



# Education 5.0 and Sustainable Development

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## **ABSTRACT:**

*Education is a key to national development. It not only opens doors of new opportunities but also empowers the individual with knowledge and wisdom to face challenges and solve various problems. Education helps in the transmission of culture, social upliftment, and political integration. With new opportunities, there come new challenges where education helps in dealing with such issues. Modern Education aims at helping students to acquire various skills like critical thinking, creative thinking, communication skills, problem-solving skills and lifelong learning. The education framework has changed from the Education 1.0 level to the present Education 5.0. This framework focuses on the needs of the learner, the demand of society and different teaching strategies and methods. In Education 1.0 the teacher taught within the confines of the physical four-walled classroom. No technology was used, and the teacher acted as an autocratic leader. It transformed into the present Education 5.0 level slowly but steadily due to the requirements of the learner, the changing needs of society and the adoption of various teaching approaches. Dr. A.P.J. Abul Kalam rightly said that Education is the holistic development of individuals at all level be it spiritual, academic, physical or psychological. The learner changed after the COVID-19 pandemic and the world needed sustainable development which shifted the paradigm from technology integration in Education to the involvement of various human skills like empathy, sharing, values etc. The present paper thus explores Education 5.0 for Sustainable Development.*

**Keywords:** Education 5.0, Sustainable Development, Technology Integration.

## **1. INTRODUCTION**

Education plays a vital role in the development of any nation. It opens a world of new opportunities for individuals and empowers them to face the world with knowledge and wisdom. It

paves the way for the holistic development of the individual so that he becomes a valuable member of society and a responsible citizen. Education is not restricted to going to a formal school system rather it can be acquired in a non-formal and informal manner as well. Learning is not confined to the four boundaries of learning institutions rather it is more of acquiring knowledge, values, skills, habits and beliefs that are beneficial for mankind.

Adesina (2022) noted that there are six main roles of education. Education transmits culture and helps in social placement for social control. Education also acts as an agent of change and promotes social and political integration. Modern education aims to help students attain skills like critical thinking, creative thinking, communication skills, problem-solving skills which are integral to 21st-century skills and are essential to be a lifelong learner.

## **2. Evolution of Education Framework-**

“Education framework refers to the cohesive structure constituted by several components that are adaptable for changing needs of students”. The major components in education framework include curriculum. It is basically the content that is required to be learned by the learners which is based on the needs and requirements of the learner. Second component in any education framework is the lesson planning or the proper organization, planning and reflection of the ideas of the educators. Third component is the programme framework.

The Programme framework focusses on the needs of the learner and the manner of teaching. These components need to be explored in the journey of technology integration from 1.0 to 5.0 education. Starting from Education 1.0 or Classroom 1.0 is basically an authoritarian type of teaching atmosphere. Here the students are passive recipients of the learning components i.e. concepts and ideas. The teacher usually teaches within the confines of the physical classroom setting. There is no use of any technology or technological application. As the teacher is teaching in an authoritarian type of setting he/she acts as a leader who determines the topics to be taught to the students without any regard to their interests, needs or requirements. Students have no say in this type of setting nor is any technology used.

Education 2.0 or the classroom 2.0 type of education is little improvement in the teaching setting. The teacher and learners communication is there with regard to classroom activities. This little interactivity is limited to the physical classroom setting. The technology used is only for sharing learning resources like use of broadcasting mediums such as television and radios. Projectors are also used in the class for rendering learning materials via slides.

Education 3.0 or classroom 3.0 framework is student-centred in which the teacher more or less acts as a facilitator or advisor. “Here the teaching setting involves both classroom teaching and online-

based teaching practices. In this type of teaching framework various factors are considered like self-directed learning, problem-solving activities, needed creativity and interactivity between teachers and students.” In this framework, i.e.3.0 classroom Information Technology (IT) is widely used for the teaching-learning process. Examples include blended learning, flipped classrooms and other e-learning platforms as well. Learning resources used by the students are mostly shared by teachers. Although both blended as well as flipped learning approaches are hybrid of both physical and online learning still there is greater interaction between student and teacher in flipped learning.

Education 4.0 is basically the education framework where technology began to transform education using more advanced inventions as well as automation. More importantly, various technologies including artificial intelligence are explored most extensively. Universities are focused in preparing students for technological advancement in the world. Thus technology is integrated into the curriculum through the teaching and learning process thus leveraging technology to make the university experience more beneficial and focused.

Education 5.0 is the latest Education Framework. In this the focus is on the application of the latest technologies to incorporate more humanized teaching and the work for learners' social and emotional growth. Moreover, the emphasis is also on solutions to various problems so as to improve society's quality of life. In this Education 5.0 framework, human is the center of Education. Although various new technologies have been evolved during past few decades like Artificial Intelligence (AI), Data processing, Chat GPT etc. The major emphasis in Education 5.0 is to specify learning goals that learners should achieve through various learning opportunities. Its general objective is to prepare individuals who are academically, socially and emotionally conscious at all dimensions. For this, the specific strategies, methodologies and approaches are subsequently implemented as and where required. It also includes objectives of how to reintroduce drive and creativity including joyful learning in students at all levels. It means the digital equipment, the infrastructure and various other technologies are not an end in itself rather it is mean for attaining more humane objectives.

The background of this framework includes the scenario of the COVID-19 outbreak. During the outbreak of this pandemic, life became more digital. The whole world changed and education was not an exception. Online learning, remote learning, and digital learning apps were the need of the hour and such kind of learning became more normalized. Apart from technological preparedness during the pandemic the need arise to prepare humanity for emotional, social and psychological adjustment in the era of digital transformation. The need was well being of society at all levels i.e. psychological, physical and social. In this scenario, Education 5.0 framework connected the digital along with the human social and emotional abilities so as to enhance their well-being. Here it signifies that Education 4.0 is aimed to increase the speed, accuracy as well as the knowledge in instruction. Thus the aim is

to incorporate 4.0 technology through teaching learning process into educational institutions such as the Internet of Things (IoT), Artificial Intelligence, Machine Learning and gamification. It needs to be mentioned that Education 5.0 does not nullify Education 4.0 recommendations rather it bring a more humanistic approach in learning including social and emotional abilities. The advantage of Education 5.0 is that in addition to technological integration educational institutions can incorporate various other features in their teaching philosophy such as enhanced interpersonal relationships, empathy, tolerance and conflict resolution methodologies. According to Digital Education & Skills Council (2023) “Education 5.0 is a new approach to education and problem-solving ability.”

**According to Alharbi (2023)**, “Education 5.0 has a number of key areas for implementation to obtain maximum benefits.” Some of those areas are narrated below.

“Focused learning to become a professional, improved and blended concept of personalized learning, applying creative thinking for solving the problems and developing value based learning culture.” Education 5.0 also demands a teacher with improved teaching skills and teaching methodologies. The key roles associated with the teachers in Education 5.0 are specialization in resources. A teacher must update the necessities of a resource specialist because modern education is based on the ocean of knowledge thus a teacher must provide the knowledge and also help the students to utilize the passed on information or knowledge. A educator must also act as a support person. He/she must facilitate students whenever some information is required and thus help students in learning and acquiring the knowledge is a relevant topic. The teacher should act as a mentor for shaping the students behavior, expanding the needed work ethics, and provide leadership skills for continuous growth and development.

### **3. Role of Education 5.0 for Sustainable Development Goals-**

The Agenda 2030 has set the demand for collaborative efforts at all levels to achieve SDG. Now it has become very essential for all the members of the society to become more accessible towards social development, justice and human dignity at all levels. **According to Emas (2015)**, “Sustainable development needs to maintain a balance between social needs and environmental preservation along with striking for development of economy as well.” **According to Kopnina (2015) and Mayer (2014)**, “education is crucial for altering behaviours and promoting analytical thinking towards a more sustainable society.” It is Education 5.0 framework that educational institutions include principles of empathy, tolerance and interpersonal adjustment so as to work for a more sustainable approach. The first Goal of Sustainable Development is “No Poverty”. This goal requires a thorough preparation at all levels. Education 5.0 is aimed to provide learning experiences which prepare individuals at academic, social and emotional level. Along with this preparation Education 5.0 provides various digital platforms which help in educating individuals how to adopt better and

make responsible choices, have empathy, share resources among less privileged. It can also help in ensuring equitable development and fair resource distribution.

**According to Maantay and Morako (2009)**, “low-income individuals are affected by numerous challenges due to lack of information.” Thus the various technologies in Education 5.0 must help in achieving humane objectives. It also helps in learning how to live and work in ways that are sustainable. “The principles of sustainable development needs to be installed at all levels and cover all types of education. Skills and knowledge acquired through education results in more capable people who will have higher possibilities of employment or opening new startups thus contributing for the progress of country’s economy” **(Umoh, 2010)**.

Thus adopting Education 5.0 in one of the many ways that will help in Educational sustainable development for reducing poverty. Apart from this it also helps in the realization of Goal 8’ related to Employment and Economic growth. The second Goal is “Zero Hunger” which is again related to Goal one. Thus by adopting and working for goal one, helps in the achievement of Goal 2. **According to Kopnina (2015)**, “use of appropriate teaching methods and interactive education may help in realization of the goals of sustainable development.”

**Ghilardi (2013)** believes that “students need to be encouraged to apply their learning and understanding towards development of agroecological techniques on agricultural production and food security.” The fourth goal of Quality Education among all genders in order to improve their lives by giving them the skills they need for a sustainable existence. Education 5.0 aims to provide the knowledge and the abilities essential for sustainable development like “gender equality, human rights, promoting a culture of peace and non-violence.” It also promotes global citizenship, respect for cultural diversity and tradition and culture’s role in advancing sustainability. **Togo and Gandidzanwa (2021)**, worked on the role of Education 5.0 in expediting the implementation of SDGS and reported that “in order to implement SDGS through Education 5.0 the higher and tertiary education institutions should work together with policymakers and societies.”

SDG4 is Quality Education and SDG5 is Gender Equality can be very well achieved through Education 5.0. Through the use of ICT inclusive and equitable education and experiences for lifelong learning are provided at all level. Values, skills and behaviour necessitated to promote sustainable development are also promoted via education 5.0. The problem-solving approach of Education 5.0 can be used to solve the problems of affordable and clean energy is (SDG7). The learners are able to evaluate and implement strategies to enhance energy efficiency and employ basic principles to evaluate the most effective renewable energy strategy in particular situations. Similarly Education 5.0 will help the learners to make appropriate lifestyle choices that enhance the desirable social, economic and environmental advancements. This in turn will help in developing sustainable practices in

consumption and production which is reflected in SDG12. Education 5.0 encourages practical application and skill development along with human values. This is helpful in encouraging Innovation and Entrepreneurship. The skills are taught which help in developing an entrepreneurial mindset among learners. This will be helpful for the changing needs of the world.

#### **4. Conclusion**

It can be inferred from the above discussion that Education 5.0 is relatively new framework of education designed to prepare students for achieving sustainable development. The learner as well as teachers have to work together and use the technology in best possible manner developing human skills alongside. Education 5.0 is focused on sustainability of environment and resources of the society. Thus drawing students focus towards creating a more just and equitable society where resources can be developed and shared. Since Education 5.0 is human-centered so it focusses on the opportunity to develop the talents and abilities of the learner so that they may find meaning of life and find their path in life. Education 5.0 is innovative and uses new technologies and approaches to learning. It helps students to think critically, be innovative, develop creativity and use them in solving problems of life and be a contributing member of society, helping in economic growth and development. Education 5.0 is collaborative where teachers and students work together to achieve common goals. Thus helping students to develop the skills needed for enhancement of global economy. Education 5.0 helps the students to develop sustainable skills like energy efficiency, waste reduction and sustainable consumption required for more sustainable lives along with protecting the environment and nature.

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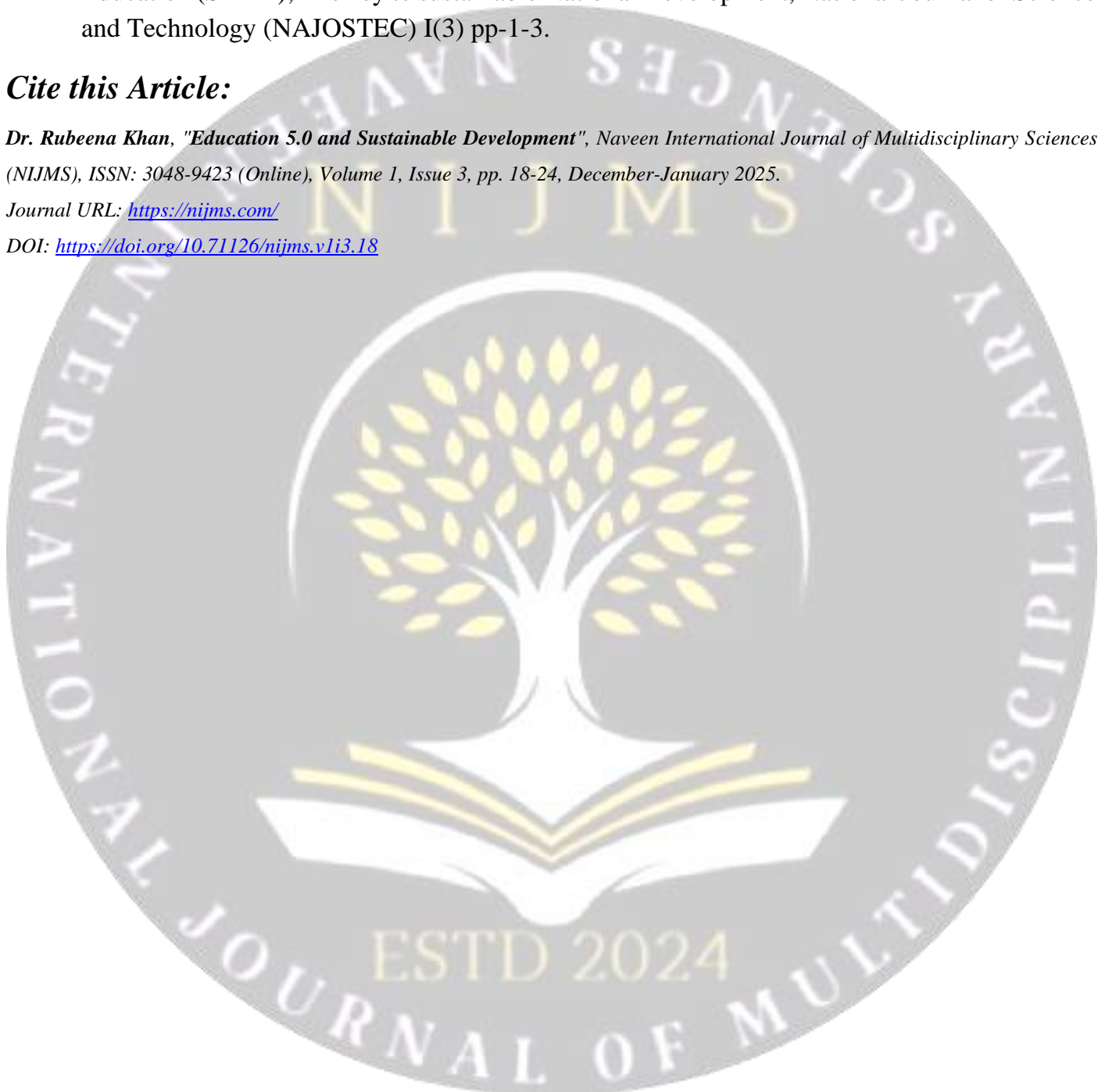
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