDG 4. The

NEP is intended to put India on pace to achieve SDG 4 of the 2030 agenda for sustainable development by offering inclusive and equitable education and assuring lifelong learning opportunities for everyone. The NEP recognises that in order to fulfil all crucial aims and SDGs, the entire educational system will need to be reformed.

In the Indian context, there aren't many research projects or practises in the fields of sustainable environment, sustainable energy, etc., but there is a need of paradigm shift to build an ecosystem and culture for education that entails systematic change in education policy and system, as well as in the beliefs and behaviors of all stakeholders connected to Indian education system.

Both teachers and students need new project models, textbooks, and learning resources. A tight collaboration between curriculum developers, content creators for textbooks, subject pedagogies and teaching practices is needed. Cross-curricular subjects can be as much of an emphasis of the curriculum as specific school subjects, including diversity of values, cultures, and living situations; globalisation of the economy and labour; peace and conflict; and global environmental changes.

The next section includes the theoretical and conceptual framework of the study.

Theoretical Framework

The Curriculum Framework for Education for Sustainable Development

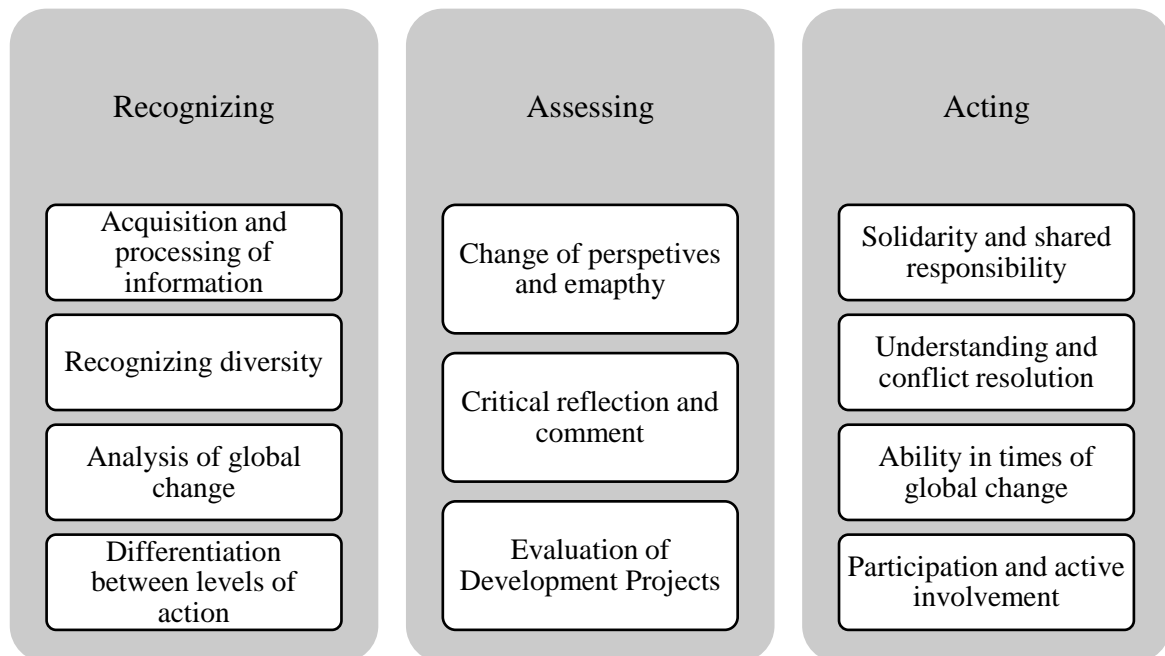
Schreiber et al. (2016) in the Curriculum Framework provides a structural basis for Education for Sustainable Development (ESD) in schools. This Framework refers to Primary Level and Secondary Level I and provides basics for the extension into Secondary Level II. The Curriculum Framework for Orientation is built around an integrative understanding of competency and the related purpose to employ knowledge, skills, and attitudes in a self-organised way on the background of the principle of sustainable development.

The Curriculum Framework is intended to serve as a catalyst for all levels of administration and education, as well as for cooperating institutions and educational service providers. It serves as a frame of reference for creating lesson plans and extracurricular activities, developing teaching/educational plans and school curricula, evaluating area- and subject-specific requirements, and — more importantly in the latest version — managing schools and training researchers.

It does make suggestions for the elaboration of:

- Competencies that students should develop,
- Thematic areas and contents that are important and suitable for developing these competencies,
- And performance standards to be achieved.

All three aspects are directed towards the educational goals of this learning area to ensure that they are attained as well as possible.

Figure 1*Competencies for Education for Sustainable Development*

The Curriculum Framework suggests that thematic areas and topics are selected according to a context model.

Thematic areas should:

- Represent basic knowledge relevant to the learning area
- Illustrate the multidimensional character of the guiding principle of sustainable development
- Address globalisation and global development processes
- At the same time be relevant to students' lives and make a global perspective possible
- Be grouped in a manner that is typical for the academic or social discourse
- Draw from educational experience

The selection of topics and the design of tasks and learning situations should follow certain criteria:

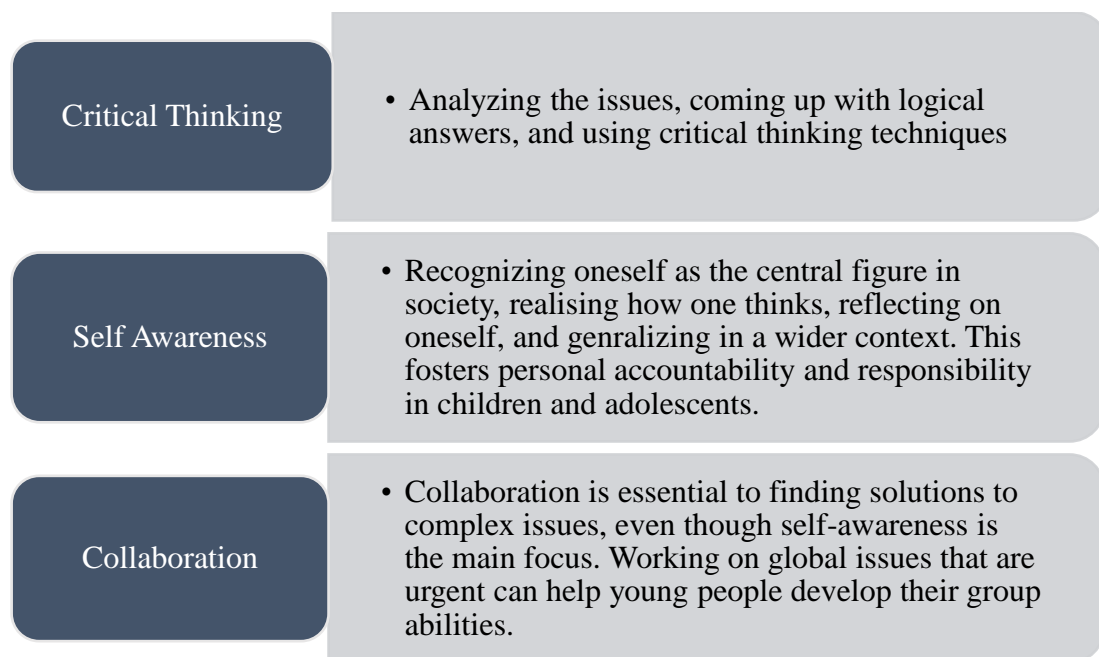
- Reference to core competencies of all three competency areas, with a clear focus
- Reference to the principle of sustainable development and to the model of structural levels
- Enabling a change of perspectives
- Connection to learning processes in one or more subjects
- Connection to students' real-life experiences and relevance for their education
- Topicality and long-term relevance for society/politics
- Enabling self-organised learning
- Good chances to be implemented in the existing school organisation

Anaadi Sustainability Awareness for the Young (ASAY) Framework

The ASAY framework by Pooviah (2020) bridges the gap from Environment Education to ESD with holistic content, pedagogy and delivery. This framework has been created to be flexible enough to accommodate young people from diverse backgrounds, including socioeconomic level, age, and country. Depending on the user's age and location, the tasks' complexity and local contexts may change. It is easier for facilitators to concentrate on the pedagogical aspects of creativity, inquiry-based learning, and innovation when the framework is flexible rather of concentrating only on the answers (Thomas, 2010). In order to produce good future leaders and problem solvers, it is also critical that young people develop their fundamental abilities.

Figure 2

Crucial Capabilities Emphasized

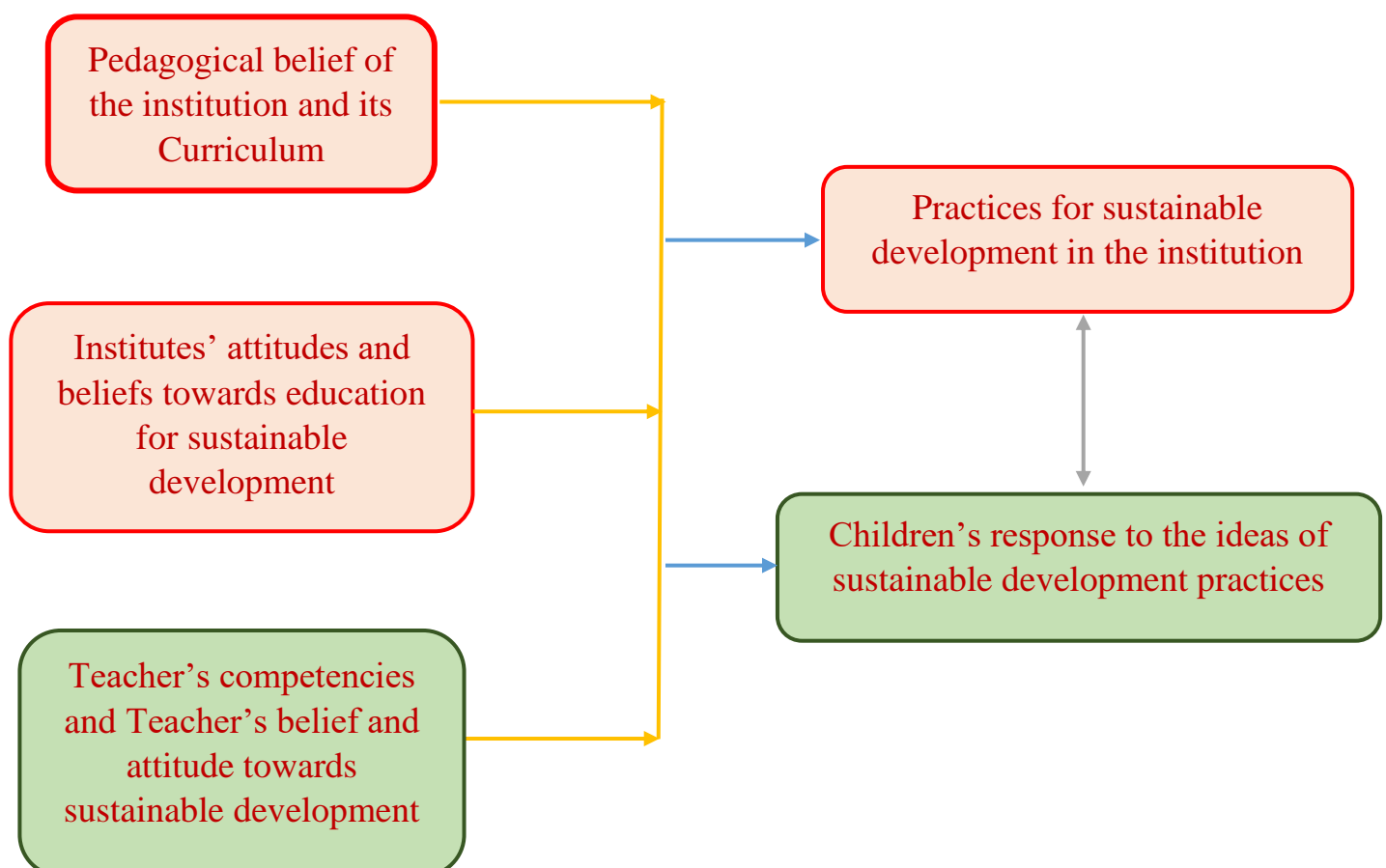


Conceptual Framework

Figure 3 displays the conceptual framework. Pedagogical beliefs influence the institutes attitude towards sustainable development simultaneously influencing the teacher's attitude as well. These factors collectively affect the practices followed by the institution in respect to sustainable development and the children's knowledge and awareness related to ideas about sustainable development influencing their responses. This study especially focuses to determine the institute's attitude, teacher's belief and attitude and children's response to the idea of sustainable development.

Figure 3

Conceptual Framework



Rationale

The current state of the world demands urgent, remarkable changes in prevailing beliefs, behaviors, lifestyles, and the ways that societies function to protect Earth's ability to support life and ensure that a peaceful, sustainable future may be established.

The Sustainable Development Goals for 2030, which have nationwide need of Education for Sustainable development at their core, are something that India has been working to attain. There is still very limited data that has been recorded and studied regarding the imperative implementation of ESD in Indian curriculum.

The importance of incorporating ESD into curricula and the everyday lives of young children has increased as the early years are the foundational years of life. Young children live in the environment which might not be a stimulator for sustainable practices. These factors put pressure on preschools to ensure that they must incorporate essential ESD concepts into their core curriculum and strive to acquire sufficient resources to create and support the adoption of ESD practises.

Educator's beliefs and responses towards ESD is a path to promote the desirability of ESD for pre-schoolers. Being a traditionally inclined nation India also hold indigenous sustainable knowledge, attitudes, and practises that are underutilised.

Strategies are required to overcome current tendencies toward compartmentalization of knowledge and neglect of ethics and values education that are inherent in the concept of sustainable development.

Research Questions

- What practices are followed related to Education for Sustainable Development in preschools?
- How do pre-schoolers respond to complex issues and ideas about sustainable development?

The next chapter presents the methodology used for this study.

Methodology

This chapter presents an overview of the research methods, data collection and analysis procedures. It comprises of the, research objectives, research design, the sample, the sampling technique, the research tools, data collection and analysis process, and ethical considerations.

Research Objectives

Broad Objectives

- To identify the existing awareness and prevalence of practices related to sustainable development in preschools.
- To develop a module on Practices for Education in Sustainable Development for pre-schoolers.

Specific Objectives

- To understand the perspectives of early childhood teachers / educators towards introducing Sustainable Development in ECCE.
- To determine how do children respond to concepts related to sustainable development.
- To develop practises that are important and regarded as beneficial for sustainable development.

Research Design

An exploratory mixed methods approach is used in this study. The tool for data collection includes a quantitative checklist and qualitative questions which have been used with teachers of the selected preschools.

Sample

Research Setting

Figure 4

Selected Research Settings

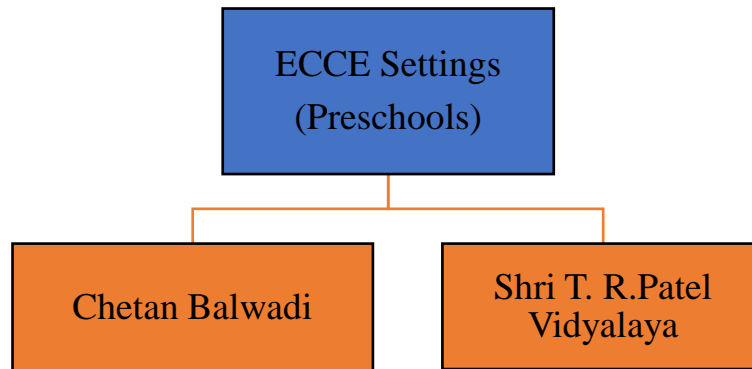


Figure 4 illustrates the two preschools in Vadodara that were selected for the study.

Chetan Balwadi - Chetan Balwadi is an experimental lab of the Department of Human Development and Family Studies, Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda. It was founded in 1949 and provides a high-quality early childhood programme for children, training for professionals and paraprofessionals working in the early education field, and acts as a setting for research.

Shri Tulsidas. R. Patel Vidyalaya – The school was established in 1967 by Shri Tribhovandas T. Patel. An equal and fair emphasis is given to academics, moral values, discipline, and personal growth. It is a private funded school in kindergarten to grade 8 and Government-Aided in grades 9-12.

The two research settings are similar on the basis of the context to which the children belong. Children accepted into these two institutions typically come from socioeconomic backgrounds that are less affluent. The primary language of both the schools is Gujarati and both are located in the city of Vadodara. Chetan Balwadi incorporates the philosophy by John Dewey. The curriculum is thoroughly revised by the HDFS professionals and implementation

takes place keeping the core essentials of ECCE in mind. TRP Vidyalaya being a local semi government school might not pursue the same pedagogical perspective and curriculum. Two research settings are involved to study the differences regarding the mentioned objectives of the study.

Figure 5

Participants of the Study

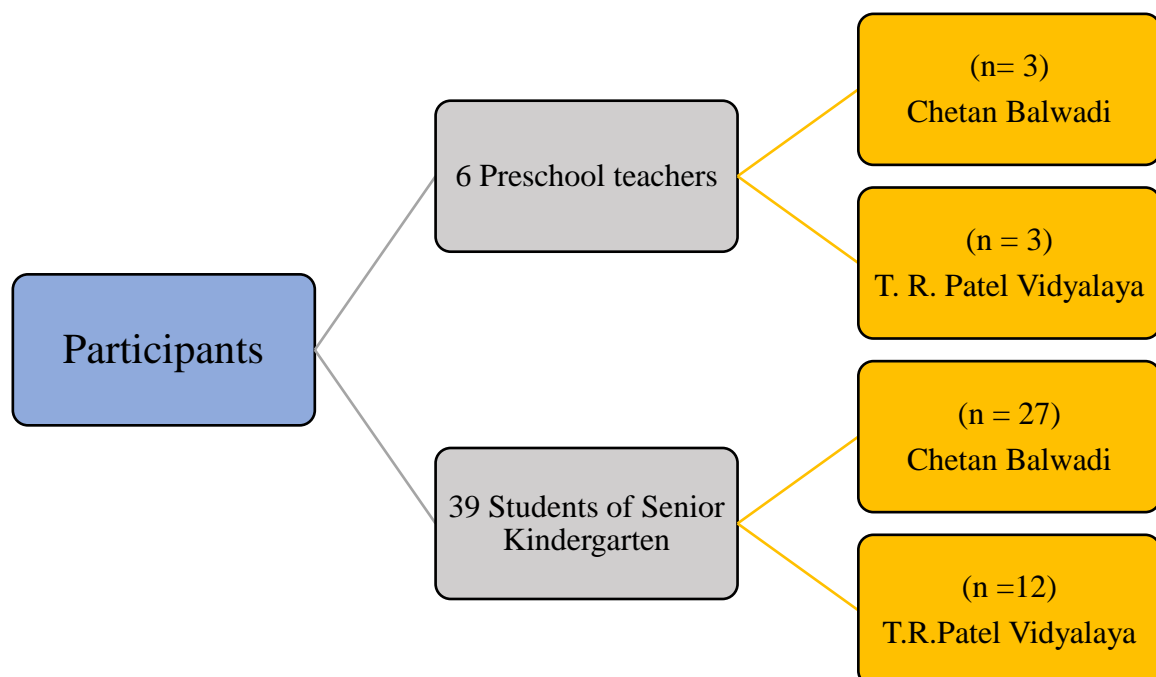


Figure 5 illustrates that six teachers from the previously mentioned preschools were approached for collecting the data. A quantitative checklist was developed for the teachers to fill and a structured interview was held for qualitative information.

A module was developed module which was implemented on the students of Senior Kindergarten from the mentioned preschools and the responses were recorded through an observational checklist.

Sampling Technique

Convenient Judgmental Sampling method was used based on the demands of the objectives of the study.

Tools for Data Collection

Quantitative tool

A Checklist was developed by the researcher for the study in reference with the OMEP – ESD Rating Scale to evaluate the preschool's involvement in Sustainable Development (refer to appendix B). The tool was translated in Gujarati.

OMEP ESD rating scale was developed in 2011-2014 within the framework of best practices in early childhood by UNESCO. It is well suited as a self-review or internal evaluation tool. The tool kit (the rating scale and its rubrics) includes observations, ratings, reflections, discussions and action plans. The OMEP ESD rating scale relates to both content and curriculum, as well as to the educational approach, the pedagogy.

Qualitative tool

In order to understand the teacher's familiarity, convictions, and attitude toward sustainable development and its presentation to pre-schoolers, open-ended questions were designed and translated in Gujarati (refer to appendix C).

An activity module based on the knowledge of children's developmental stages has been developed in order to understand how children respond to ideas and concepts regarding sustainable development (refer to appendix D). This module aims to help children learn about the need and importance of Sustainable Development and guide them the ways to achieve it. This module was implemented on children and their responses were recorded.

Content Validation

The checklist was validated by two experts, one from Department of Human Development and Family Studies and another from the Department of Philosophy from The Maharaja Sayajirao University of Baroda.

Their suggestions have been incorporated in the tool. To avoid confusion, the alternatives to the questions' replies were given basic terms in the checklist. For example, the yes/no options for responses were changed to regular/ sometimes. The qualitative questions were reframed to be less directive and more comprehensive and holistic in the sustainable development context.

Field Testing

The tool was tested on one preschool teacher from Vadodara.

The tool was tested for the following reasons: -

- To ensure that the terminology and language used were clear.
- The amount of time taken to establish the tool.

The field testing gave an idea about how the tool can be interpreted by the participants and comprehensiveness of the language used.

Procedure for Data Collection

Permission was obtained through letters from the research settings and interviews were scheduled accordingly (refer to appendix A). The teachers were approached on field in the respective time provided. The objectives of the study were debriefed and consent was taken. The checklist was given in hand for the teachers to fill. The interviews were audio recorded after taking consent, due to which a few interviews were not recorded and the responses were written down on field.

After the module was created, the activities were implemented with the children. The permission for implementation was taken from the responsible authorities. Children were

approached through their class teachers and the teachers were present throughout the implementation.

Children's responses were not recorded in any media form instead field notes were prepared.

Challenges faced

Due to teacher's fixed schedules and time constraint, three teachers from one school did not provide with individual interviews, thus the researcher had to compromise the method and take one collective interview. The researcher ensured that all the qualitative questions are answered individually as much as possible, yet there were questions in which the teachers would add things in support of their colleague's answer. Consent for recording the interview was also not provided which led to the researcher writing down the answers.

Procedure for Data Analysis

The checklist has been examined through percentage and represented through a chart.

The responses from the qualitative interviews have been transcribed and further thematic coding is done to derive codes and categories. Necessary verbatims and their translations are mentioned.

The responses of the children are recorded through an observational guideline that consists of elements such as children's engagement, attention span, comprehension of the shared concept, articulation of children's own ideas, reflection of values in children's actions and a few anecdotes. These responses are also transcribed and through coding, categories are derived and revealed. Necessary verbatims and their translations are mentioned.

Ethical Considerations

- Permission letters were drafted for the research settings (preschools).
- The objectives of the research were shared with the participating teachers and the interviews were taken forward on the basis of the provided consent.

- The detailed responses of the participants were kept confidential and anonymous.
- The children were not harmed or risked in any manner.
- The collected information will be used only for academic purpose.
- The study was approved by the Institutional Ethics Committee for Human Research (IECHR) at the Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Vadodara. The ethics clearance number for this study is IECHR/FCSsc/M.Sc./2022/50.

The next chapter includes results and interpretations.

Results and Interpretation

This chapter demonstrates the results of this study within two sections Phase 1 and Phase 2 which further consists of subsections respectively. Each phase covers one or more objectives of the study.

Phase 1 – Involvement of teachers and institutions in incorporating sustainable development in preschool education.

Section I – Quantitative results

Section II – Qualitative interview responses

Phase 2 – Children's response towards the complex ideas of sustainable development.

Phase 1

Involvement of teachers and institutions in incorporating sustainable development in preschool education.

Section I

Quantitative Results

To assess the preschool's participation in sustainable development, a checklist was developed. By categorizing the practices into the domains of environmental, economic and cultural sustainability, the checklist assessed the practices that were followed and its prevalence. Six preschool teachers filled the checklist and participated in the qualitative interview. The responses were measured through frequencies and percentages were obtained.

Figure 6

Assessment of practices followed and its prevalence in the institutions leading to sustainable development.

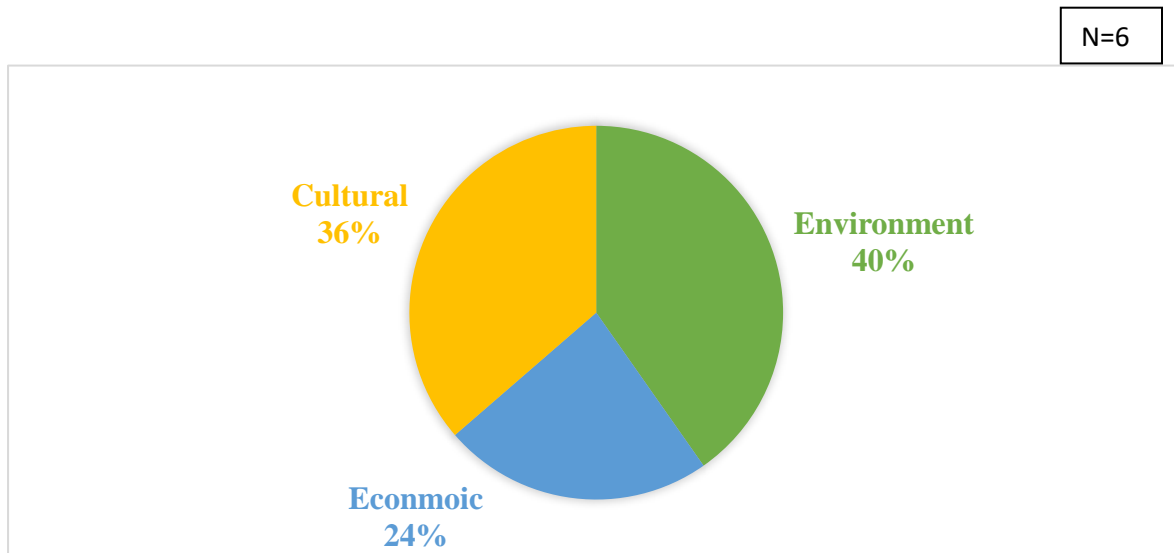


Figure 6 indicates the responses of the teachers on the items related to all the three domains collectively and its prevalence. Based on the information provided, it seems that preschools generally have a positive attitude towards caring for the environment and promoting cultural diversity. Children are regularly exposed to discussions and activities related to these topics, and teachers and the institution strive to adopt practices that promote responsible consumption and resourcefulness. However, there may be some room for improvement in terms of ensuring that teaching and play materials are gender neutral. It is also important to note that a small number of participants did not respond to questions related to cultural diversity, indicating that there may be some variation in the extent to which this topic is addressed in preschools. Overall, the data suggests that preschools are taking steps towards creating a more sustainable and inclusive learning environment for children.

Section II - Qualitative Interview responses

This section includes the responses of the semi structured interviews conducted with the teachers. Based on the analyses the results are segregated into categories and are presented through figures including emerged themes and supporting verbatims.

Perceptions about Sustainability

Responses depict that the central idea of sustainable development and sustainability amongst the teachers is to save the natural resources. Resources that are essential for our daily living like water, air, soil, electricity, gas, fuel etc. are depleting and it is our responsibility as individuals to not pollute it and use it adequately. Quoted by one teacher *“Je badhi kudrati wastuo che tene niyamsar wapar karwu. Gas, electricity, fuels te badhu future mate baki rahe agar apne amna thi save karwu. Sangrah ane bachat karwu”* (All the natural resources should be used responsibly. Gas, electricity, fuels are to be saved for the future so we have to start saving it from today. Accumulation and saving is to be done). While it is common for us to model behaviours that demonstrate optimal utilization, education can in addition focus on resource alternatives, resource generation which are in line with ecology and sustenance.

Consciousness about the impact of human behavior that have current situation of resource extinction and the perspective of saving to secure the future life is to be envisioned straining this idea one of the teacher states *“Koi pan paristiti hoi che te apna karyo na waje thi che, to apne paani, bijli te badhu save karwu important che. Vatavaran pan etluj zaroori che to apne vatavaran na lidhe plants ane hawa ne pan saachvi rakhwi. Pradushit karwu nai. Ane anupurta pramane wapar karwu badhi wastuon nu.”* (The current situation exists because of our own actions. The environment and climate are equally important, so we have to look after the plants and air as well. Avoiding pollution and using all the resources adequately).

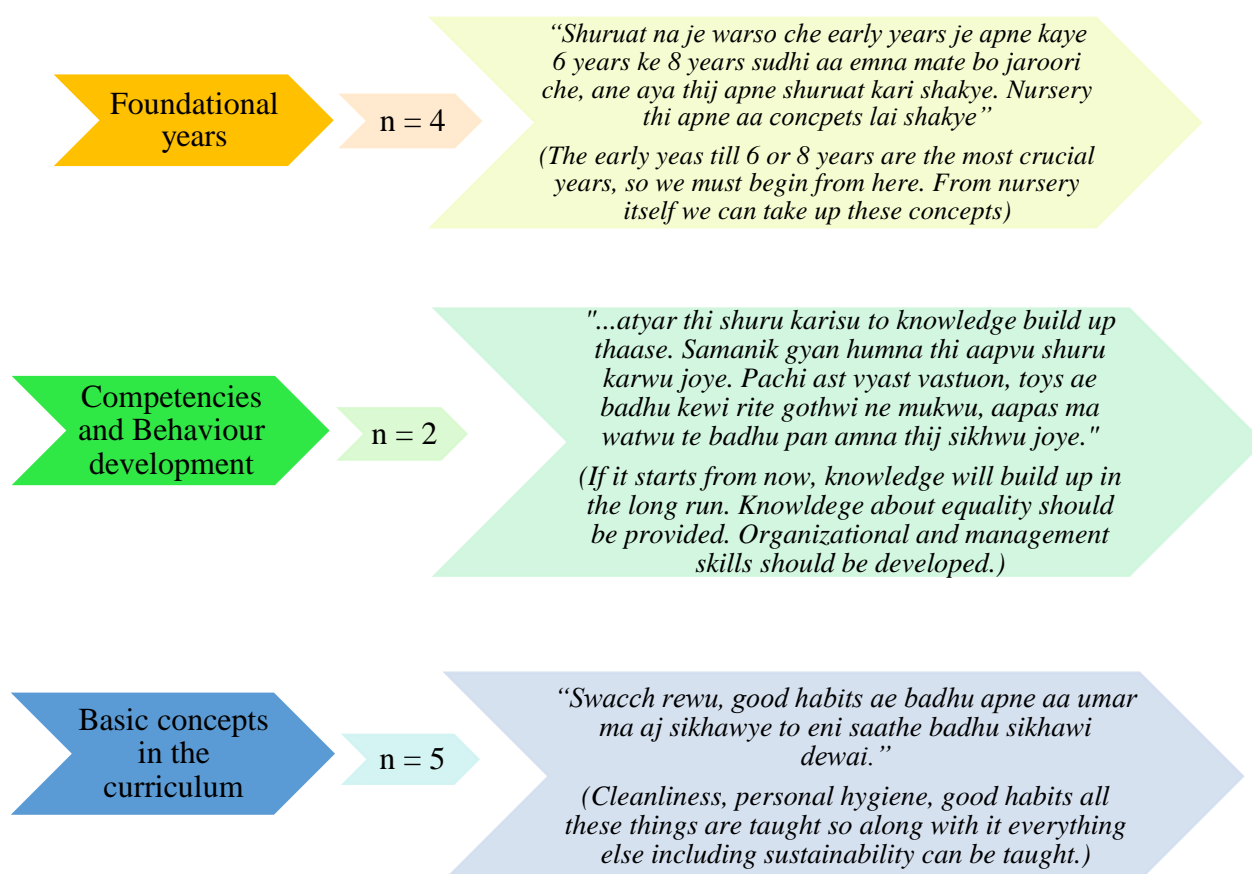
Participants believe that halting and opposing any behavior that is detrimental to the environment or to other individuals will result in sustainability. Teachers were not aware about the Sustainable development goals but a couple of them had an idea as the new NEP 2020 weaves in sustainability.

Should Education for Sustainable Development be Included in Pre-school Education?

Figure 7

Reasons for Including ESD in Preschool Education

N = 6



Note. n = number of responses

As mentioned in the figure 7, the respondents admitted that the early years are the foundational years, all the important competencies can be developed during these years,

hence education for sustainable development can be interwoven in the regular curricula for children. The curriculum usually covers certain ground level concepts and have theme-based activities that promote sustainable development like eco-friendly practices, good habits, pollution and its adverse effects, but more core and detailed activities can be designed as the teachers believe that the children have the capability to understand the same. These concepts can be imparted through regular discussions, informal interactions and behavior modification. This will also make it relevant for the children to eventually learn it in the long run.

Early years especially in terms of behavioral development is a critical period for developing attitudes, values, and behaviors that can last a lifetime. Exposure to concepts of sustainable development in an engaging and a creative manner can help children develop a sense of responsibility and their role in creating a sustainable future. It is important to build upon the foundational knowledge and concepts that are already known and understood by the children and then by providing a more comprehensive and nuanced understanding of sustainability, they can become more informed and engaged citizens who are empowered to make positive contributions to the world around them.

Teaching - Learning Practices Reflecting Sustainability

The respondents believe that the best way children learn is by observing others, hence it becomes mandatory for the teachers to portray responsible behaviors. In the voice of a teacher *“Jo ame ae logoni saame agar light switch off karuchu, ochu pani wapru to ae logone khabar padse ke ane aam bachavu che ane paachad ni je life aavnari ena mate rakhvu che. Ame amara outdoor na garden ma jaye to me ae logone humesha kav ke jhaadone pani aapo, fool todta nai kem ke aa badhu apne clean air ape che je apne saas lewa mate zaroori che.”* (If I as a teacher switch off lights and fans in front of them, if I don't waste water so they understand it better that this is how we are supposed to save these resources for the

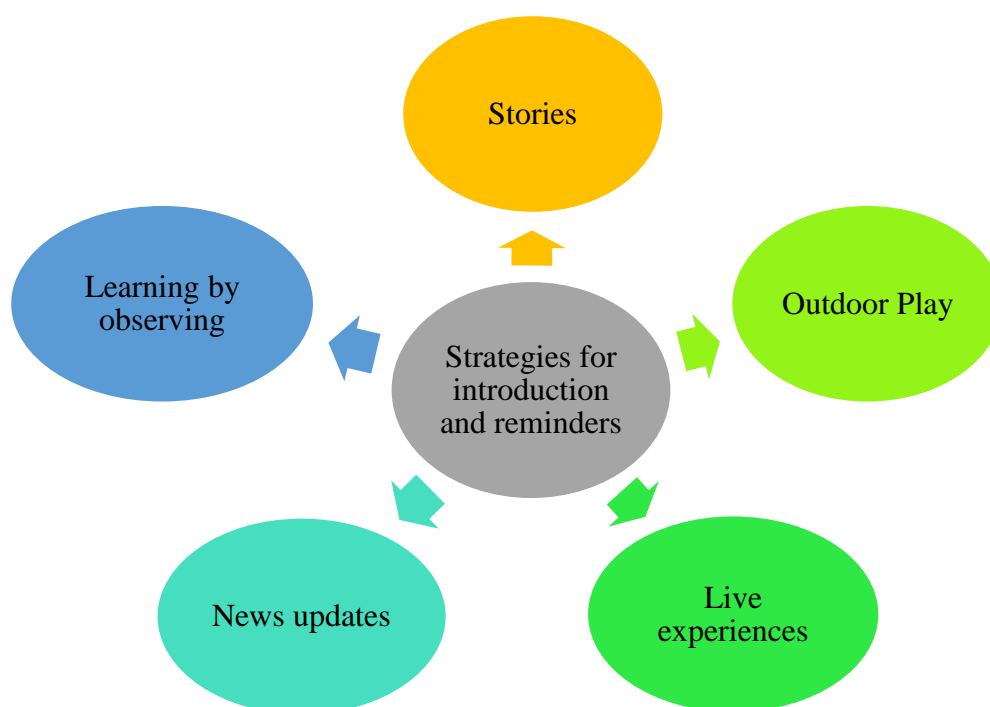
future generation. When we are in the outdoor, I guide them that do not pluck the flowers or harm the plants as these gives us clean fresh air which is important for our survival”

Teachers need to keep a constant check on children’s behavior and correct them especially during lunch and outdoor play by using phrases like “don’t waste food, close the tap, don’t step on the insect etc. Stories and outdoor play are the most recommended medium to convey these messages and enhance sustainable behaviors. Teachers express that discussion related to sustainable development occurs in between activities as presented in figure 8, thus the teacher has to be well informed and spontaneous in carrying out such discussions meaningfully, in the voice of a teacher *“on the spot situation ma khabar padi jae ke aya aawu chale che to tayyari ma tyaj ene correct karine kai dewa nu, on the spot e logo ne realize to thai ena pachi ae logo ne khabar padi jaye”* (If you come to know that some kind of thoughts or conversation or actions are going on amongst children than they are to be corrected at the same time, so they will realize it immediately).

Figure 8

Strategies for Incorporating Discussions on Sustainability

N= 6



As presented in figure 8, the participants express that while in outdoors children are exposed to the surrounding, animals, insects, weather etc. so it becomes the responsibility of the teacher to utilize this opportunity to hold meaningful conversations related to environmental and cultural sustainability. *“Outdoor is the area where maximum this thing happens, so during monsoon for example insects are there, kids are very much interested in insects, so what we do is we take those insects, we talk about them, then we talk about that they are also living beings, children observe them and after the discussion we again drop these insects in their respective places so that none of the child steps on it etc. so they also get sensitised towards insects’ life.*

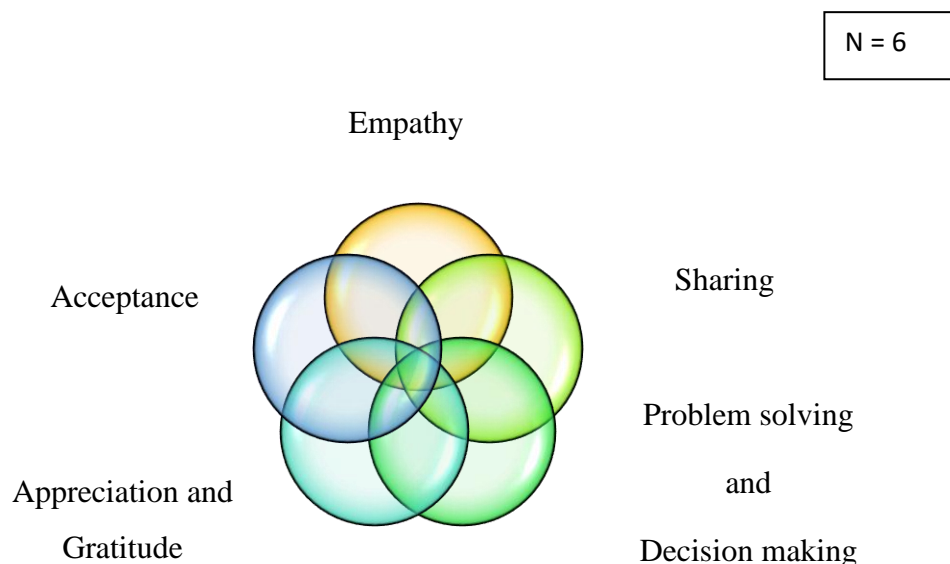
Also, real life experiences and news updates help in spreading awareness and initiating conversations related to environment, economy and culture with children. In the words of a teacher *“...hume ghani badhi charcha karta ho che ke ghani waar ewu hoi ke newspaper me article read karyu ke koi magazine ma karyu, koi news ma kai aavyu to mane aya aawi ne balako saathe ae bara ma charcha karwanike aa aawu che su tamne khabar che,su apne aa aam karwu che to ghano saaro response male che...”*(We have a lot of group discussions on important topics, if I read something in the newspaper or magazine, I come here share it with them and take their opinions on it, it is a very effective method).

Education for sustainable development requires critical thinking skills, which can be developed through exploration, inquiry-based learning, and problem-solving activities. By engaging in these activities, children can develop a deeper understanding of sustainability issues and learn to think critically about them. Discussions related to sustainable development are spontaneous and they have to be relevant, and well-informed that puts an onus on teachers to be well-prepared.

Values and Competencies Developed after Conducting Sessions related to Sustainable Development

Figure 9

Reflected Values and Competencies in Child's Behavior



Most of the responses agree that changes are seen in children gradually after having conversations related to diversity, equality and valuing all life forms. As shown in figure 9, children develop numerous values and competencies when exposed to topics related to sustainability. Children become more empathetic and sensitive in general. According to the teachers, encouraging children to develop social connections and resolve conflicts among themselves is one of the most appreciated practices that leads to enhancement of values like empathy and sharing in children.

The respondents express that children start developing conscience about acceptable and unacceptable behaviors and even correct their peers and parents regarding the same. A teacher shares that children usually criticize the other, in her words “*Handwash karwa jaiye ne to mane aawi ne balako em kai ke madam ane nal khulo rakhyo che*” (*When they return after handwashing, they address that this particular person kept the tap on*) another teacher adds “*Mara papa bathroom ma jai ne to nal chalu rakhi ne brush karya kare to ewu kai*

chaltu hoi” (My father keeps the tap on while brushing, is that even acceptable).

Appreciation and reward also motivate children to perform good practices so they themselves report their good behaviors and expect the teacher to appreciate them. In the words of a teachers “*Ae logo pan saamne thi em kai ke teacher hume to ghare pan light pankho band kariye che man thi, pani pan hume dhodta nathi” (They themselves tell us that at home also we keep in mind to switch-off the light and fans, we don’t waste water etc.).*

Children are exposed to activities to explore their own strengths and weakness along with the people around them. The children understand the need and importance of other people and organisms in our lives. One teacher also states that the children start predicting the morals of the stories that are told in the class on the basis of the behaviors of the characters, in her words “*Stortelling ma to balako pote thi kai aj de ke aane aawu karyu etle eni saathe aam thyu.”.*

Children are quick learners, and the foundational nature of the early years aids in the quickest possible development of values and competences yet it is a complex process that requires the active involvement of teachers, parents, and caregivers. A multi-faceted approach that includes modeling, positive reinforcement, and a supportive environment is required to develop such behaviors. It is essential that teachers are aware of what attitudes and values are being formed, what can be formed, and how they affect children’s overall conduct. The best ways to examine and recognise these behaviours of children as well as to encourage them to keep such attitudes are to be determined.

One anecdotal episode shared by a teacher reflects all the values and competencies that are mentioned above in Figure 9.

A boy in the Sr. Kg class used to throw up every day as soon as the class begins. And his vomit only had tea in it. So, the teacher asked that do you only drink tea every day? Do you not eat any breakfast? The child replied “I feel hungry but mummy doesn’t cook anything.

Listening this the other children started saying that “My mom gives me Bournvita milk with biscuits”, “My mom gives me Bhakhri” etc. Everyone in the class felt sad for that boy.

Meanwhile one of the children said “Request your mother to cook Bhakhri or something for you, I am sure she will do it” and then another one added “Or ask your father to buy you something to eat”.

Practices Followed by the Preschool that are Contradictory to Sustainable Development

Figure 10

Contradictory Practices in School

N = 6

Lack of resources

- n = 2
- *“Humara garden ma regularly ghana badha pandhrao kharta hoi che, ae apna mate ghana badha useful che to apne ene compost kari sakye ne, ena thi khatar banavi shakye pan ae ami nathi karta, ame balako ne aa concept apye che, activity ma karawye che pan je regular basis par thava joye ne ae nathi thatu kem ke ema bo dhyan apva pade ne ewukoi che nathi je dhyan aaapeane badhu kare”. (We have enough place in our outdoor and there are so many dried leaves which are useful, we can have a compost pit and develop manure, we teach these things to children but we are not able to do it because we don't have proper help and people for it)*

Lack of awareness amongst the non teaching staff

- n = 3
- *“Our helps do not switch off lights and fans, even after reminding them several times. When they are washing utensils, the tap is open and they are washing and the water is flowing. Certain times they cut all the vegetables in small pieces and then they wash so there's a lot of waste, even after telling them so many times this does not change. So, one side we teach children about saving and sustainability but adults here are really lacking in all this.”*

Note. n = number of responses

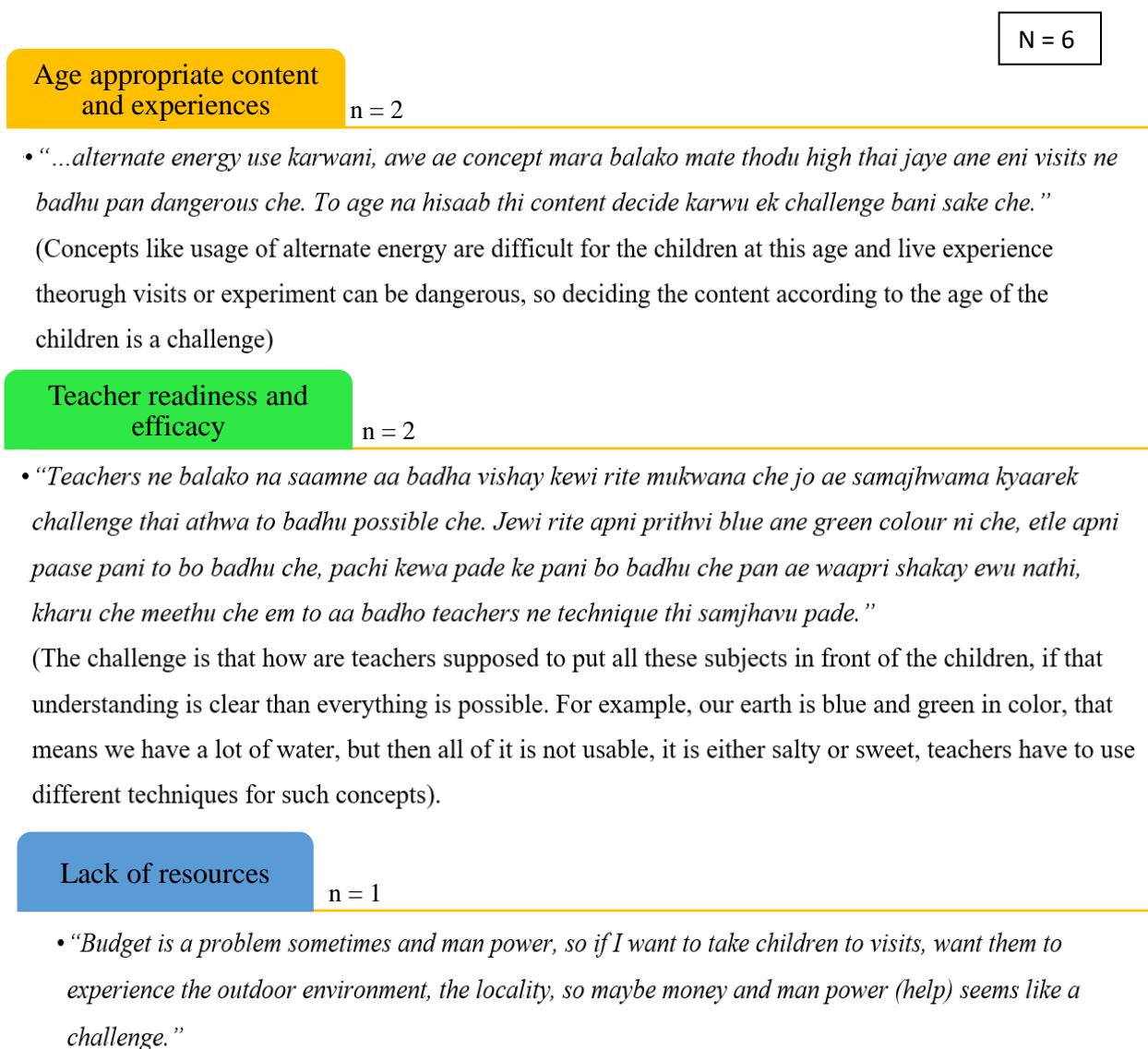
The respondents believe that their schools are generally good at practicing sustainability but there are some areas for improvement. As shown in figure 10, teachers express that even though the educators and the management try their best to follow sustainable practices the other end that includes the non - teaching staff for example the cleaning staff, the cooking staff etc. is not equally aware and involved in such behaviors. It's important for schools to continue to prioritize sustainability and work towards creating a culture of sustainability yet engaging all stakeholders, including students, teachers, non-teaching staff, and the broader community becomes a challenge in efforts to promote sustainable practices and behaviors. The teachers also address the unavailability of resources including materials, physical help and finance. They express regret over not being able to take advantage of the resource that are available and is highlighting the need for more attention and effort to be given towards utilizing them effectively. The respondents address that they do not have any specific limitations or restrictions in creativity, yet one needs to be mindful with the budget of the school.

It is crucial to balance creative ideas with practicality and feasibility within the constraints of availability. But having a resourceful and conscientious consuming attitude is required. This entails being resourceful and coming up with innovative methods to use the available resources to overcome the dearth. By taking a comprehensive approach and involving the entire school community, schools can make significant progress towards promoting sustainable practices and behaviors.

Challenges in Incorporating Education for Sustainable Development (ESD)

Figure 11

Challenges reported in Incorporating ESD in ECCE



Note. n = number of responses

The respondents expressed that as such there are no major challenges, as education is a broad forum and there is freedom to incorporate as many aspects of knowledge as possible that can be provided. As presented in figure 11, Concern was expressed in terms of providing

the right amount of information as per developmental milestones and ensuring that children get opportunities for concrete and experiential learning, as the topic of sustainable development are abstract for young children.

Teachers also address that the teachers themselves must be ready, creative and spontaneous in imparting these complex ideas towards children. Also, dearth of financial and physical help can be a challenge when it comes to providing experiential learning to the children.

Effective teaching also requires creativity. Teachers are more likely to hold students' attention and make learning enjoyable if they can come up with creative and interesting methods to communicate knowledge. It is important to remember that experiential learning doesn't necessarily require expensive equipment or elaborate setups. The approach required is to involve children in the process of creating their own learning experiences. By encouraging them to explore their interests and take ownership of their learning, they can develop skills and knowledge in a way that is both engaging and personalized.

Learning Materials and Activities Required to Impart Education for Sustainable Development

Figure 12

N = 6

Teaching Learning Aids Required for Education for Sustainable Development

Indigenous and environment friendly materials

n = 2

- "...give them the natural red clay, geru, multani mitti which is very environment friendly."

Reuse old and unwanted materials

n = 2

- "...we don't buy very fancy materials for example sand play we have buckets, empty gum bottles, aluminium utensils which we used long back those things we have in our outdoors because we know children are going to break it. So, things which are easily available like in art also use used papers, printed papers, newspapers etc."

Videos, drams, stories, songs

n = 3

- "...game hoi ka to videos batawe to ae logo ne mazapan aave ane knowledge pan male. Jewi rite humna Swacch bharat abhyaan je che to enu je geet che te me balako ne sambhdayu ane ek video batawi to ae logo ne maza aawi ane samjh padi."
- (Games can be played and videos can be shown, they enjoy as well as learn well. We had played the Swacch Bharat song recently, children enjoyed it and they understood the message as well)

Charts and posters display

n = 3

- Poster and charts can be put in thier immediate environment which can be positive as well as negative so they can reflect on it as well.

Live examples and reflection

n = 4

- Live examples aapi ne batawu ae savthi mothu teaching aid che.
(Providing live examples is the biggest teaching aid)

Note. n = number of responses

As the figure 12 depicts, a few strategies as well as the types of learning materials required for introducing and teaching children the complex topics of sustainable development

have been suggested by the teachers. The use of indigenous and reusable materials is an effective and environmentally friendly approach. The teachers convey that providing a real-life experience and incorporating various mediums, such as charts, posters, drama, stories, and songs, makes it more understandable and relatable to the children. These mediums effectively communicate the message and provide opportunities for the children to reflect on the same in a clear and a concise manner. It is also essential to keep in mind the children's perspective and how they can relate to the experience being shared hence, the concepts and strategies should be developmentally appropriate. Teachers can use more engaging and creative ways, especially to address topics like renewable energy, diseases, disaster management, pollution, gender equality, sharing and caring etc.

Teaching and learning aids are extremely valuable but they are only effective when they are coupled with rich and divergent knowledge provided by a guide. It is important to focus on both curriculum and teaching methodology. Incorporating logic and ethics into the curriculum in age-appropriate ways to encourage active learning and critical thinking and providing opportunities for students to analyze and evaluate information is required. The teachers also have to be more informed and updated and model behaviors that reflect consistent positivity and inclusiveness in order to establish clarity and confidence in children at this age.

Phase 2

Children's Response towards the Complex Ideas of Sustainable Development.

The study aimed to explore how do pre-schoolers respond to complex issues and ideas about sustainable development. This part of the chapter includes the observations of the children and their particular responses towards concepts of sustainability. Activities from all the three domains (environmental, economic, socio – cultural sustainability) were selected from the module to be implemented with the children (refer to appendix D). The observations and children's responses are presented according to the three respective domains in the form of emerged themes and supporting verbatims and anecdotes.

The activities that were implemented with the children were as follows (refer to appendix D):

Environmental

- Value the resource
- News for the day – Discussion on world sparrow day

Economic

- Is it worth it?

Cultural

- Poem recitation – followed by Group discussion on the diversity of our nation
- We meet we greet
- Feed a friend

Environmental Sustainability

The activities that were implemented with the children were to develop the consciousness about the importance of nature and natural resources, value of these resources, identification of the current issues and environmental threats and analyse the impact of human activities on the environment.

Activity – Value the Resources

The children were shown different objects and they were asked to identify the material of what the object is made up of and then where do we get those materials from.

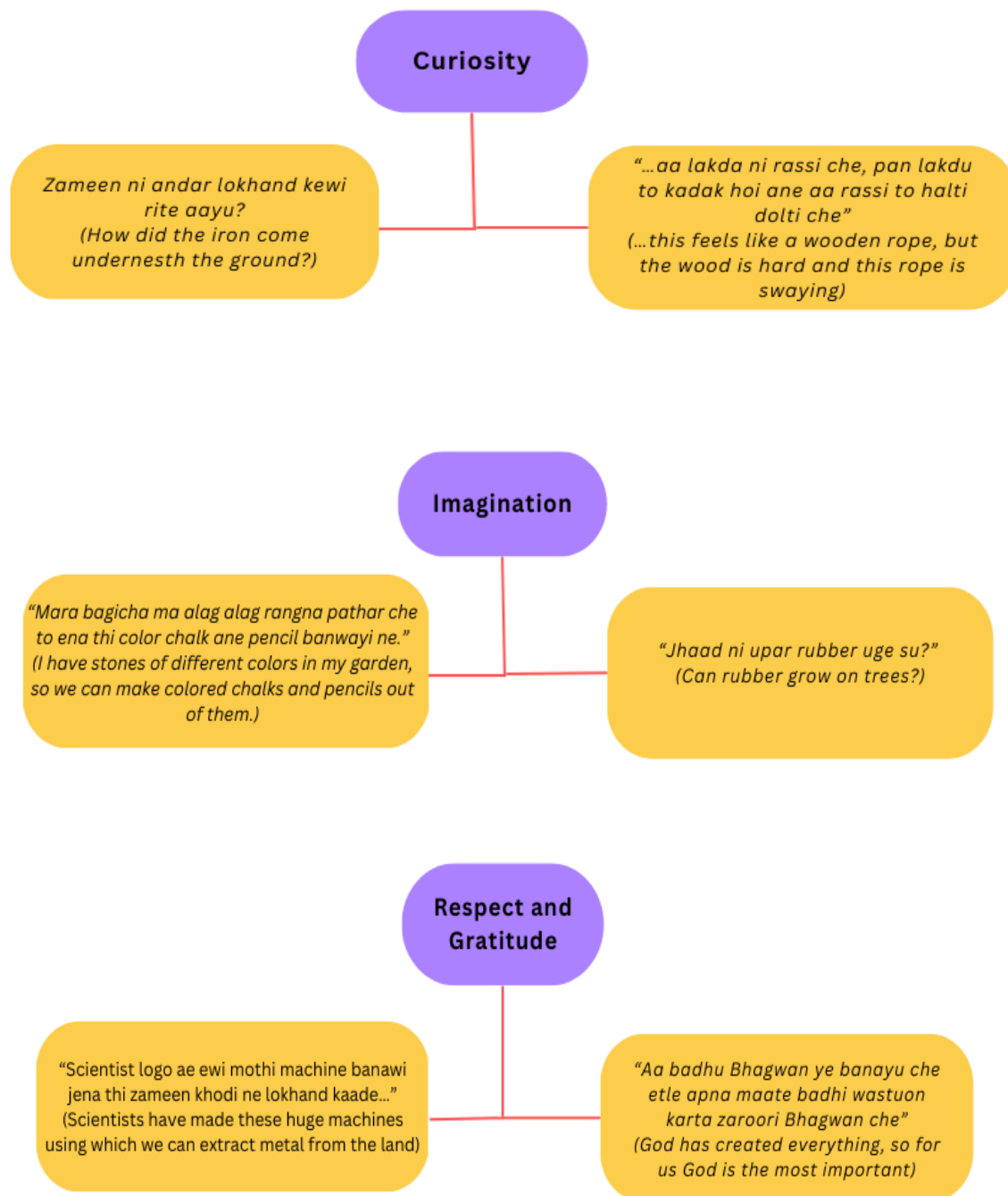
The objects shown to the children were - Table, Chair, Pencil, Eraser, Chalk, Water bottle, Jute string and metallic pencil box.

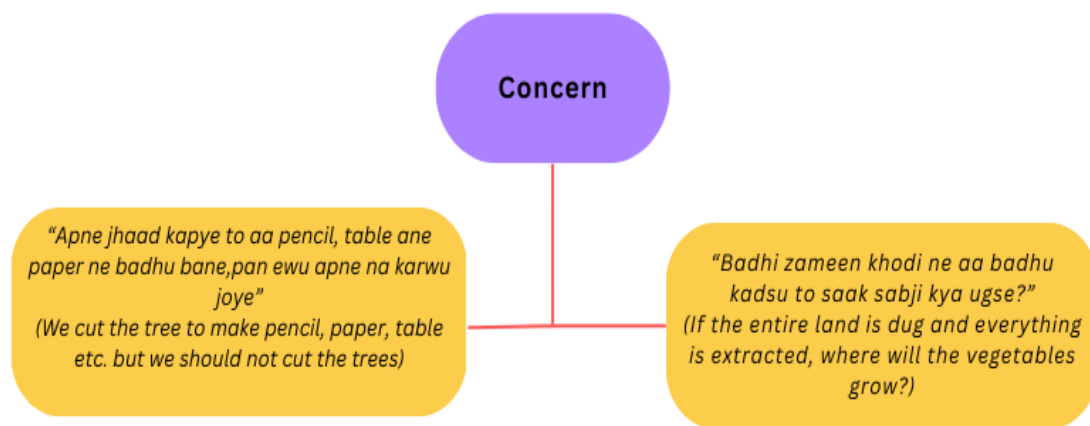
The responses of the children reflected their knowledge about the object and the materials they are made up from but there was an urge to know where do these materials come from, what is the source etc. Once the children were given information about the natural sources their imagination took the best of them and their questions doubled. These made the uninterested children also involved and it was evident that all the children liked the topic and enjoyed the discussion.

Figure 13

Reflection of the Children towards the Information that Everything is Somehow or Other made from Natural Resources

N = 39





As shown in the figure 13, respect, gratitude and appreciation were expressed by the children towards the nature and the creator. Appreciation was also expressed towards the human intelligence to be able to produce such useful and mandatory products. Encouraging children to develop a sense of reverence towards nature and the world around them can help foster a deeper connection with the environment. Promoting these values in children can help them become more compassionate, empathetic, and responsible individuals who care for both themselves and the world around them.

Activity - Aaj ni Taza Khabar – World Sparrow Day

‘Woodcutters in Surendra Nagar built 5000 wooden houses for sparrows.’

Curious questions were raised as “*chakli mate pan koi alag divas hoi, kem?*” (*Sparrows have a special day, why?*), “*chakli nu birthday che?*” (*Is it their birthday?*).

The children critically questioned the concept of development and expressed concern for the impact it has on the environment and its inhabitants. Their thoughts were “*jhaad upar maala ma to chakli re, pachi ae maalo ka banave.*” (*The sparrows build their nests on the trees, if the trees are cut where will they build their nests?*).

The news of building houses had a positive effect on children and they appreciated the deed through sentences like “*ha jhaad upar bhi lakdu hoi, to chakli ne lakda nu ghar rehwan*
faawse” (*The tree has wood and these are wooden houses, so it will be comfortable for the sparrows to live here*), “*saru che ae logo ae ghar banawya pan chakli ne khabar kem padse ke kayu ghar enu che?*” (*It is good that these people made houses for the sparrows, but how will the sparrows identify their own houses?*).

Anecdote

While discussing about the house structure of the sparrows, an interesting conversation took place wherein unique questions and ideas were reciprocated by the children.

One of the children said “*chakli nu ghar khulu rehse to ema koi pan biju janwar ghusi jase ane ae logo ne khai jase.*” (*If the sparrow’s house is open, any other animal can enter and harm the sparrows*) to which another child replied “*ae logo ne ghar na darwaja upar taalu lagadwa padse*” (*They have to put locks on their houses*) another one added “*chakli chaavi thi taalu kewi rite khols?*” (*How will the sparrow unlock it using a key*) a girl then said “*chakli bo nhani hoi, etle eni mate ewu nhanu kaanu ghar na chapda upar padi dewai*

jema thi udi ne awe ane jaye, to bija janwaro pan nai aawi sake.” (The sparrows are very tiny, so for them a small hole can be made in the roof of the house so that they can fly from there and no other animal would be able to enter). The conversation led the children towards understanding and respecting the nature’s role and rule of functioning.

Similarly in another task of feeding an animal or a bird children show similar responses of concern “*ae logo paase to khavanu kai nai hotu, ae logo ne pan bhuk lagti hoi*” (They have nothing to eat, they must be also feeling hungry) and generosity “*Mari mummy roj mane gai ne rotli khalava mate lai jaye*” (My mother takes me to feed a cow every day).

Throughout the session children reflected values of values of kindness, protection and care, affection, concern etc. It shows that they have a deep understanding of the interconnectivity between living beings and the natural world. Children understand how the nature functions and has its way of providing food, shelter and protection to the organisms. Children also express the creative, reasoning and problem-solving skills by questioning and counteracting each other’s perspectives. Overall, the activity encouraged children to think about the impacts of human behavior on the nature and value other organisms. The activity updated children on the ongoing environmental crisis and its potential solutions.

Economic Sustainability

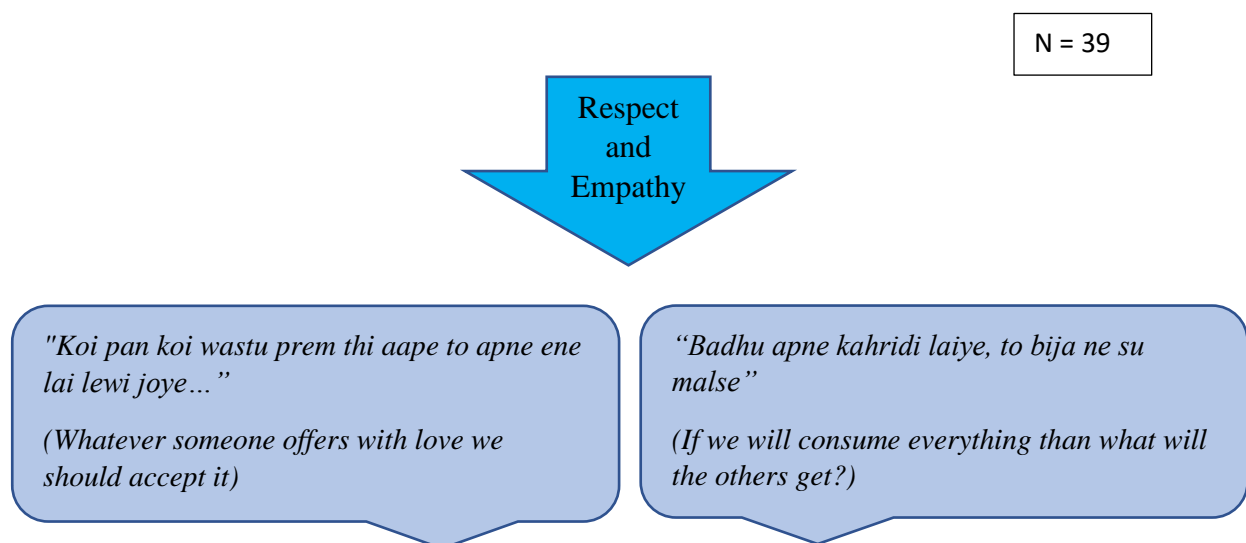
Activity - Is it Worth it?

In this activity children were shown advertisements related to market products or consumer behaviors. These were short clips of 1 to 2 minutes each and after every clip the researcher held a discussion based on children's observation and comprehension of the shown video. This activity was performed to understand children's perspectives about product consumption including the need, expense and its effects.

The children were actively involved in the activity, use of media for display being one of the reasons. The children were quite focused and attentive while watching the videos. The initial responses of the children were related to the availability of the product and their own experiences related to the shown product. After a little probing by the researcher the children dwelled into critically analyzing the product based on the need, its cost and its effects.

Figure 14

Comments of the Children on the Shown Video



Critical Evaluation

"Aa kinder joy ni chocolate thi daat kharab thai."

(This kinder joy chocolate affects our teeth)

"Awu badhu bahar nu khava pachi pet dukhe ne tabyet kharab thai."

(Due to all this junk food, we get unwell and have stomachaches)

Value of Money

"50 rupya to bo kewai, etla badha paisa mummy papa bo mehnat thi kamay."

(50 rupees is a big amount, our parents work very hard to earn it)

"Mummy papa ne zid kari ne, bazaar ma thi faltu wastuon nai kharidwani"

(We should not force our parents to buy useless things from the market)

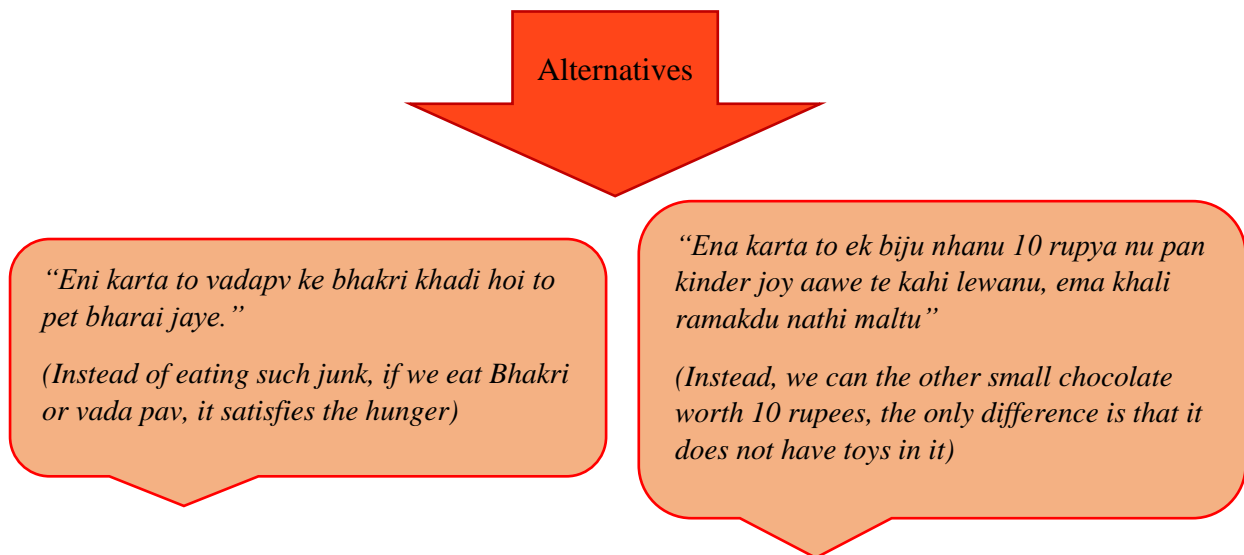
Value of an object

"Koi pan saari wastu ne, nawi athva kaam ni wastune aam fekai nai"

(We should not throw away anything that is useful, be it an old item or a new one)

"Apni paase koi wastu saari hoi to ewi biji wastu laine paisa nai bagadwana"

(If we have something that is in a good condition than we should not buy such similar things and waste money)



Surprisingly children listed many drawbacks of the product, displaying a mature perspective coming from such young minds. As presented in the figure 14, their responses included the idea of valuing money and the objects more than personal desire. They acknowledged and expressed respect and empathy towards parents who work hard to earn money and how it should not be spent mindlessly. Based on their personal experiences they expressed dissatisfaction and provided alternatives and possibility of buying and enjoying various other things with that amount of money. This indicated that the children were able to critically evaluate and then find a solution related to any provided stimulus. The importance of not wasting anything that can be useful and to reuse or repurpose items and appreciating what we have and not fall into the trap of materialism was evident.

Children's perspectives on product consumption varies depending on their age and developmental stage. Thus, there was a lack of awareness of social and cultural influences on product consumption which can be an area to be worked on. Children's perspectives may also be shaped by their individual experiences with products.

Overall, gaining insights into children's perspectives about product consumption requires a sensitive and nuanced approach that takes into account their individual experiences and developmental stage.

Social - Cultural Sustainability

Activity – Desh Mera Bharat

(Poem recitation and group discussion)

The activities focused on building an understanding of the diversity of the nation and instilling a sense of patriotism and respect for the country among the children. The researcher used familiar examples from the children's surroundings to introduce the concept of diversity in the country. Poem recitation and greeting each other in different languages helped the children to comprehend the idea of unity in diversity.

The children were actively engaged in the session and shared their experiences and ideas related to the topic. However, a few of them seemed distracted and uninterested in the conversation mainly due to the time of the session and schedule of their day, which suggests that the researcher needed to employ different strategies to engage such children which did not happen effectively.

Figure demonstrates the children's articulation of their ideas showed a sense of responsibility towards the country and the importance of keeping it clean and safe.

Figure 15

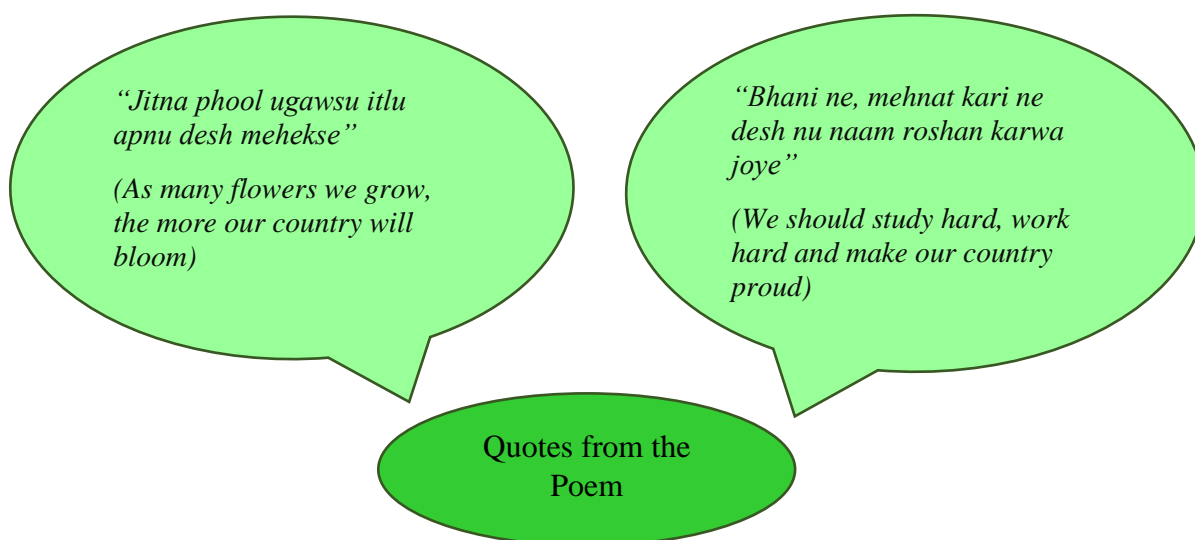
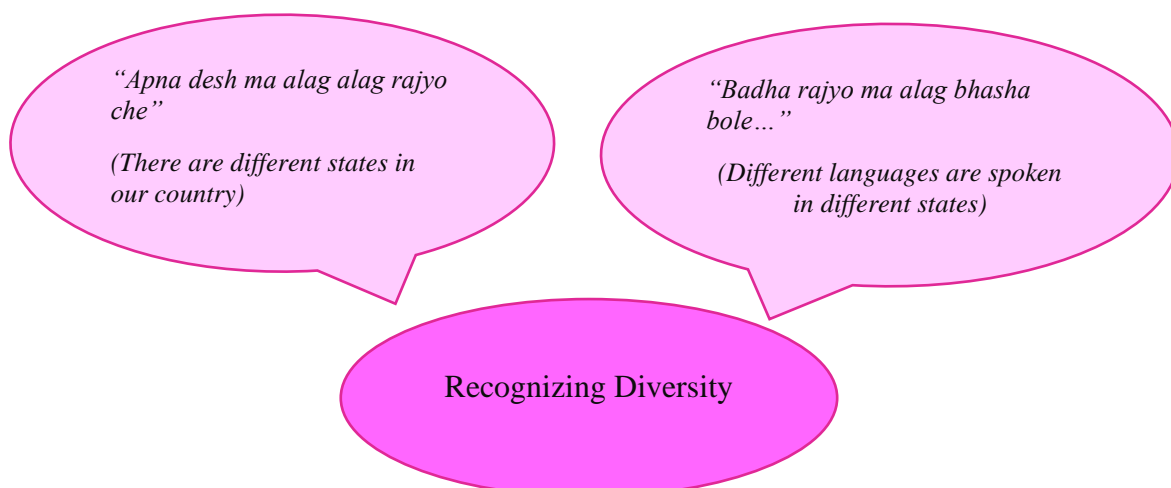
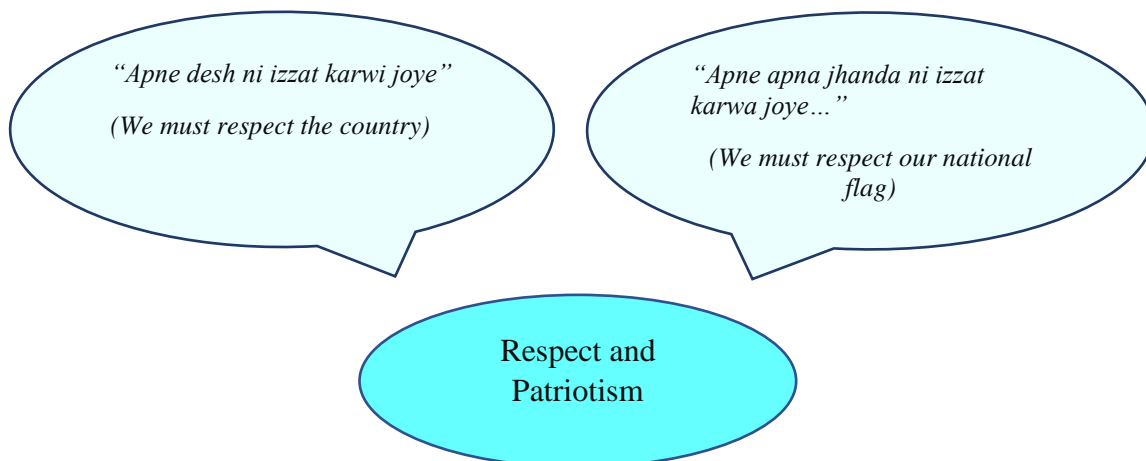
Children's Reflection on the Topic of National Diversity and the Poem

N = 39

Responsibility

“Jo desh ne sachvi rakhvu hoi to ene saaf rakhva padse, kem ke desh ma kachro hase to apnu naam kharab thase”

(If we want to keep our country safe, we need to keep it clean, if our country is dirty, it will be disrespectful for us and the country)



The reflection of values like patriotism and respect was evident in their comments. The researcher may need to introduce the children to the diverse cultural practices and festivals celebrated across the country to broaden their understanding of cultural diversity. Children were also able to pick up certain messages from the poem and they incorporated certain phrases which expresses their comprehension of the concept.

Anecdote

While discussing about cultural diversity all the children were busy addressing different festivals celebrated in the country, in which a few festivals were left out. When the researcher added the festivals like Eid, Christmas, Pateti a group of 3 to 4 children were observed having a conversation...

One girl says *“Eid to gandha logo no tevhaar che”* (*Eid is the festival of bad people*), similarly a boy says *“Christmas to bija desh no tevhar che apne nai manavanu”* (*Christmas is the festival of a different country*) and another one adds his concern towards environment stating *“ae logo ek diwas mate jhaad kape, ene ghar ma muke, sajave ane pachi bija diwse ene feki de”* (*These people cut the tree, keep it in their homes for a day, decorate it and later throw it away*). When the researcher added that there are Christians and Muslims living in our country, the immediate response of the boy was *“to ae logo potana desh ma jai ne rai, aya na rai”* (*Ask them to go back and live in their own country*).

While the researcher took the initiative to talk about unity in diversity, due to the complexity of the topic the class teacher intervened and carried on the discussion addressing a few other known festivals to the children.

Simultaneously a few other children addressed different movies like Ram Setu, Uri, War etc. and expressed the need to fight against other countries in order to protect our country. *“Apne desh ne atankwadio thi bachawa joye”* like sentences were heard. These incidents shows that although children are exposed to cultural diversities in school through

different mediums like festive celebrations, multimedia plays a role in budding ideas of violence and discrimination in the face of patriotism in the minds of young children.

Overall, through the activity they expressed their love and respect for the country and showed their willingness to contribute towards its betterment. They also talked about the importance of cleanliness and how it can reflect on the country's image. Overall, the activity helped the children to develop an appreciation for the country's diversity and instilled a sense of patriotism and respect among them.

Highlights of the findings of Phase 1

- Ideas of sustainability are commonly related to Environmental sustainability; hence it arises as the most valued form of sustainability.
- Early years are the crucial years and the appropriate age to introduce the concept of Sustainable Development.
- Challenges in incorporating Education for sustainable development are the appropriateness of the content as per the age of the children and teacher readiness and efficacy to deal with the content.
- Schools have incorporated practices related to recycling, reusing and reducing yet the challenges arise from the unawareness amongst the stakeholders.

Highlights of the findings of Phase 2

- Children understand and reciprocate to the complex ideas of sustainable development.
- Children show more involvement and better comprehension towards the concepts of environmental sustainability as compared to economic and social and cultural sustainability.

- Development of various competencies like critical thinking, reasoning, problem solving and decision making in children are reflected through in-depth discussions related to sustainable development.
- Children reflect values such as empathy, generosity, kindness and respect.

Discussion and Conclusion

This chapter presents the discussions on the main findings of the study. It includes discussions in the light of the theoretical framework in terms of an integrative understanding of competency and the purpose to employ knowledge, levels of administration and education, frame of reference for creating educational plans and school curricula, facilitators awareness and adaptability to suit the needs of their learners.

Education for sustainable development refers to the incorporation of sustainable development principles and practices into the education and care of young children. It involves providing children with experiences, knowledge, and skills that foster an understanding of sustainable living, environmental stewardship, and social responsibility (Davis, 2007).

The goal of early childhood education for sustainability is to develop environmentally and socially responsible attitudes and behaviors in young children that will carry through into their future lives. This includes promoting an appreciation for the natural world, encouraging sustainable consumption and production patterns, and fostering a sense of community and social justice.

In order to achieve these goals, early education should be transformative, empowering, and participatory (Davis, 2007). It should be designed to encourage children to explore and inquire about their environment and community, to engage in critical thinking and problem-solving, and to take action towards creating a more sustainable future.

Values play a crucial role in shaping human behavior, and they can have a significant impact on our ability to build a sustainable future for ourselves and future generations.

When it comes to education, instilling values that prioritize sustainability can be an effective way to promote sustainable development. This type of education can also help people understand the interconnectedness of the three sectors: environment, society, and economy.

By understanding how these sectors are interdependent, individuals can begin to see the big picture and take a more holistic approach to problem-solving (Alelaimat & Taha, 2013).

Educators can support it by incorporating sustainability themes into their curriculum, creating learning opportunities that are hands-on, inquiry-based, and experiential, enabling children to learn through exploration, experimentation, and play. It also involves building partnerships with families, communities, and other stakeholders to support children's learning and engagement in sustainable practices

Young children in the pre-primary period have a natural curiosity and desire to explore and learn about the world around them. They are capable of making sense of their environment, and with the right support and guidance, they can develop a deep understanding of complex environmental and social issues.

Moreover, providing children with the confidence and skills to affect change in their surroundings, empowers them to become active agents in their own lives. This can help them develop a sense of agency and responsibility, which is critical for their social and emotional development (Hart, 1997 & Davies, 2005). When children are given opportunities to contribute to their community, they can develop a sense of pride and belonging, which can lead to greater social cohesion and community engagement.

Schools are a vital social organization for promoting unity and fostering noble ideals that guide students' growth and serve as a model for sustainable practices within the community. Schools can also take a holistic approach to sustainability by involving all stakeholders, including teachers, students, parents, and administrators.

Overall, providing young children with learning opportunities that expand their understanding of the planet they inhabit, in a variety of settings, including natural ones, is critical for their development and well-being. Thus, early childhood education and care is an

important component of promoting sustainable development and creating a more sustainable future for all. Ultimately, incorporating sustainable values into education can help to create a more just, equitable, and prosperous world for everyone.

Teacher Efficacy

Research has shown that the involvement of teachers and guardians in sustainability-related discussions and activities can have a significant and positive impact on young children's learning about sustainability. As a result, it is important for teacher education programs to incorporate sustainability into their curricula and prepare future teachers to integrate sustainable practices into their teaching.

While discussions about sustainability are often focused on school curricula, there is a growing body of literature on "teacher education for sustainability," which emphasizes the need for teacher education programs to prepare future teachers to teach in ways that promote environmental sustainability and responsibility. This includes providing opportunities for student teachers to learn about sustainability and practice incorporating sustainability into their lesson plans (Dahl, 2019).

By training teachers to incorporate sustainability into their teaching, we can help ensure that future generations are equipped with the knowledge and skills they need to live sustainably and protect our planet.

Environmental Sustainability

It is encouraging to hear that environmental sustainability is becoming a common interest amongst teachers and children. This is a positive development, as the natural world is facing numerous challenges, including climate change, loss of biodiversity, and pollution, which threaten the well-being of humans and other species.

Teachers play a vital role in educating children about environmental sustainability by incorporating it into the curriculum and encouraging hands-on learning opportunities. This

can include lessons on conservation, recycling, reducing waste, and the impacts of human activity on the environment.

By promoting environmental sustainability, teachers help children to develop a sense of responsibility and care for the planet. This can lead to positive lifelong habits and the formed attitude that the natural resources are finite, and we must conserve and use them responsibly to ensure that they are available for future generations.

Conserving natural resources not only helps to preserve ecosystems but also ensures that everyone have access to important resources such as fresh water, clean air, and productive soils. Additionally, a stable climate and manageable disaster risk are essential to maintaining economic and social stability.

Furthermore, sustainable practices can promote economic growth and job creation. For instance, investments in renewable energy and green technologies can create new job opportunities and stimulate economic growth.

In summary, prioritizing environmental sustainability is crucial to securing a prosperous and stable future for all.

Economic sustainability

Economic, social, and cultural sustainability are essential pillars of sustainable development. However, it is true that they are often undervalued and underrepresented in many discussions and decision-making processes (Jetly & Singh, 2019).

Blatchford's suggestion that economic sustainability should be prioritized as the curricular area in early childhood that presents the largest challenge is based on the idea that daily consumption patterns and assumptions play a significant role in shaping our economic behavior and impact on the environment. By teaching young children about economic sustainability, we can help them develop a greater awareness of the impact of their actions on the environment and the importance of making responsible choices.

Economic sustainability education can encompass a range of topics, including recycling, energy conservation, responsible consumerism, and sustainable food production. By introducing these concepts to children at an early age, lifelong habits and attitudes that will contribute to a more sustainable future can be instilled.

Economic sustainability is indeed an important topic that presents a significant challenge, especially when it comes to early childhood education. The consumption patterns and presumptions that children develop in their early years can have a significant impact on their later lives and the world around them.

Teaching children about economic sustainability can help them understand the importance of making responsible choices when it comes to resource consumption, waste reduction, and environmental protection. It can also help them develop a sense of social responsibility and empathy towards others, as well as an understanding of how their actions can impact the broader community.

Therefore, while economic sustainability should be prioritized as a curricular area, it should be balanced with other important topics to provide a well-rounded education that prepares children for a lifetime of success and contribution to society.

Dealing with Complex Issues

It is important for teachers to steer discussions related to identifying sustainable product options and exploring the impact of food choices on personal health, the environment, and society. By doing so, they can help the students develop a deeper understanding of the issues surrounding sustainability and encourage them to make informed decisions about their consumption habits.

Discussion on how the products consumed can have an impact on the environment, the various stages involved in the production of packed foods, such as farming, packaging,

transportation, and distribution, and highlighting the unsustainable practices that are associated with each stage can be helpful.

Understanding the adverse effects of product consumption on the environment, health, economy, and values is essential to promote sustainable. Products such as processed foods and sugary drinks have been linked to obesity, diabetes, and other health problems, while chemicals in products such as cleaning supplies, personal care items, and plastics can have harmful effects on the environment. Product consumption can also have economic implications, such as resource depletion, and imbalanced finances. Values are also impacted resulting into materialism. Hence, conscious decisions are to be taken about the products we use and promote values that align with our beliefs.

Teachers can probe children to think about sustainable alternatives and encourage them to make informed choices. Engaging the students in interactive activities, such as group discussions, debates, or role-playing exercises can help them develop critical thinking and problem-solving skills and encourage them to think about the impact of their actions.

Social and Cultural Sustainability

In today's globalized world, it's crucial to have an appreciation for different cultures, as it can lead to greater understanding and respect between people from different backgrounds. By learning about different cultural practices and beliefs, we can gain insights into how other people see the world and understand their perspectives.

Additionally, incorporating cultural values and practices into development strategies can lead to more sustainable outcomes. Culture shapes people's values, beliefs, and behaviors, which can influence their relationship with the environment and natural resources. By considering local cultural practices and values in development strategies, more meaningful and effective solutions that are better suited to the needs of the local community can be created. Showcasing and celebrating cultural diversity, brings opportunities for

cultural exchange and economic growth, while also promotion of cross-cultural understanding.

Schools are the institutes where all students feel respected and valued regardless of their religious or cultural backgrounds as there is a safe and an inclusive learning environment. Teachers should strive to promote critical thinking and encourage respectful dialogue. Teachers can also incorporate multicultural education and diversity training into their curriculum, helping students understand and appreciate different religious and cultural perspectives. It is essential to maintain a neutral stance and refrain from promoting any particular religious beliefs in the classroom. Instead, teachers should focus on fostering empathy, respect, and understanding among their students, encouraging them to see beyond differences and to work together towards a more inclusive and peaceful society.

Curriculum and teaching methodology, including teacher behaviors are to be upgraded to help children develop logical skills and moral judgment. Children's minds should be trained at an early, receptive age to consider metaphysical, moral, and logical issues. Children should go beyond wonder, and reflect upon and meaningfully discuss metaphysical, epistemological, aesthetic and ethical aspects of any situation (Lipman. M, 1992). The world of children is filled with analogues to the complex social and political institutions characteristics of the adult world. Younger children are capable of reflecting on a variety of moral concepts for example fair/unfair, good/bad, right/wrong, cruel/kind etc.

The point is made that children frequently are not satisfied with simplified answers to their questions, and that their minds need educational change and philosophical inquiry. Education, in this sense, is not a matter of dispensing information; it is the process of assisting in the growth of the whole individual (Lipman et al. 1980).

Valuing and understanding cultural diversity is essential for achieving sustainable development, promoting cross-cultural understanding, and creating a more harmonious and inclusive world. In summary, addressing culture and morality in the classroom can be a challenging topic, but it is crucial to help students become more open-minded, accepting, and inclusive individuals.

Multimedia influencing children's ideas related to cultural diversity

The finding in this study suggests that exposure to certain types of multimedia may have an impact on children's ideas related to cultural diversity. However, it is important to note that the relationship between multimedia exposure and cultural attitudes is complex, and the effects can vary depending on a number of factors, such as the content of the media, the age and developmental stage of the child, and the social context in which the media is consumed.

Exposure to negative stereotypes and prejudice in media can lead to negative attitudes toward other cultures, while exposure to positive portrayals of diversity can have the opposite effect. Additionally, media can influence children's perceptions of their own culture and identity, which can in turn affect their attitudes toward other cultures.

It is important to note that media is just one of many factors that can shape children's attitudes toward diversity. Parents, educators, and other caregivers also play a critical role in helping children develop positive attitudes and values related to cultural diversity. By exposing children to a wide range of cultural experiences and encouraging them to ask questions, explore different perspectives, and appreciate diversity, adults can help foster a more inclusive and tolerant generation.

Valuing all the life forms

It is true that human beings have historically seen themselves as superior to other life forms, often viewing animals, plants, and other organisms as mere resources to be exploited for human benefit. However, as the understanding of the natural world has advanced, many people have come to realize that other life forms have value in and of themselves, regardless of any benefit they may provide to humans.

There are many reasons why other life forms are valuable, even if they do not directly benefit humans. For example, biodiversity is essential for maintaining healthy ecosystems and providing a range of ecosystem services, such as pollination, soil formation, and nutrient cycling. Many species also have intrinsic value, meaning that they have value simply because they exist and have a right to be respected and protected.

The human being is responsible for maintaining the balance between the grounded nature and its value and the current trends of consumption patterns. Shifting the idea that other life forms are only valuable to the extent that they benefit humans is an important step towards a more sustainable and equitable relationship with the natural world. This requires a fundamental shift in our values and priorities, as well as changes in how we interact with other species and ecosystems.

Implications

Children are considered vulnerable and kept away from discussion including environmental, economic, social and cultural threats. The study identifies children's readiness and interest in acquiring knowledge about these issues and participate in change.

Responsibility is placed on schools and the curriculum for its pedagogical and instructive forms to create ideal opportunities and experiences for children to adapt to pro-sustainable behaviors. The study offers an activity-based module as an aid for the teachers to serve appropriate content and experiences to the children.

Recommendations

The limitation of the current study is that the researcher for the activities was not an experienced preschool teacher. Thus, preschool teachers can utilize the module to identify the level of children's understanding specific to each domain of sustainable development. Similar researches can be conducted in different types of preschools especially those that range in socio – economic status and with children belonging to different age groups. It can be also determined to what extent are the existing curriculums providing exposure towards education for sustainable development. Teacher trainings can be enhanced by developing models for teachers to learn about sustainable development and incorporate it in their teaching practices.

Conclusion

Children in their early years can indeed understand and comprehend the concepts of sustainable development. This is a promising finding as it indicates that educators and parents can start teaching children about sustainability from an early age. The results suggest that the curriculum is to be designed and upgraded including the combination of appropriate concepts and level of exposure based on the social context of the children. Educators play a vital role in mediating sustainability values and ideologies in children. Therefore, it is important for

educators to master the knowledge of Education for Sustainable Development (ESD) in order to effectively teach children about sustainability. ESD is a framework that focuses on teaching sustainability concepts through an interdisciplinary approach, which integrates environmental, social, and economic perspectives. Children do not have to just learn about the past history but the upcoming future. By developing desired competencies of a pro-sustainable citizen in children, one can ensure a sustainable future.

References

- Alalaimat, A. R., & Taha, K. (2013). Sustainable Development and Values Education in the Jordanian Social Studies Curriculum. *Education, 134*(2), 135.
- Banerjee, S., Banerjee, I., & Khandelwal, M. P. (n.d). Inculcating Values through Education. *International Journal of Research in Social Sciences*.
- Barnett, T., Brun del Re, C., & Moore, H. (n.d). Sustainable Development: *Teacher Module*.
- Busana, M. (2013). UNICEF Education Kit Handbook: *Early Guidance Development Kit Guidance*. Retrieved March, 25, 2020.
- Campbell, C., & Speldewinde, C. (2022). Early Childhood STEM Education for Sustainable Development. DOI: [https:// doi.org/10.3390/su14063524](https://doi.org/10.3390/su14063524)
- Dahl, T. (2019). Prepared to Teach for Sustainable Development? Student Teachers' Beliefs in their Ability to Teach for Sustainable Development. *Sustainability, 11*(7), 1993. DOI: <https://doi.org/10.3390/su11071993>
- Davis, J. (2005). Educating for Sustainability in The Early Years: Creating Cultural Change in a Child Care Setting. *Australian Journal of Environmental Education, 21*, 47-55. DOI: <https://doi.org/10.1017/S081406260000094X>
- Hart, R. A. (1997). *Children's participation: The theory and practice of involving young citizens in Community Development and Environmental Care*. Earthscan Publications Limited.
- Iyengar, R., & Bajaj, M. (2011). After the Smoke Clears: Toward Education for Sustainable Development in Bhopal, India. *Comparative Education Review, 55*(3), 424-456. DOI: <https://doi.org/10.1086/660680>
- Jetly, M., & Singh, N. (2019). Analytical Study based on Perspectives of Teacher Educators in India with Respect to Education for Sustainable Development. *Journal of Teacher*

Education for Sustainability, 21(2), 38-55. Page range: 38 – 55. DOI:

<https://doi.org/10.2478/jtes-2019-0016>

- Leicht, A., Heiss, J., & Byun, W. J. (2018). *Issues and trends in education for sustainable development* (Vol. 5). UNESCO publishing.
- Lipman, M., Sharp, A. M., & Oscanyan, F. S. (1980). *Philosophy in the Classroom*. Temple University Press.
- Makrakis, V. G. (2014). ICTs as Transformative Enabling Tools in Education for Sustainable Development. *ICT in Education in Global Context: Emerging Trends Report 2013-2014*, 101-115. DOI: 10.1007/978-3-662-43927-2_7
- Mohanty, A., & Dash, D. (2018). Education for Sustainable Development: A Conceptual Model of Sustainable Education for India. *International Journal of Development and Sustainability*, 7(9), 2242-2255.
- Nousheen, A., Zai, S. A. Y., Waseem, M., & Khan, S. A. (2020). Education for Sustainable Development (ESD): Effects of Sustainability Education on Pre-Service Teachers' Attitude towards Sustainable Development (SD). *Journal of Cleaner Production*, 250, 119537. DOI: <https://doi.org/10.1016/j.jclepro.2019.119537>
- Paul, P. K., & Mehera, C. (2016). Impacts of Education on Sustainable Development: A Micro Study in Burdwan District of West Bengal, India. *American Journal of Educational Research*, 4(7), 551-555. DOI:10.12691/education-4-7-7
- Pooviah, P.C. (2020). Sustainability Education Framework for Building ESD Competencies and Inspiring Environmental Stewardship and Conscious Consumption among Students. Anaadi CREST.
- Pramling Samuelsson, I., & Siraj-Blatchford, J. (2014). Education For Sustainable Development in Early Childhood Care and Education: A UNESCO Background Paper. DOI: 10.13140/RG.2.1.3197.2564

- S. M. A., Lipman, M., Reed, R. F., & Sharp, A. M. (1992). *Studies in Philosophy for Children: Harry Stottlemeier's Discovery*. Temple University Press.
- Santone, S., Saunders, S., & Seguin, C. (2014). Essential Elements of Sustainability in Teacher Education. *Journal of Sustainability Education*, 6(5), 1-15.
- Schrage, J., & Lenglet, F. (2016). Towards A Theory-Based Framework for Assessing the Mainstreaming of Education for Sustainable Development: A Case Study of Teacher Education Institutions in Botswana. *Southern African Journal of Environmental Education*, 32, 87-104.
- Schreiber Jörg-Robert, Siege, H., & Stukenberg, T. (2016). *Curriculum Framework: Education for Sustainable Development A Contribution To The Global Action Programme "Education For Sustainable Development": Result of The Joint Project of The Standing Conference of The German Ministers Of Education and Culture (Kmk) and The German Federal Ministry Of Economic Cooperation And Development (Bmz)*. Cornelsen.
- Schreiber, J. R., & Siege, H. (2016). *Curriculum Framework: Education for Sustainable Development*. Engagement global, Bonn.
- Seker, F., & Aydinli, B. (2022). A Trial Patch to Sustainable Development Perspectives from Extracurricular Activities of Elementary Schools in Turkey. *Science & Education*.
<https://doi.org/10.1007/s11191-021-00315-x>
- Sengupta, E., Blessinger, P., & Yamin, T. S. (Eds.). (2020). Integrating Sustainable Development into the Curriculum. *Emerald Group Publishing*. DOI: 10.1108/S2055-3641202018
- Singh, D. S. K., & Rayee, Z. (n.d.). SDGs and India's New National Education Policy 2020.
- Siraj-Blatchford, J., & Pramling-Samuelsson, I. (2016). Education for sustainable development in early childhood care and education: An introduction. In *International*

research on education for sustainable development in early childhood (pp. 1-15).

Springer, Cham. DOI: 10.1007/978-3-319-42208-4_1

UNESCO. (2017). *Education for Sustainable Development Goals: Learning Objectives*.

Wiek, A., Iwaniec, D. (2014). Quality criteria for visions and visioning in sustainability science. *Sustain Sci* 9, 497–512. DOI: <https://doi.org/10.1007/s11625-013-0208-6>

Woolis, D. (2018). *Sustainable Learning Framework Advancing the UN Sustainable Development Goals: Scale and Sustainability: Two Sides of the Same Coin*.

Yadav, Archana. (2016). Role of Education in Sustainable Development of Modern India. 2. 80-85

Appendices

Appendix A

Permission Letters

Permission Letter for Research on Education for Sustainable Development



To,
Dr. Rachana Bhangaokar,
The Superintendent,
Chetan Balwadi Lab School,
The Maharaja Sayajirao University of Baroda,
Vadodara – 390002.
Date –

Subject – Request for permission to collect data and implement a module in Chetan Balwadi

Dear Rachana Ma'am,

I am Fatema Sadriwala, a Senior Masters student in Child Development and Education for Sustainable Development from the Department of Human Development and Family Studies. The research I am doing for Masters Dissertation is based on Development of Module for Education for Sustainable Development under the guidance of Dr. Jigisha Gala.

I am hereby seeking your consent to allow me to conduct 1 individual interview (approx.30 minutes) each with the teachers of the Balwadi, and later 3 to 4 sessions to test out the modules with the children and record their responses to the ideas of Sustainable Development. I assure that the collected data from the teachers will be confidential and used for academic purpose only.

I will be providing with my research plan for your reference. I hope for your positive response on this matter.

Your approval will be greatly appreciated.

Thank you.

Yours sincerely,

Fatema Sadriwala
Research Student
Sr. MSc CDESD

Dr.Jigisha Gala
Research Guide
Assistant Professor
Department of Human Development and Family Studies
The Maharaja Sayajirao University of Baroda

Permission Letter for Research on Education for Sustainable Development



To,
The Respected authority,
T. R. Patel Vidyalyaya,
Sardarnagar Society,
Nizampura, Vadodara.
Date –

Subject – Request for permission to collect data and implement a module in your preschool.

Dear

I am Fatema Sadriwala, a Senior Masters student in Child Development and Education for Sustainable Development from the Department of Human Development and Family Studies. The research I am doing for Masters Dissertation is based on Development of Module for Education for Sustainable Development under the guidance of Dr. Jigisha Gala.

I am hereby seeking your consent to allow me to conduct 1 individual interview each with the teachers of the preschool, and later 3 sessions to test out the modules with the children and record their responses to the ideas of Sustainable Development. I assure that the collected data from the teachers will be confidential and used for academic purpose only.

I will be providing with my research plan for your reference. I hope for your positive response on this matter.

Your approval will be greatly appreciated.

Thank you.

Yours sincerely,

Fatema Sadriwala
Research Student
Sr. MSc CDESD

Dr. Jigisha Gala
Research Guide
Assistant Professor
Department of Human Development and Family Studies
The Maharaja Sayajirao University of Baroda

Permission Letter for Research on Education for Sustainable Development



પ્રતિ,
આદરણીય સત્તાધિકારી,
ટી. આર. પટેલ વિદ્યાલય,
સરદારનગર સોસાયટી,
નિઝામપુરા, વડોદરા.
તારીખ –

વિષય – તમારી પૂર્વજ્ઞાનામાં ડેટા એકત્રિત કરવા અને મોડ્યુલ અમલમાં મૂકવાની પરવાનગી માટે વિનંતી

પ્રિય

હું ફાતેમા સદરીવાલા છું, સિનિયર માસ્ટર્સ યાઇલ્ડ ડેવલપમેન્ટ એન્ડ એડ્યુકેશન ફોર સસ્ટેનેબલ ડેવલપમેન્ટ, ડીપાર્ટમેન્ટ ઓફ ડેવલપમેન્ટ એન્ડ ફેમિલી સ્ટડીસ ની વિદ્યાર્થીની. હું માસ્ટર્સ નિબંધ માટે જે સંશોધન કરી રહી છું તે ડૉ. જીગીશા ગાલાના માર્ગદર્શન હેઠળ ડેવલપમેન્ટ ઓફ મોડ્યુલ ફોર એડ્યુકેશન ફોર સસ્ટેનેબલ ડેવલપમેન્ટ પર આધારિત છે.

હું આથી પ્રિસ્કુલના શિક્ષકો સાથે 1 વ્યક્તિગત ઇન્ટરવ્યુ અને પછીથી 3 સત્રો બાળકો સાથેના મોડ્યુલનું પરીક્ષણ કરવા અને સસ્ટેનેબલ ડેવલપમેન્ટ (ટકાઉ વિકાસના) વિચારો પ્રત્યેના તેમના પ્રતિભાવો રેકૉર્ડ કરવા માટે તમારી સંમતિ માંગું છું. હું ખાતરી આપું છું કે શિક્ષકો પાસેથી એકત્રિત કરવામાં આવેલ ડેટા ગોપનીય રહેશે અને તેનો ઉપયોગ માત્ર શૈક્ષણિક હેતુ માટે જ કરવામાં આવશે.

હું તમારા સંદર્ભ માટે મારી સંશોધન યોજના પ્રદાન કરીશ. હું આ બાબતે તમારા હકારાત્મક પ્રતિભાવની આશા રાખું છું.

તમારી મંજૂરીની ખૂબ પ્રશંસા કરવામાં આવશે.

આભાર.

આપની વિશ્વાસુ,
ફાતેમા સદરીવાલા
રિસર્ચ સ્ટુડન્ટ
Sr. MSc CDESD

ડૉ. જીગીશા ગાલા
રિસર્ચ ગાઈડ
અસીસ્ટન્ટ પ્રોફેસર
ડીપાર્ટમેન્ટ ઓફ હુમન ડેવલપમેન્ટ એન્ડ ફેમિલી સ્ટડીસ,
મહારાજા સયાજીરાવ યુનિવર્સિટી ઓફ બરોડા

Appendix B

Quantitative Checklist

Please tick the subjectively appropriate choice.

Sr. No	Practices	Regularly (નિયમિત પણે)	Some Times (ક્યારેક)	Not at all (જરાય નહિ)	Personal Comment (વ્યક્તિગત ટિપ્પણી)
❖ Environmental Sustainability					
1	Lessons about conservation of natural resources are given કુદરતી સંસાધનોના સંરક્ષણ વિશેના પાઠ આપવામાં આવે છે				
2	School children have access to the natural world during school hours? (e.g., outdoor play) શાળાના બાળકોને શાળાના સમય દરમિયાન પ્રાકૃતિક વિશ્વમાં પ્રવેશ મળે છે? (દા.ત., આઉટડોર પ્લે)				
3	Discussions on Biological Diversity, Waste Management and Pollution take place in the classroom વર્ગખંડમાં જૈવિક વિવિધતા, કચરા વ્યવસ્થાપન અને પ્રદૂષણ પર ચર્ચા થાય છે				
4	Occasional visits to local natural areas such as parks, zoo's etc are organized સ્થાનિક પ્રાકૃતિક વિસ્તારો જેમ કે ઉદ્યાનો, પ્રાણી સંગ્રહાલય વગેરેની પ્રસંગોપાત મુલાકાતોનું આયોજન કરવામાં આવે છે				
5	Natural resources and organic materials are used in classroom activities કુદરતી સંસાધનો અને કાર્બનિક સામગ્રીનો ઉપયોગ વર્ગખંડની પ્રવૃત્તિઓમાં થાય છે				
6	Activities related to care of the environment, including plants and animals, in the preschool and the community.				

	પૂર્વશાળા અને સમુદાયમાં છોડ અને પ્રાણીઓ સહિત પર્યાવરણની સંભાળને લગતી પ્રવૃત્તિઓ.				
7	Important issues like the right to clean water, healthy food, and personal hygiene are addressed સ્વચ્છ પાણીનો અધિકાર, સ્વસ્થ ખોરાક અને વ્યક્તિગત સ્વચ્છતા જેવા મહત્વના મુદ્દાઓને સંબોધવામાં આવ્યા છે				
8	Preschool maintains the standards of clean and green environment શાળા સ્વચ્છ અને લીલા પર્યાવરણના ધોરણો જાળવે છે				
9	Awareness programmes on conservation and protection of the world, conducted in which children can participate are organized વિશ્વના સંરક્ષણ અને સંરક્ષણ અંગેના જાગૃતિ કાર્યક્રમોનું આયોજન કરવામાં આવે છે જેમાં બાળકો ભાગ લઈ શકે છે				
❖ Economic Sustainability					
1	Discussions on conservation of electricity and paper take place વીજળી અને કાગળના સંરક્ષણ પર ચર્ચા થાય છે				
2	Concepts of recycling and reusing materials are introduced સામગ્રીના રિસાયક્લિંગ અને પુનઃઉપયોગની વિભાવનાઓ રજૂ કરવામાં આવી છે				
3	Children participate in conversations about money and saving. બાળકો પૈસા અને બચત વિશેની વાતચીતમાં ભાગ લે છે.				
4	Children are comfortable with practicing behaviors like sharing, forgiving, being empathetic બાળકો વહેંચણી, ક્ષમા આપવી, સહાનુભૂતિ દર્શાવવા જેવી વર્તણૂકોની પ્રેક્ટિસ કરવામાં આરામદાયક છે				
5	Institution takes into account the necessity, waste, consumption, and the environment when making decisions about purchases				

	ખરીદી અંગે નિર્ણય લેતી વખતે સંસ્થા જરૂરિયાત, કચરો, વપરાશ અને પર્યાવરણને ધ્યાનમાં લે છે				
6	Economic concerns associated with practising responsible consumption are seen in choices in food, entertainment, and toys are covered. જવાબદાર વપરાશની પ્રેક્ટિસ સાથે સંકળાયેલી આર્થિક ચિંતાઓ ખોરાક, મનોરંજન અને રમકડાંની પસંદગીમાં જોવા મળે છે.				
❖ Social Equity and Cultural Sustainability					
1	Preschool encourages multilingual liberty and respect for mother tongue. પૂર્વશાળા બહુભાષી સ્વતંત્રતા અને માતૃભાષાના આદરને પ્રોત્સાહન આપે છે.				
2	Classroom environment promotes gender equality વર્ગખંડનું વાતાવરણ લિંગ સમાનતાને પ્રોત્સાહન આપે છે				
3	Gender equality is depicted through teaching and play aids લિંગ સમાનતા શિક્ષણ અને રમતના સાધનો દ્વારા દર્શાવવામાં આવી છે				
4	The curriculum explicitly includes content for awareness of different living conditions and cultures that helps to develop an ability to understand and empathise with other people's conditions and values. અભ્યાસક્રમમાં સ્પષ્ટપણે વિવિધ જીવનની પરિસ્થિતિઓ અને સંસ્કૃતિઓની જાગૃતિ માટેની સામગ્રીનો સમાવેશ થાય છે જે અન્ય લોકોની સ્થિતિ અને મૂલ્યોને સમજવા અને તેમની સાથે સહાનુભૂતિ દર્શાવવાની ક્ષમતા વિકસાવવામાં મદદ કરે છે				
5	Children are enlightened about the significance and importance of cultural diversity in the nation. બાળકોને રાષ્ટ્રમાં સાંસ્કૃતિક વિવિધતાના મહત્વ અને મહત્વ વિશે પ્રબુદ્ધ કરવામાં આવે છે.				

6	<p>Events hosted by the preschool for families and the neighbourhood, and children to frequently interact with their immediate surroundings?</p> <p>પરિવારો અને પડોશ માટે પૂર્વશાળા દ્વારા આયોજિત ઇવેન્ટ્સ, અને બાળકો તેમના નજીકના વાતાવરણ સાથે વારંવાર સંપર્ક કરે છે?</p>				
7	<p>Children have abundant opportunities in play, group activities, and discussions to bring up their own ideas and experiences.</p> <p>બાળકોને તેમના પોતાના વિચારો અને અનુભવો રજૂ કરવા માટે રમત, જૂથ પ્રવૃત્તિઓ અને ચર્ચાઓમાં વિપુલ તકો હોય છે</p>				

Appendix C

Sr. No	Quantitative Questions
1.	<p>What does the term "sustainable development" mean to you?</p> <p>તમારા માટે " સસ્ટેનેબલ ડેવલપમેન્ટ (ટકાઉ વિકાસ)" શબ્દનો અર્થ શું છે?</p>
2.	<p>Are you aware about the Sustainable Development Goals?</p> <p>શું તમે ટકાઉ વિકાસ લક્ષ્યો વિશે જાગૃત છો?</p>
3.	<p>What are your thoughts on teaching pre-schoolers about sustainability?</p> <p>પ્રી-સ્કૂલર્સને ટકાઉપણું વિશે શીખવવા વિશે તમારા વિચારો શું છે?</p>
4.	<p>What practices in your teaching - learning routine reflect thinking / understanding related to sustainability?</p> <p>તમારા શિક્ષણમાં કઈ પ્રેક્ટિસ - શીખવાની નિયમિતતા ટકાઉપણું સંબંધિત વિચાર/સમજણને પ્રતિબિંબિત કરે છે?</p>
5.	<p>What are the values reflected in children's behavior that you've observed after taking (involving) sessions related to SD?</p> <p>બાળકોના વર્તનમાં કયા મૂલ્યો પ્રતિબિંબિત થાય છે જે તમે SD સંબંધિત સત્રો પછી જોયા છે? /</p>

	SD સંબંધિત સત્રો લીધા પછી (સંકળાયેલ) બાળકોના વર્તનમાં તમે જે મૂલ્યો જોયા છે તેમાં કયા મૂલ્યો પ્રતિબિંબિત થાય છે?
6.	In what way is the idea of valuing all life forms ingrained in children? બાળકોમાં જીવનના તમામ સ્વરૂપોનું મૂલ્યાંકન કરવાનો વિચાર કઈ રીતે બંધાયેલો છે?
7.	How is the conversation led when children bring up their own ideas and experiences to understand and empathize with other people's conditions and values in play, group activities, and discussions? જ્યારે બાળકો રમત, જૂથ પ્રવૃત્તિઓ અને ચર્ચાઓમાં અન્ય લોકોની સ્થિતિ અને મૂલ્યોને સમજવા અને તેમની સાથે સહાનુભૂતિ દર્શાવવા માટે તેમના પોતાના વિચારો અને અનુભવો રજૂ કરે છે ત્યારે વાતચીત કેવી રીતે થાય છે?
8.	What are some of the practices adopted by schools in general, which are contrary to sustainability? સામાન્ય રીતે શાળાઓ દ્વારા અપનાવવામાં આવતી કેટલીક પ્રથાઓ શું છે, જે ટકાઉપણની વિરુદ્ધ છે?
9.	According to you what are the challenges in imparting ESD in the current education curriculum for ECCE? તમારા મત મુજબ ECCE માટે વર્તમાન શૈક્ષણિક અભ્યાસક્રમમાં ESD આપવાના પડકારો શું છે?
10.	What kind of learning materials are required in promoting the idea of sustainable development for pre-schoolers? પ્રી-સ્કૂલર્સ માટે ટકાઉ વિકાસના વિચારને પ્રોત્સાહન આપવા માટે કેવા પ્રકારની શીખવાની સામગ્રીની જરૂર છે?
11.	Which activities do you wish to include in the current plans for inclusion of ESD? ESD ના સમાવેશ માટે તમે વર્તમાન યોજનાઓમાં કઈ પ્રવૃત્તિઓનો સમાવેશ કરવા માંગો છો?

Appendix D

Activity based module – Education for Sustainable Development

Introduction

This module is created by including crucial topics like interacting with nature, understanding biodiversity, being familiar with your neighbourhood, the value of natural resources, resource consumption, the impact of waste, conservation, fostering social connections, and knowledge of justice, equality, empathy, and overall willing participation. This module is developed with the knowledge of children's developmental stage and the context they belong to, understood from the teachers working with the children. This module has been created as an aid for teachers to incorporate Education for Sustainable Development into their curricula, in particular for preschool education.

The module provides foundation for learning sustainable practices. Concepts and activities work as a catalyst to improve the likelihood of children developing values that must be possessed in order to adopt a sustainable attitude and the knowledge necessary to save the future of Mother Earth.

The module is designed by adapting the theoretical frameworks of the study, The Curriculum Framework for Education for Sustainable Development by Schreiber et al. (2016), Anaadi Sustainability Awareness for the Young (ASAY) Framework by Pooviah (2020) and Sustainable Development: Teacher Module by Barnett et al. (n.d).

Rationale for the module

Due to the materialistic nature of today's society, it is imperative that we shift our focus from career-focused education to value-based education.

The curriculum of primary education in India is similar in almost all the states of India; the subjects taught are Mathematics, Science, History, Geography, English, Hindi, and in some states, there is a provision of a third language. Along with all these subjects one subject is added for personality development of a student usually named as Moral Science/ Value Education. Some schools call it “Value Education”, others call it “Life Skills” and some even call it “Personality Development”. They are generally secular in nature and universal values like honesty, trust, responsibility, compassion etc., are given prime importance. Some schools have prescribed books for the subject, but unlike subjects like Music, Dance, or Physical Education there are no specially trained teachers for the subject. No school, schedules more than one class a week for Value Education.

It's past time for educators to make a deliberate effort to teach values, given the status of public life in our country today, when corruption, violence, and intolerance are increasingly obvious in day-to-day interactions. Many people argue that principles can't be taught; instead, they must be imbibed. Why isn't it possible to utilise the same approaches of Value Education if teaching is the providing of instruction or is intended to transfer knowledge or skill, and if it is done through conversations, experimentation, lectures, demonstration/modelling, role play, and so on? The knowledge material would be based on universal concepts such as Sustainable Environment, Respect, Compassion, and so on, and the procedures would be similar to those used in other courses.

The concept of sustainable development has already been included in the aims and objectives of educational programs yet there still lies a need to upgrade the curricula accordingly. The module development is an initial step to re-accommodate the valuable sustainable practices in the education while maintaining the pedagogical beliefs of the system.

Objectives of the module –

- To help children learn about the need and importance of Sustainable Development and guide them the ways to achieve it.
- To expose children to positive instrumental values such as honesty, sincerity, fairness, courage, equality, and dignity.
- To help students become self-sufficient, self-constrained, self-reliant, and selfless individuals.
- To produce great leaders and to make each student a good human being and a responsible citizen. To make each student an agent of constructive social change.

Assessment strategies

- In-class group discussions
- Imaginative or fabricated situations inside the classroom.

Expected Competencies

1. Acquisition and processing of information - acquire information on topics of nature, globalisation and development and process it topic-relatedly.
2. Recognising diversity - recognise the socio-cultural and natural diversity in the world.
3. Analysis of global change - analyse processes of globalisation and development by using the concept of sustainable development.
4. Differentiation between levels of action - recognise levels of action – from the individual to the global level – and their respective function for development processes
5. Change of perspectives and empathy - realise, appreciate and reflect upon own and others' values and their significance for life.

6. Critical reflection and comment - comment on issues of globalisation and development by critically reflecting and orienting at the international consensus, at the principle of sustainable development and at human rights.
7. Evaluation of development projects - work out approaches to evaluate development projects (here and in other parts of the world), taking into account diverse interests and general conditions, and come to self-reliant conclusions.
8. Solidarity and shared responsibility - realise areas of personal responsibility for humans and the environment, and accept the respective challenge.
9. Understanding and conflict resolution - contribute to overcoming socio-cultural barriers and self-interest by communicating and cooperating, and contribute to conflict resolutions.
10. Ability to act in times of global change - ensure the ability to act socially in times of global change, most of all in personal and professional fields, by openness and readiness to innovate as well as by an appropriate reduction of complexity, and to bear open situations.
11. Participation und active involvement - Students are able and willing, based on their autonomous decision, to pursue objectives of sustainable development in private, school and professional fields and to participate in their implementation in society and politics

Activities

1. Poem recitation

Title - Mati se hi janm hua hai, mati me hi mil jana hai by Anushka suri

Content

माटी से ही जन्म हुआ है! माटी में ही मिल जाना है!
 धरती से ही जीवन अपना! धरती पर ही सजे सब सपना!
 सब जीव जन्तु धरती पर रहते! गंगा यमुना यही पर बहते!
 सब्जी फल यहाँ ही उगते! धन फसल यहाँ ही उपजे!
 धरती माँ की देख रेख कर! हमको फर्ज़ निभाना है!

Class – Jr.KG and Sr.KG

Procedure

- Recite the poem along with the children in the class.
- After recitation let the children reflect upon what is the message of the poem.

Probe and encourage them to express what do they feel about the poem.

Duration – 10 minutes

Expectations

- The children will understand the importance of Mother Earth and the need to respect and protect it.
- The children will reflect and analyse the current conditions of the environment and its effects on Earth.

Competencies

- Acquisition and processing of information
- Solidarity and shared responsibility

Values

- Appreciation
- Gratitude
- Acceptance

2. Changes all around

The children have to observe their environment and the gradual changes. Let the children observe the changes in the sky like the flow of the clouds, changes in the weather like the flow of the breeze, the temperature etc.

Class – Sr. KG

Procedure

- At the beginning of the school take the children to the outdoor and ask them to observe the sky, feel the weather etc.
- Ask the children if they wish to express whatever they feel through words or any drawings etc.
- After snacks break again take them to observe and notice the changes that took place.
- Ask them what do they feel about the changes and what do they think the reason is.
- Finally, before leaving again ask them to observe the environment and ask them about the same on the next day.

Expectations

- The children will observe and notice the natural changes and its phenomenon.
- The children will understand the interdependence of the nature.
- The children will appreciate the aesthetics of the nature.

Competencies

- Acquisition and processing of information

Values

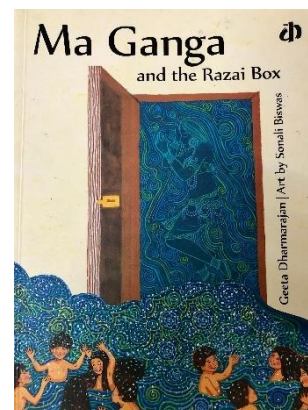
- Respect and appreciation

3. Story telling

Class – Jr. KG and Sr.KG

Title - Maa Ganga and the Razai Box by Geeta Dharmanjan

Content – the people of the hills complain about Ma Ganga flooding their villages. Ma Ganga says that she will only stop when Shiva's hair is spread on her banks. The villagers realize the difficulties Ma Ganga is going through and decide to plant trees on the banks.



Through this story the children will be introduced to important concepts like pollution, soil erosion and desertification.

Duration - 15 minutes

Expectations –

The children will understand the certain environmental concepts.

Competencies

- Acquisition and processing of information
- Analysis of global change
- Differentiation between levels of action
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility
- Ability to act in times of global change

Values

- Respect
- Protection and care
- Empathy
- Gratitude

Reference

https://books.google.co.in/books/about/Ma_Ganga_and_the_Razai_Box.html?id=M89S8Me6aY8C&redir_esc=y

4. Value the resource

Class – Sr. Kg

The children will name the source of material of the object.

Procedure

- In the classroom point out any item.
- Ask the children to identify what is the object made from and where does the material come from.
- Clarify and inform them about the materials and the respective natural resources.
- For example: - Display a pencil.

Ask the children what is made from?

Wood. Then where do we get the wood from.

Graphite. Where does graphite come from.

Duration – 15 minutes

Expectation

The children will understand the consumption of the earth's resources.

Competencies

- Recognising diversity
- Critical reflection and comment

Values

- Protection and care
- Appreciation
- Gratitude

5. Water Pollution

Discuss the effects of waste in the water bodies and its effects on aquatic life. Discuss the dangers and effects of the waste on the aquatic life.

Class – Jr. Kg and Sr. Kg

Procedure

- Take a big tub filled with clear water.
- Ask the children if they would like to play in it?
- After their response add dried flowers and leaves in the water. Ask the same question again.
- Give them time to organize their thoughts, choose their vocabulary and express it.
- Later keep on adding some left-over vegetable peels, plastic waste, paper waste etc and repeat the question.
- After their response add a little bit of oil in the water.
- Finally let them reflect on the entire process of how the water got dirty and polluted.
- Lead the discussion towards water pollution and its adverse effects on the nature and the health and wellbeing of different life forms.
- Encourage the children to question for clarification and additional information.

Duration – 20 minutes

Expectations

- The children will gain knowledge on the concept of Water pollution.
- The activity will enhance empathy and sensitivity in children towards the condition of the natural resources.

- Children will develop resilient behavior towards unhealthy and unsustainable practices.

Competencies

- Acquisition and processing of information
- Analysis of global change
- Differentiation between levels of action
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility

Values

- Protection and care
- Empathy
- Resilience

6. Aaj ki Taza Khabar

Read news for the awareness of children on about the global development and global issues.

Class – Sr. Kg

Procedure

- After the first session every day spare at least 5 minutes for this activity.
- Let the children sit in a comfortable position.
- Read any one news related to climatic conditions around the globe, or any natural disasters, any new invention or development in the country etc.
- Share if there is any development in terms practices for solution like ban on usage of plastic bags etc.
- Give the children the freedom of thought, let them process the information and reflect and comment on the same.
- Encourage them in their articulation of thoughts and vocabulary.

Duration – 5 to 7 minutes

Expectations

- Children will identify current issues and environmental threats.
- Children will be able to analyse the impact of human activities on the environment in different regions of the world.

Competences

- Recognising diversity
- Analysis of global change
- Differentiation between levels of action

- Critical reflection and comment
- Evaluation of development projects
- Solidarity and shared responsibility
- Understanding and conflict resolution
- Ability to act in times of global change
- Participation und active involvement

Values

- Empathy
- Respect
- Equality and justice
- Generosity
- Kindness

7. Home

Prior knowledge – Knowledge about different habitats of different organisms through pictures and videos.

Class – Sr. Kg

Procedure

- Divide the children into a few groups.
- Assign each group a shelter related to an animal for example a den, a pond etc. and a picture of the same.
- Provide the time and space for children to build up their models with their own creativity.
- Encourage them and provide help whenever needed.
- Let the children display their models and express their ideas of that particular habitat.

Duration – 30 minutes

Materials – shoe boxes, old aluminium/ steel bowls and plates, leaves, grass, water, sand, shells, and other art items.

Expectations

- Children will understand the interdependence of the earth and the natural environment.
- Children will realize the importance of a shelter and feeling of belongingness.
- Children will be sensitized and develop empathy towards destruction of habitats like jungles and water bodies.

Competencies

1. Acquisition and processing of information
2. Recognising diversity
3. Change of perspectives and empathy
4. Critical reflection and comment
5. Participation und active involvement

Values

- Respect
- Patience
- Self confidence
- Non violence
- Generosity
- Empathy

8. Being a farmer

Children can take up roles as farmers. They can learn the entire process of food production starting from ploughing, sowing the seed, irrigation, cutting, threshing etc.

Pre – preparation –

- Invite a farmer as a resource person if possible so that they can demonstrate the procedure well.
- Show farming videos to the children for them to understand the procedure.
- Pre grown grains and vegetables can be used for the procedures of cutting and threshing.

Class – Jr. Kg and Sr. Kg

Procedure

- Divide the children into a few groups.
- Assign different tasks to different groups like ploughing, sowing, irrigation, cutting, threshing etc.
- Line up different activities according to the sequence.
- Ask one group to start with the process of ploughing and let the others observe it and learn it.
- After that the next group can sow the seeds and the rest can observe.
- Follow the same for all the groups.
- For cutting and threshing as mentioned preprepared food can be used.

Expectations

- Children will understand the complex and lengthy procedure of food production and develop value for food.

- Children will develop respect and gratitude towards the nature and the professionals who are working in this field especially farmers.
- Children will also be able to relate the interdependence of nature.

Competencies

- Acquisition and processing of information
- Change of perspectives and empathy
- Evaluation of development projects
- Solidarity and shared responsibility
- Participation und active involvement

Values

- Gratitude
- Respect
- Appreciation
- Self confidence
- Patience

9. Designing posters for awareness

Children will design posters for awareness like save water, paper, say no to plastic, gender inequality or any such global message. and these will be displayed in the required areas like wash area, lobbies, bulletins or switch boards inside the preschool.

Class – Sr. Kg

Procedure

- Inform the children a day prior so they can select a topic of their choice and show them some references.
- Instruct them about the importance of these posters as it will be displayed in their school.
- Provide them with the required materials.
- Give them enough time to think, and be creative.
- As a teacher, draw and paint along with them and make your own poster.
- Encourage them throughout and clarify the doubts.
- Let every child present their poster and express their idea and message behind it.

Duration – 20 minutes

Expectations

- Children will be able to reflect on the global concerns and understand the individual's contribution in the same.
- Children can come up with creative solutions.
- Spreading awareness will be a valuable contribution.
- It will help in promoting sustainable consumption patterns.

Competencies

- Acquisition and processing of information
- Analysis of global change
- Differentiation between levels of action
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility
- Understanding and conflict resolution
- Ability to act in times of global change
- Participation und active involvement

Values

- Respect
- Patience
- Self confidence
- Justice
- Equality
- Non discrimination

10. Market survey

- Children can be taken for a visit to a supermarket or a regular vegetable market learn about the available vegetables and fruits sold.
- The teacher can list down a few inquiry questions before going.
The prices, procedure of production, seasons and weather conditions, market demand etc. can be enquired.

Class – Jr. Kg and Sr. Kg

Duration – 30 to 40 minutes

Expectations

- Children will learn about the seasonal and annual vegetables and fruits, how are they grown these days, why are they expensive or cheap etc.
- Children will learn about the trading practices and functioning of a market.
- Children will also be able to observe the different qualities of different buyers and sellers etc.

Competencies

- Acquisition and processing of information
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility
- Participation und active involvement

Values

- Respect and Generosity
- Resilience

11. No waste lunches

Children can produce more food from food waste by decomposition.

Procedure

- Ask the children to bring food (vegetables, fruits or snack) which releases little to no waste. For example, the orange peel is thrown away after removing the orange so what can be done?
- Introduce the concept of compost pit which can be formed in the outdoor area of the school.
- All the biodegradable waste like peels, vegetable waste from the school kitchen etc. can be deposited in this pit for decomposition.
- Explain the function of the compost pit and the micro-organisms in decomposing the waste.
- The manure formed can be used in kitchen gardening in the school itself or can be sold to earn funds.

Expectations

- The children will understand the value of each part of the food item they are consuming.
- The concept of biodegradable waste and decomposition will be understood.
- The interdependence of organisms and nature will be understood and valued.
- It will help in promoting sustainable consumption practices.

Competencies

- Differentiation between levels of action
- Change of perspectives and empathy

- Critical reflection and comment
- Solidarity and shared responsibility
- Ability to act in times of global change
- Participation und active involvement

Values

- Respect
- Gratitude
- Appreciation

12. Story telling

Title - The ant and the grasshopper

Content

On a warm, sunny day in the middle of summer. A grasshopper is lying in a field, enjoying the sunshine, singing and playing his fiddle. Suddenly, he notices an ant scurrying through the field, carrying an ear of corn. The grasshopper, wanting to chat for a while, calls out to the ant.

‘What are you doing? Come and talk to me for a while.’

The ant shakes his head.

‘I’m sorry, I can’t stop, I’m too busy. I have to gather food for the winter.’

The grasshopper laughs at the ant.

‘The winter is ages away! It’s the middle of summer, and there’s plenty of food,’ he says.

‘Come and talk to me.’

But the ant refuses to stop working. He spends all day scurrying backwards and forwards across the field, carrying his supplies. The grasshopper watches on, thinking the ant is missing a great opportunity to enjoy himself. The ant is obviously not having a good time, while the grasshopper is completely content.

All too soon, the winter comes. The weather is cold and there is no food to be found anywhere. The grasshopper is hungry and has nothing to eat. He knocks at the ant’s door, hoping the ant will take pity on him. The ant opens the door, and the grasshopper can see plentiful supplies of food inside the house.

‘I’m so hungry,’ says the grasshopper. ‘You have plenty of food. Is there any chance you might share some with me?’

‘Yes sure,’ says the ant. ‘You laughed at me for gathering food in summer, but I don’t wish to leave you hungry. Come in I will give you something to eat.’

So, the grasshopper survived the winter due to the ant’s help.

Have a discussion in the end related to the behavior of the characters, the moral of the story etc. Let the children think and reflect upon it.

Expectations

- Children will learn about saving, hard work and responsibility.
- Children will be sensitized towards other’s conditions and learn how to never make fun about it.
- They will also learn reliance on each other.

Duration – 15 minutes

Competencies

- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility
- Understanding and conflict resolution
- Ability to act in times of global change

Values

- Kindness
- Respect
- Generosity
- Empathy
- Responsibility

13. Story telling

Title - Grandfathers' coins

Content

Every month, Julia and her cousins would go for the big family meal at their grandparents' house. They would always wait excitedly for the moment their grandfather would give them a few coins, "so you can buy yourself something." Then all the children would run off to buy chewing gum, lollypops, or wine gums. The grandparents, aunts, uncles, and parents commented that, behaving like this, the children would never learn to manage their money. So, they proposed a special test, in which the children would have to show, over the course of a year, just what they could manage to get with those few coins.

Some of the children thought that they would save their money, but Ruben and Nico, the two smallest kids, paid no attention, and they continued spending it all on sweets. Every time, they would show off their sweets in front of the other children, laughing and making fun of their cousins. They made Clara and Joe so angry that they could no longer stand to keep saving their money. They joined Ruben and Nico in spending whatever they had, quickly, on sweets.

Monty was a clever boy, and he decided to start managing his money by exchanging it: buying and selling things, or betting it in card games with other children. Soon he had surprised the whole family. He had accumulated a lot of money for little effort. The way he was going, he would end up almost a rich man. However, Monty was not being very careful, and he got involved in more and more risky deals. A few months later he hadn't a single penny left, after placing a losing bet on a horse race.

Alex, on the other hand, had a strong will. He saved and saved all the money he was given, wanting to win the competition, and at the end of the year he had collected more money than

anyone. Even better, with so much money, he managed to buy sweets at a reduced price, so that on the day of the competition he presented enough sweets to last for much more than a year. And even then, he still had enough money left over for a toy. He was the clear winner, and the rest of his cousins learnt from him the advantages of knowing how to save and how to wait.

There was also Julia. Poor Julia didn't enjoy the day of the competition, because even though she had had a wonderful secret plan, she had spent her money without giving her plan enough time to work. However, she was so sure that her plan was a good one that she decided to carry on with it, and maybe change the expressions on her relatives' faces, who had seemed to be saying, "What a disaster that girl is. She couldn't manage to save anything."

But when she was about to complete the second year of her plan, Julia surprised everyone by turning up at their grandparents' house with a violin and a lot of money. What was even more impressive was hearing her play. She played really well.

Everyone knew that Julia adored the violin, even though the family couldn't afford to pay for her to have lessons. So, Julia had befriended a poor violinist who played in the park, and she offered him all the coins her grandfather had given her, if he would teach her how to play. Although it wasn't much money, on seeing Julia's excitement, the violinist agreed, and he taught her happily for months. Julia showed so much desire and interest that a little after a year the violinist loaned her a violin so they could play together in the park, as a duo. They were so successful that gradually she managed to buy her own violin, with quite a bit of money to spare.

From then on, the whole family supported Julia, and she became a very famous violinist. And she would always tell people how it was all possible, with just a few coins well spent, to make one's wildest dreams a reality.

Have a discussion in the end related to the behavior of the characters, the moral of the story etc. Let the children think and reflect upon it.

Duration – 15 minutes

Expectations

- Children will learn how to effectively manage their own money.
- Children will learn the idea of saving today for a better tomorrow.

Competencies

- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility

Values

- Self confidence
- Gratitude

14. No electricity day

This activity is the opportunity to discuss the importance of electricity and its conservation, weather changes, atmosphere and sustainable practices etc.

Content

One day can be decided when the entire class will be using no electricity for an hour and rather work in natural sunlight and fresh air.

Children can be taught natural ways of dealing with the weather. During winters the children can sit in broad sunlight in the outdoors on thick mats and rugs. Natural ways of keeping the climate cool and fresh during summers can be having plenty trees and water bodies around.

Exercises to keep the body cool and warm can be discussed.

Expectations

- Children will understand the importance of the conservation of electricity.
- Children will learn sustainable consumption practices.
- Children will also be introduced to natural solutions for arising concerns.

Competencies

- Acquisition and processing of information
- Analysis of global change
- Differentiation between levels of action
- Critical reflection and comment
- Solidarity and shared responsibility
- Ability to act in times of global change
- Participation and active involvement

Values

- Appreciation
- Resilience
- Gratitude

15. Group Discussion – Electric vehicles

Class – Jr. Kg and Sr. Kg

Content

The need, advantages and disadvantages of the electric vehicles should be the topic of discussion.

Electric Vehicles can play a vital role in combating climate change across the globe by helping to cut down the emissions and reducing dependence on fossil fuels. Electric Vehicles (EV's) include, road and rail vehicles, surface and underwater vessels, electric aircraft and electric spacecraft.

- **Environment Friendly:** It is stated that Electric Vehicles are 100% eco-friendly. These vehicles help to reduce pollution because they do not emit smoke or toxic gasses into the environment which leads to global warming.
- **Needs Less Maintenance:** These electric vehicles require less maintenance than the other conventional vehicles. In these vehicles, there are fewer fluids (like oil and transmission fluid) to change and there are only fewer moving parts.
- **Cost-Effectively:** These vehicles are cost-effective as they use electricity to charge their batteries instead of using fossil fuels like diesel or petrol. In these vehicles, there will be only electricity cost but charging an electric vehicle is cheaper than filling petrol or diesel for travel purposes.
- **Reduce health effects from air pollution**
- **Reduce dependence on petroleum**

Duration – 15 minutes

Expectations

Children will learn the importance of new inventions and development as a creative solution for global issues.

Competencies

- Analysis of global change
- Critical reflection and comment

Values

- Protection and care
- Appreciation

16. Trade toy store

This activity addresses concepts such as price, affordability, and trade.

Class – Jr. Kg and Sr. Kg

Procedure

The classroom can be setup as a toy store and children can be given roles as buyers and sellers.

The children can be provided fake money or made-up money.

Then the children can be given the freedom to choose to buy the toys they wish to play with within the provided budget.

Duration – 20 minutes

Expectations

- Children will be able to learn mathematical concepts of addition and subtraction and develop communication skills.
- Children will be able to evaluate the worth of the objects and understand the market demands.
- Children will be able to understand the concept of affordability and privileges.
- Children will develop qualities of conflict resolution and decision making.

Competencies

- Change of perspectives and empathy
- Critical reflection and comment

Values

- Equality
- Gratitude
- Satisfaction
- Responsibility

17. Is it worth it?

Watch advertisements and discuss the need and worth of the products especially toys or plastic items.

Class – Sr. Kg

Procedure

- Ask the children to sit comfortably.
- Select any 3 products and its advertisements which are child friendly. For example – Games or fancy plastic tiffin and bottles etc.
- Play one advertisement and ask the children to watch it.
- After watching discuss the need of the product, the use of the product, the price etc.
- Similarly, do it for all the three.
- Let the children express their ideas regarding the requirement and use of the product, the worth of the product, the durability of the product etc.
- Encourage the children to critically think and express their thoughts. Help them to enhance their vocabulary.

Duration – 15 minutes

Expectations

- Children will be able to differentiate between needs and desires.
- Children will be able to evaluate the worth of the objects and understand the market demands.
- Children will be able to understand the concept of affordability and privileges.
- Children will find cheaper and creative replacements for such products.

Competencies

- Change of perspectives and empathy
- Critical reflection and comment

Values

- Non discrimination
- Gratitude
- Satisfaction

18. Natural aesthetics – Homework

Create artifacts to decorate the classroom and create musical instruments.

Class – Jr. Kg and Sr. Kg

Procedure

- Instruct the children to create any best out of waste products for the classroom.
- Show them the pictures of a few such products to give them an overview.
- Children can use pencil waste, old socks, cardboards, newspapers, DVD's etc. to create artifacts.
- Children can also use empty cans or bottles to make shakers and drums for music time.

Expectations

- Children will learn sustainable consumption patterns and the concepts of reuse and recycle.

Competencies

- Acquisition and processing of information
- Recognising diversity -
- Differentiation between levels of action
- Critical reflection and comment
- Solidarity and shared responsibility

Values

- Appreciation and Gratitude
- Generosity

19. Poem recitation – Mera Desh Bharat

देश है मेरा सबसे प्यारा,
कहते हैं सब इसे निराला।
भिन्न भिन्न राज्यों का देश,
मिलकर रहने का देता सन्देश।



अलग अलग है बोली सबकी,
अलग अलग अंदाज है।
मनाते हैं सब भिन्न त्यौहार,
जिसमें अपनेपन की मिठास है।



जैसा सुंदर हमारा मन,
तो क्यों ना हो सुंदर देश का तन।
रखेंगे साफ़ हम इसको इतना,
कि फूलों सा महकाये उतना।



मेहनत कर आगे बढ़ेंगे,
बढ़ाएंगे अपने देश का नाम।
तारों सा रोशन रहेगा।
करेंगे सब इसे सलाम।

Procedure

- Recite the poem along with the children in the class.
- After recitation let the children reflect upon what is the message of the poem. Probe and encourage them to express what do they feel about the poem.

Duration – 10 minutes

Expectations

- Children will learn about the diversity in the nation.
- They will develop respect for the nation and its citizens.

Competencies

- Acquisition and processing of information
- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility
- Understanding and conflict resolution

Values

- Respect
- Generosity
- Equality
- Kindness
- Appreciation

20. Story Telling

Title - Unity is Strength – The flock of pigeons and the mouse

Content

There was a flock of pigeons which lived on a banyan tree. One day, the pigeons were flying in search of food. They saw plenty of grains strewn around on the ground. All of them came down on the ground to pick up grains. But it was a trap laid by a hunter. All the pigeons were trapped in the net which the hunter had spread on the ground.

The pigeons were very sad and feeling dejected because they knew that their end was near. The leader of the pigeons asked them not to lose courage. He said that if all of them made a joint effort they would be able to fly away with the net. The leader was a wise pigeon and knew the power of unity. All the pigeons tried in unison and finally were able to fly along with the net. The hunter could do nothing but repent at seeing the pigeons flying away.

After flying for a long time, they reached a place where an old friend of the pigeon king lived. It was a rat. The pigeon king called for his friend and then the rat came out of his hole. Once he understood the whole story, he called his folks. All the rats worked on the net and were able to cut it to set the pigeons free.

The moral of the story is, "Unity is strength and one should not lose hope and courage even in extreme difficulty."

Duration – 15 minutes

Expectations

- Children will value team work and support each other.
- Children will develop sensitivity towards animals and their feelings.

Competencies

- Acquisition and processing of information
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility

Values

- Kindness
- Empathy
- Non violence

21. Feed a friend (home assignment)

Children can be given a task to feed any animal nearby their house and later share their experience.

Teachers must give examples like feeding a roti to a stray dog, placing a bowl of water near the window for the birds, leaving a little amount of food near a corner for the ants etc.

Imagine and discuss the feelings and reactions of the animals towards this gesture.

Class – Jr. Kg and Sr. Kg

Expectations

- Children will feel the satisfaction of helping and feeding an organism.
- Develop sensitivity towards animals and their feelings.

Competencies

- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility

Values

- Kindness
- Empathy
- Protection and care
- Non violence

22. We meet, we greet

All the children can be given a homework to learn saying hello or a greeting in different languages across the nation or globe.

Class – Jr. Kg and Sr. Kg

Procedure

- Instruct the children to learn a greeting from any language of their choice for the next day.
- On that particular day, the teacher will greet the children with a unique greeting and then ask every child to reply to the with the language greeting they've learned one by one.
- Also ask the child to name the language they've used for the greeting.

Expectations

- Children will develop respect for the diverse languages.
- It will develop curiosity in the children to learn about the diversities they are surrounded with.

Competencies

- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment

Values

- Equality and Respect
- Kindness and Generosity

23. World tour on the globe

Throughout the year of the school every week the teacher can spin the globe and wherever it stops that country can be discussed in the class.

Class- Sr. Kg

Procedure

- At the beginning of the week the teacher can spin the globe and one child can be called to point out a country.
- Throughout the week, every day for 5 minutes the teacher will share a few facts about that particular country.
- The topics of discussion can be the countries nationality, specialities, festivals, economic condition, climatic condition, habitat etc.
- Every week a new country can be discussed and learned.

Expectations

- Children will develop curiosity to learn about the world.
- Respect and appreciation will be developed towards socio-cultural diversities.
- Knowledge about issues that arise from the impact of human activities on the environment in different regions of the world will be gained.

Competencies

- Acquisition and processing of information
- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment
- Understanding and conflict resolution

Values

- Acceptance
- Appreciation
- Respect
- Empathy
- Non discrimination
- Justice
- Equality
- Protection and care

24. Observe and tell

Pictures of people from different religions, classes, tribes, occupations can be shown to the children and their viewpoints of the lives of these people can be taken.

Class – Sr. Kg

Procedure

- Choose the topic of learning diversities during group discussions.
- Choose pictures of different people from different religions, tribes and social classes residing in and around your city.
- Ask the children to observe these pictures and tell whatever they can see and feel.
- Make sure to choose pictures that are child friendly.

Duration – 20 minutes

Expectations

- Children will know about the people residing in and around them.
- Children will develop respect and sensitivity towards all the human beings irrespective of the diversities.

Competencies

- Acquisition and processing of information
- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment
- Understanding and conflict resolution

Values

- Acceptance
- Appreciation
- Respect
- Empathy
- Justice
- Equality
- Protection and care

25. Who am I?

Riddles on community helpers.

Procedure

- Create riddles on community helpers including their roles and importance in our daily life.
- Sing the riddles for the children and let the children guess the answer.
- Accompany the answer with the picture of the particular community helper for clarification of the children.
- After every riddle once again convey the roles and importance of these helpers in our life.

Expectation

- Develop respect towards all the professions.

Competencies

- Acquisition and processing of information
- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment
- Understanding and conflict resolution

Values

- Appreciation and Gratitude
- Respect and Kindness
- Empathy and Equality

26. Group discussion

Gender roles - Children tend to have a notion about girls talking more about clothes and boys more inclined towards sports so this session can be a way to break the stereotype and promote equality.

Class – Jr. Kg and Sr. Kg

Procedure

- Choose women athletes & businesspersons and male chefs & designers as the topic of discussion.
- Select renowned personalities whom the children can see on television or in newspapers and discuss about their life story.
- Discuss the passion of these people, gendered challenges faced by them, the reaction of the audience and their success.
- Encourage the children to connect these situations with their current lives, their friends or siblings and reflect on it.

Duration – 15 minutes

Expectations

- Children will develop respect towards both the genders.
- They will also develop resilience towards stereotypes and sensitivity towards each other.
- They will show behaviors which are more gender neutral and inclined towards equality.

Competencies

- Acquisition and processing of information
- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility
- Understanding and conflict resolution
- Active participation and involvement

Values

- Equality
- Justice
- Respect
- Generosity
- Acceptance

27. Knowing your surrounding (home assignment)

Children can be given a task to visit their neighbor or a friend and learn about their lifestyle.

Class – Sr. Kg

Procedure

- Assign the task to children to visit any neighbour's or friend's house to learn about them.
- Ask the children to observe what does their house look like, what religion do they belong to, what language do they speak, what is the occupation of the people in the house, etc.
- Next day ask the children about their experience of the visit, what did they learn? What did they like about it etc.

Expectations

- Children will strengthen their bonds with the people they visited.
- Children will develop respect and sensitivity towards all the human beings irrespective of the diversities.

Competencies

- Acquisition and processing of information
- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment
- Understanding and conflict resolution
- Participation und active involvement

Values

- Respect
- Equality
- Justice
- Generosity
- Acceptance
- Kindness

28. You are beautiful

Class – Jr. Kg and Sr. Kg

Procedure

- Introduce the children to the concept of beauty in terms of inner beauty. Explain them that beauty lies in the way we behave with each other, in the way we depend upon and support each other, in the way feel for each other.
- Clarify the misconception of children about beauty in terms of appearance.
- Ask the children to sit in a circle.
- Ask them to appreciate their peer for any action they did towards them or just appreciate them for being kind and beautiful.
- Every child should say the phrase “You are beautiful” to their peers.

Expectations

- Children will develop respect and love towards each other.
- Children will strengthen the bonds amongst themselves and become more accepting.
- Children will respect each other’s strengths and weakness and show interdependence.

Competencies

- Recognising diversity
- Change of perspectives and empathy
- Critical reflection and comment
- Understanding and conflict resolution

Values

- Respect
- Acceptance

- Appreciation
- Kindness
- Equality
- Self confidence

29. Role play

Teachers can create a script for a role play based on Unity in Diversity spreading the message that we are all God's gift and we all have different strengths and weaknesses.

Class – Jr. Kg and Sr. Kg

Expectations

- Children will develop respect and love towards all the organisms.
- Children will respect the strengths and weakness everyone carries and show interdependence.
- Children will show unbiased behaviors towards everyone.

Competencies

- Acquisition and processing of information
- Recognising diversity
- Differentiation between levels of action
- Change of perspectives and empathy
- Critical reflection and comment
- Solidarity and shared responsibility
- Understanding and conflict resolution
- Participation und active involvement

Values

- Equality
- Respect
- Kindness
- Empathy

- Generosity
- Justice
- Acceptance
- Appreciation
- Gratitude