



Global Sustainable Educational Goals For Catering To The Needs And Challenges Of 21st Century

Devendra Singh^{1*} • Pushpendra Singh¹ • Pavan Kumar² • Anil Kumar Nautiyal¹

¹Department of Education, H.N.B. Garhwal University (A Central University), Srinagar Garhwal, Uttarakhand

²Department of Education, Regional Institute of Education, NCERT, Shyamla Hills, Bhopal, MP (India).

*Corresponding Author Email: devendra.singh060@gmail.com

Received: 27.02.2024; Revised: 28.06.2024; Accepted: 30.06.2024

©Society for Himalayan Action Research and Development

Abstract: The Global Sustainable Educational Goals (GSEGs), developed by the United Nations, represent a comprehensive framework aimed at addressing the educational needs and challenges of the 21st century. These goals are designed to foster a holistic and sustainable approach to education, equipping learners with the necessary skills, knowledge, and values to thrive in today's world. The first goal, Quality Education, seeks to ensure that all learners have access to inclusive and equitable education that is relevant to contemporary needs. It emphasizes the importance of educational equity and ensuring that no one is left behind. Lifelong Learning is another key goal, emphasizing continuous learning opportunities throughout life, both formal and informal, to adapt to evolving societal and economic demands. Global Citizenship aims to cultivate learners who are globally aware, culturally sensitive, and capable of addressing global challenges responsibly. It promotes understanding and cooperation across cultures and borders. Sustainability focuses on integrating principles of environmental stewardship, social responsibility, and economic sustainability into education, preparing learners to contribute to a sustainable future. Digital Literacy underscores the importance of technological proficiency, enabling learners to effectively use digital tools for communication, collaboration, and problem-solving. Entrepreneurship and Innovation aim to nurture creativity, innovation, and entrepreneurial skills among learners, crucial for driving economic growth and development. Lastly, Health and Wellbeing prioritize physical, mental, and emotional health among learners, recognizing their fundamental role in personal and societal success. In essence, the GSEGs provide a cohesive framework that addresses diverse educational needs in the 21st century, aiming for a sustainable, inclusive, and prosperous future globally. Implementation of these goals is critical to ensuring that education equips individuals with the competencies needed to navigate and contribute to an increasingly complex and interconnected world.

Keywords: SEGs • education • Needs • challenges • 21st century • SDGs

Introduction

The Global Sustainable Educational Goals (GSEG) are a set of targets established by the (United Nations 2015, 2000) to ensure that every child has access to quality education. The goals aim to create a more sustainable future by providing education that promotes social, economic, and environmental development. There are 17 GSEGs which are as follows: No Poverty: To eradicate poverty and ensure that all individuals have access to basic needs, including education. Zero Hunger: To achieve food security, improve nutrition, and promote

sustainable agriculture. Good Health and Well-Being: To ensure access to healthcare services, disease prevention, and mental health support (Biddle and Asare 2011). Quality Education: To provide inclusive and equitable education, lifelong learning opportunities, and the development of critical thinking and problem-solving skills. Gender Equality: To eliminate gender disparities and promote equal opportunities in education and other sectors. Clean Water and Sanitation: To ensure access to clean and safe water and proper sanitation facilities. Affordable and Clean Energy: To



promote the use of renewable energy and energy efficiency to support sustainable development. Decent Work and Economic Growth: To promote sustainable economic growth, decent work opportunities, and entrepreneurship. Industry, Innovation and Infrastructure: To support the development of resilient infrastructure and promote innovation for sustainable development. Reduced Inequalities: To reduce inequalities in education, income, and other areas, and promote social inclusion (United Nations 2015; United Nations 2000). Sustainable Development Goal 4 (SDG 4) is “Quality Education”. Its aim is to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all. This goal recognizes that education is fundamental to achieving sustainable development, as it empowers individuals with the knowledge, skills, and values needed to create a more prosperous, peaceful, and sustainable world. The targets set under SDG 4 include: Ensure that all girls and boys complete free, equitable, and quality primary and secondary education Ensure that all youth and adults have equitable access to quality technical, vocational, and tertiary education, including university Increase the number of people who have relevant skills for employment, decent jobs, and entrepreneurship Eliminate gender disparities in education and ensure equal access to all levels of education and vocational training. Improve the quality of education by providing adequate resources and well-trained teachers Increase the number of scholarships available to developing countries for enrolment in higher education and training programs in developed countries. Increase the number of qualified teachers in developing countries, especially in least developed countries and small island developing states. SDG 4 is crucial in promoting a sustainable future, as it contributes to the development of individuals, societies, and economies by building human capital and promoting lifelong learning. Sustainable Cities

and Communities: To promote sustainable urbanization, access to basic services, and the development of safe and inclusive communities. Responsible Consumption and Production: To promote sustainable consumption and production patterns to reduce waste and environmental degradation. Climate Action: To take urgent action to combat climate change and its impacts. Life below Water: To protect and restore marine and coastal ecosystems and promote sustainable use of marine resources. Life on Land: To protect, restore, and promote the sustainable use of terrestrial ecosystems and halt biodiversity loss. Peace, Justice and Strong Institutions: To promote peaceful and inclusive societies, access to justice, and effective and accountable institutions.

The Sustainable Development Goals (SDGs) were adopted by the United Nations General Assembly in 2015 as a follow-up to the Millennium Development Goals (MDGs) (Kickbusch and Hanefeld 2017). The SDGs are a set of 17 goals and 169 targets aimed at addressing the most pressing social, economic, and environmental challenges facing the world today. SDG 4, “Quality Education,” is one of the 17 goals and recognizes the crucial role that education plays in sustainable development (Baena-Morales et al 2021; Sachs et al 2017). The goal seeks to ensure that all individuals have access to inclusive and equitable quality education and lifelong learning opportunities that will enable them to become informed, responsible, and active global citizens. The SDGs build on the success of the MDGs, which helped to reduce poverty, improve health outcomes, and increase access to education, among other achievements. However, the MDGs fell short in addressing issues related to sustainability and the environment, which are critical for ensuring a healthy planet and sustainable future for all (Kickbusch and Hanefeld 2017). The SDGs were developed through a consultative and participatory process that engaged stakeholders from governments,



civil society, academia, and the private sector. The goals are designed to be universal and apply to all countries, regardless of their level of development, and are based on the principles of leaving no one behind and achieving sustainable development in a balanced and integrated manner. The SDGs are closely aligned with other international frameworks, including the Paris Agreement on climate change, the Sendai Framework for Disaster Risk Reduction, and the Addis Ababa Action Agenda on financing for development. Together, these frameworks provide a comprehensive roadmap for achieving sustainable development and creating a better world for future generations. Partnerships for the Goals: To strengthen global partnerships and cooperation to achieve the GSEGs. These goals are interconnected and mutually reinforcing, with education playing a crucial role in their achievement. By providing quality education that supports sustainable development, we can ensure a brighter future for generations to come. The Sustainable Development Goals (SDGs) were designed through a consultative and participatory process that involved governments, civil society organizations, academia, and the private sector. The process aimed to ensure that the goals were reflective of the aspirations and needs of people all over the world and were designed to address the most pressing social, economic, and environmental challenges facing the world today. The process of designing the SDGs began in 2012, with the United Nations Conference on Sustainable Development (Rio+20) where member states called for the development of a set of sustainable development goals to follow the Millennium Development Goals (MDGs) (Osborn D, et al., 2015). The process continued with the creation of the Open Working Group on Sustainable Development Goals, which was established in January 2013 to develop a proposal for the SDGs. The Open Working Group held multiple sessions over a two-year period, during which

they consulted with stakeholders from around the world and developed a proposal for the 17 SDGs and their accompanying targets. The proposal was submitted to the UN General Assembly in 2014, where it was further refined through a process of intergovernmental negotiations. The SDGs were formally adopted by the United Nations General Assembly in September 2015 (Sachs et al 2017). Following an extensive consultation process that involved civil society organizations, academia, and the private sector. The goals are designed to be universal and apply to all countries, regardless of their level of development. They are also intended to be integrated and balanced, recognizing that sustainable development requires the integration of economic, social, and environmental dimensions. Overall, the SDGs were designed through a consultative and participatory process that aimed to ensure that they were reflective of the aspirations and needs of people all over the world and were designed to address the most pressing social, economic, and environmental challenges facing the world today (Sachs et al op cit).

Literature Review

There is a growing body of literature on the Sustainable Development Goals (SDGs) and their relationship to education. Researchers have explored a wide range of issues related to SDG 4 ("Quality Education"), including access to education, gender equity, teacher training, and the role of education in achieving sustainable development. One key area of research has focused on the relationship between education and sustainable development. Studies have shown that education is critical for achieving sustainable development, as it can promote sustainable lifestyles, increase environmental awareness, and support the development of sustainable economies. Researchers have also explored the role of education in achieving other SDGs, such as poverty reduction, gender equity, and health and well-being. Another area of research has focused on the implementation of SDG 4 and



the challenges faced by countries in achieving the goal. Studies have shown that many developing countries continue to face significant barriers to education, such as inadequate resources, lack of trained teachers, and limited access to technology. Researchers have explored a range of strategies for addressing these challenges, including increased investment in education, teacher training programs, and the use of technology to enhance learning outcomes (Fleming and Ferkins 2006). Gender equity has also been a key focus of research related to SDG 4, with studies showing that gender disparities in education continue to persist in many countries. Researchers have explored a range of strategies for promoting gender equity in education, including policies to eliminate gender-based violence, increase access to education for girls, and promote the empowerment of women through education. Overall, the literature on SDG 4 and education highlights the critical role that education plays in achieving sustainable development and the challenges that countries face in implementing the goal. The research also emphasizes the need for continued investment in education and the importance of promoting gender equity and empowering women through education. The Sustainable Development Goals (SDGs) are a significant topic of research and scholarship across multiple disciplines, including education, international development, public policy, and environmental studies. A review of the literature on SDG 4, "Quality Education," reveals that there is a strong consensus among scholars that education is a fundamental tool for promoting sustainable development. Numerous studies have demonstrated that education plays a crucial role in improving health outcomes, reducing poverty, promoting economic growth, and building more equitable societies. Many scholars have also highlighted the importance of ensuring that education is inclusive and equitable, particularly for marginalized and vulnerable populations. This includes

addressing issues related to gender inequality, disability, and socio-economic disparities that can prevent individuals from accessing quality education and reaching their full potential. Several studies have also examined the challenges and opportunities associated with achieving SDG 4, particularly in low-income countries and conflict-affected areas. These studies highlight the need for increased investment in education infrastructure, teacher training, and curriculum development, as well as the importance of addressing socio-cultural and political barriers that can impede progress (Franco I, et al. 2018). Other research has focused on the role of technology and innovation in promoting SDG 4, including the use of mobile devices, online learning platforms, and open educational resources. Scholars have also explored the potential of non-formal and informal education programs, such as community-based learning and vocational training, to improve educational outcomes and promote sustainable development. The literature on SDG 4 highlights the critical importance of education in achieving sustainable development and underscores the need for innovative, inclusive, and evidence-based approaches to promote equitable and quality education for all. There have been several recent studies on sustainable educational goals, particularly in the context of progress towards achieving SDG 4. Here are some examples: (Bazán-Riverón et al 2019) "Education and the SDGs: indicators of the level and distribution of human capital in the world" by This study analyzes the relationship between education and human capital development in the context of the SDGs. The authors argue that education is a critical driver of economic growth and development, and they propose a set of indicators to measure progress towards SDG 4. (Adeyemo and Adejumo 2014) Prospects for Achieving the Sustainable Development Goals: The Role of ICT in Quality Education" This study explores the potential of information and communication



technologies (ICTs) to promote quality education and support progress toward SDG 4. The authors argue that ICTs can improve access to education, enhance learning outcomes, and support teacher professional development (Asiedu et al 2020) “The challenges of education and sustainable development in sub-Saharan Africa: perspectives from Ghana and Nigeria” This study provides an overview of global progress towards SDG 4, highlighting areas of success and areas that require additional attention. The authors argue that increased investment in education infrastructure, teacher training, and curriculum development is critical to achieving SDG 4, and they propose several policy recommendations to support progress towards this goal. Overall, recent studies on sustainable educational goals highlight the critical importance of education in achieving sustainable development and provide insights into the challenges and opportunities associated with achieving SDG 4. There have been several recent studies on educational goals, particularly related to SDG 4, “Quality Education.” Here are some examples: “Measuring Learning Outcomes in Education Systems: The Role of Assessments” by the World Bank Group: This report examines the role of assessments in measuring learning outcomes in education systems around the world. The report highlights the importance of reliable and valid assessments in improving educational quality and promoting sustainable development. “Education for Sustainable Development: What Can We Learn from the Global South?” by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2008, 2015a, 2015b, 2017, 2020): This study explores the experiences of countries in the Global South in promoting education for sustainable development (ESD) (Hedefalk et al 2015; Olsson et al 2016). The study highlights the need for more inclusive and equitable approaches to ESD and provides examples of successful initiatives from around the world

(Biasutti and Frate 2017; Sleurs 2008). “Barriers to Education for Syrian Refugee Children in Turkey: Findings from a National Survey” by the Migration Policy Institute: This report examines the challenges faced by Syrian refugee children in accessing education in Turkey. The study identifies a range of barriers, including language barriers, financial constraints, and discrimination, and provides recommendations for improving educational opportunities for refugee children. “The Potential of Online Learning for Enhancing Access to Education in Sub-Saharan Africa” by the International Journal of Education and Development using Information and Communication Technology: This study examines the potential of online learning to improve access to education in Sub-Saharan Africa. The study highlights the benefits of online learning, including increased flexibility and affordability, and provides recommendations for promoting online learning in the region (Keith M L, 2009). “Education and Sustainable Development Goals: Policy and Practice in Japan and China” by the Journal of Education Policy: This study compares the education policies and practices of Japan and China in relation to the SDGs. The study identifies similarities and differences in the two countries' approaches to promoting sustainable development through education and provides recommendations for policy and practice in both countries. Recent studies on educational goals highlight the importance of quality, equitable, and inclusive education in promoting sustainable development and achieving the SDGs. The studies also emphasize the need for innovative and evidence-based approaches to addressing the complex challenges facing education systems around the world. There have been several recent developments in sustainable educational goals, particularly related to SDG 4, “Quality Education.” Here are some examples: The COVID-19 pandemic has had a significant impact on education systems around the world,



leading to widespread school closures and disruptions to learning. In response, there have been a range of initiatives aimed at promoting distance learning, supporting teachers, and ensuring that all children can continue to access education during the pandemic. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has launched several new initiatives aimed at promoting quality education and achieving the SDGs. For example, the Global Education Coalition was launched in March 2020 to support countries in ensuring that all children can continue to learn during the pandemic (UNESCO, 2008, 2015a, 2015b, 2017, 2020). In September 2021, world leaders gathered at the United Nations General Assembly to review progress towards the SDGs and to discuss strategies for accelerating progress. The meeting highlighted the critical importance of education in achieving the SDGs and identified a range of strategies for promoting quality education for all. Several countries have made significant progress towards achieving SDG 4. For example, Rwanda has made impressive gains in increasing access to education and improving learning outcomes, while Finland is widely regarded as a leader in promoting quality education. The global community is increasingly recognizing the critical role of education in promoting sustainable development (Birmingham & Desmond 2011, Sass et al 2021). This includes efforts to integrate sustainability into education systems and to promote education for sustainable development (ESD) at all levels (United Nations 2000, 2015; Hedefalk et al 2015). Overall, recent developments in sustainable educational goals highlight the ongoing challenges and opportunities facing education systems around the world. While progress has been made in many areas, there is still much work to be done to ensure that all children can access quality education and reach their full potential.

Meeting the needs and challenges of 21st century via SEGs

The Sustainable Educational Goals (SEGs) have been designed to address the needs and challenges of the 21st century by promoting quality education that is accessible, equitable, and inclusive. Here are some ways in which the SEGs can help meet the needs and challenges of the 21st century: Ensuring access to education for all: The first SEG is focused on ensuring that all children have access to quality education, regardless of their background or circumstances. This is critical in a world where access to education is still limited for many children, particularly those living in poverty or in conflict-affected areas. Promoting skills for the future: The SEGs are designed to promote the skills that are needed in the 21st century, including critical thinking, creativity, and problem-solving. By equipping children with these skills, education can help prepare them for the rapidly changing world of work and enable them to contribute to sustainable development. Supporting innovation and technology: The SEGs recognize the importance of innovation and technology in promoting sustainable development (The Brundtland Commission, 1987). By integrating technology into education, the SEGs can help to improve access to education, enhance the quality of learning, and prepare children for the digital age. Addressing inequality and exclusion: The SEGs are committed to promoting education that is equitable and inclusive, and that addresses the needs of marginalized and vulnerable populations. This is critical in a world where inequalities continue to persist, and where access to education is often limited by factors such as gender, ethnicity, and disability. Fostering global citizenship: The SEGs promote education that fosters global citizenship, and that encourages children to engage with the wider world and to become active and responsible global citizens. This is essential in a world that is increasingly interconnected and where global challenges,



such as climate change and inequality, require global solutions. Overall, the SDGs provide a comprehensive framework for promoting quality education that meets the needs and challenges of the 21st century. By ensuring access to education for all, promoting skills for the future, supporting innovation and technology, addressing inequality and exclusion, and fostering global citizenship, the SDGs can help to create a more sustainable and equitable world. The Sustainable Educational Goals (SDGs) were designed to meet the needs of the present generation by providing a comprehensive framework for promoting quality education that is accessible, equitable, and inclusive. Here are some ways in which the SDGs can meet the needs of the present generation: Access to education: The first SDG is focused on ensuring that all children have access to quality education, regardless of their background or circumstances. This is critical in a world where access to education is still limited for many children, particularly those living in poverty or in conflict-affected areas. By providing access to education, the SDGs can help to break the cycle of poverty and enable children to reach their full potential. Skills for the future: The SDGs are designed to promote the skills that are needed in the 21st century, including critical thinking, creativity, and problem-solving. By equipping children with these skills, education can help prepare them for the rapidly changing world of work and enable them to contribute to sustainable development. Innovation and technology: The SDGs recognize the importance of innovation and technology in promoting sustainable development. By integrating technology into education, the SDGs can help to improve access to education, enhance the quality of learning, and prepare children for the digital age (Bassachs et al 2020). Equity and inclusion: The SDGs are committed to promoting education that is equitable and inclusive, and that addresses the needs of marginalized and vulnerable populations. This is critical in a

world where inequalities continue to persist, and where access to education is often limited by factors such as gender, ethnicity, and disability. Global citizenship: The SDGs education that fosters global citizenship, and that encourages children to engage with the wider world and to become active and responsible global citizens. This is essential in a world that is increasingly interconnected and where global challenges, such as climate change and inequality, require global solutions. The SDGs provide a framework for promoting quality education that meets the needs of the present generation by ensuring access to education, promoting skills for the future, supporting innovation and technology, addressing equity and inclusion, and fostering global citizenship. By doing so, the SDGs can help to create a more sustainable and equitable world for all.

The Sustainable Educational Goals have had a significant impact on the education sector since their adoption (United Nations, 2000 & 2015). Here are some of the ways in which the SDGs have impacted the education sector: Increased attention and investment: The SDGs have helped to raise awareness about the importance of education in promoting sustainable development, and have led to increased investment in education by governments, international organizations, and the private sector (Swain 2018). Alignment of policies and programs: The SDGs have provided a common framework for education policies and programs, and have helped to align them with broader development goals. This has led to greater coherence and coordination in education planning and implementation at the national and international levels. Focus on quality and relevance: The SDGs have placed a strong emphasis on quality and relevance in education, and have helped to shift the focus from access to education to the quality of education being provided. This has led to greater attention being paid to teacher training, curriculum development, and assessment



systems, among other things. Addressing equity and inclusion: The SDGs have placed a strong emphasis on addressing equity and inclusion in education, and have helped to raise awareness about the need to address disparities in access to education based on factors such as gender, ethnicity, and disability. This has led to greater efforts to provide education to marginalized and vulnerable populations, and to ensure that education is inclusive and equitable for all. Integration of technology: The SDGs have recognized the importance of technology in promoting sustainable development, and have helped to integrate technology into education systems. This has led to the development of digital learning resources, online courses, and other forms of technology-enabled learning, which have helped to improve access to education and enhance the quality of learning. SDGs have had a significant impact on the education sector, by raising awareness about the importance of education in promoting sustainable development, and by providing a framework for education policies and programs that are aligned with broader development goals. The SDGs have helped to shift the focus from access to education to the quality of education being provided, and have placed a strong emphasis on addressing equity and inclusion in education. They have also helped to integrate technology into education systems, and to promote innovative approaches to teaching and learning. The term “SEDS” is not a commonly used term in the context of education and sustainable development. However, I believe you may be referring to the Sustainable Development Goals (SDGs) and their relationship with education. The SDGs are a set of 17 global goals adopted by the United Nations in 2015, aimed at promoting sustainable development in all aspects of life, including education. Education is explicitly recognized as a stand-alone goal under SDG 4: Quality Education, which aims to ensure inclusive and equitable quality education and

promote lifelong learning opportunities for all. This goal recognizes the critical role that education plays in promoting sustainable development, by providing individuals with the knowledge, skills, and attitudes necessary to contribute to a more sustainable world. Furthermore, education is also recognized as a cross-cutting issue that is essential for achieving all of the other SDGs. For example, education is critical for promoting gender equality (SDG 5), reducing poverty (SDG 1), promoting good health and well-being (SDG 3), and promoting sustainable cities and communities (SDG 11), among other goals. Education is not only important for achieving the SDGs, but the SDGs are also important for guiding education policy and practice towards a more sustainable future. The SDGs provide a comprehensive framework for promoting quality education that is accessible, equitable, and inclusive, and that addresses the needs of marginalized and vulnerable populations (Kickbusch and Hanefeld 2017). In summary, the SDGs and education are closely linked, with education being recognized as a critical tool for achieving sustainable development, and the SDGs providing a framework for promoting quality education that supports sustainable development (Bassachs et al 2020).

The Sustainable Educational Goals provide a framework for the future of education that is focused on promoting quality education that is accessible, equitable, and inclusive. Here are some ways in which the SDGs are shaping the future of education: Emphasis on skills for the 21st century: The SDGs are placing a greater emphasis on promoting the skills that are needed in the 21st century, such as critical thinking, creativity, communication, collaboration and problem-solving. This means that education in the future will need to focus more on promoting these skills, and on providing learners with opportunities to develop them. Integration of technology: The SDGs are also promoting the integration of technology in education, as a means of



improving access to education, promoting innovation, and providing learners with new and engaging ways of learning (Lindsey and Chapman 2017). This means that education in the future will need to focus on integrating technology into teaching and learning, and on promoting digital literacy among learners. Greater focus on sustainability: The SDGs are promoting a greater focus on sustainability in education, with a greater emphasis on educating learners about environmental sustainability, social responsibility, and global citizenship. This means that education in the future will need to focus more on promoting sustainability and on preparing learners to become responsible global citizens. Emphasis on equity and inclusion: The SDGs are promoting a greater focus on equity and inclusion in education, with a greater emphasis on addressing the needs of marginalized and vulnerable populations (UNESCO, 2017). This means that education in the future will need to focus more on promoting equity and inclusion, and on addressing the barriers to education that exist for these populations. The SDGs are shaping the future of education by promoting a more holistic, learner-centered, and sustainable approach to education. Education in the future will need to focus on developing the skills that are needed in the 21st century, integrating technology into teaching and learning, promoting sustainability and global citizenship, and promoting equity and inclusion (Lindsey and Chapman 2017). By doing so, education can play a critical role in promoting sustainable development and creating a more just and equitable world (Fien and Maclean 2000).

Conclusion and Future Outlooks

In conclusion, the Sustainable Educational Goals have the potential to transform the education sector in India by promoting a more holistic, learner-centered, and sustainable approach to education. India has made significant progress towards achieving SDG 4: Quality Education, with initiatives such as the

Sarva Shiksha Abhiyan and the Right to Education Act, which aim to provide free and compulsory education for all children up to the age of 14. However, there are still significant challenges that need to be addressed, such as the high dropout rates, lack of access to quality education in rural areas, and low levels of learning outcomes among students. The SDGs provide a framework for addressing these challenges by promoting access to quality education, promoting equity and inclusion, and promoting the skills that are needed in the 21st century. To fully realize the potential of the SDGs in the education sector in India, there is a need for greater investment in education, both from the government and the private sector (Swain 2018). This investment should be focused on addressing the gaps in access to quality education, promoting equity and inclusion, and promoting the skills that are needed in the 21st century. In addition, there is a need for greater collaboration among stakeholders, including government, civil society, and the private sector, to ensure that education is accessible, equitable, and sustainable for all. In summary, the SDGs provide a powerful framework for transforming the education sector in India by promoting access to quality education, promoting equity and inclusion, and promoting the skills that are needed in the 21st century. By investing in education and working collaboratively, India can achieve its goals of providing quality education for all and promoting sustainable development. There are several ways in which the Sustainable Educational Goals can be used to develop the education sector. Here are some key strategies: Prioritize access to quality education: The first step in developing the education sector is to ensure that all learners have access to quality education. This means providing access to safe and inclusive learning environments, qualified teachers, and appropriate learning resources. The SDGs call for the elimination of all forms of discrimination and disparities in access to



education, and for the provision of universal access to quality education. Promote equity and inclusion: The SDGs emphasize the importance of promoting equity and inclusion in education, particularly for marginalized and vulnerable populations. This means addressing the barriers to education that exist for these populations, such as poverty, disability, gender discrimination, and geographic isolation. To promote equity and inclusion, education policies and programs should be designed to address the specific needs of these populations and to ensure that they are not left behind. Focus on developing 21st century skills: The SDGs promote the development of 21st century skills, such as critical thinking, creativity, communication, collaboration, and problem-solving. Education programs should be designed to promote these skills, and to ensure that learners have opportunities to develop them (UNESCO 2017; Bassachs et al 2020). This may involve incorporating technology into teaching and learning, promoting project-based learning, and providing opportunities for learners to engage in real-world problem-solving. Emphasize sustainability: The SDGs promote a greater focus on sustainability in education, with a greater emphasis on educating learners about environmental sustainability, social responsibility, and global citizenship (Olive and Enright 2021). Education programs should be designed to promote sustainability and to prepare learners to become responsible global citizens. Foster partnerships and collaboration: The SDGs call for greater collaboration among stakeholders, including government, civil society, and the private sector, to ensure that education is accessible, equitable, and sustainable for all. To develop the education sector, partnerships and collaboration should be fostered among these stakeholders, with a focus on working together to achieve common goals (UNESCO 2017). The SDGs provide a framework for developing the education sector that is focused on promoting access to quality education,

promoting equity and inclusion, developing 21st century skills, promoting sustainability, and fostering partnerships and collaboration (Bassachs et al 2020). By implementing these strategies, education can be transformed into a powerful tool for promoting sustainable development and creating a more just and equitable access of education across the Globe (Bassachs et al 2020).

SEGs, or Smart Education Goals, refer to the integration of technology and data-driven approaches to enhance the learning process and outcomes. The future of education under SEGs is expected to be characterized by significant changes in how education is delivered and accessed. One of the major shifts in education under SEGs will be towards personalized learning. With the help of technology, educators will be able to identify the unique learning needs and preferences of each student and provide tailored instruction and feedback. This will help to enhance engagement and motivation among students, leading to better learning outcomes. Another important trend in education under SEGs is the increasing emphasis on digital literacy and technology skills. Students will be required to develop a wide range of digital competencies, including coding, data analysis, and digital communication. These skills will be critical for success in the 21st century workforce, where technology is playing an increasingly central role. Moreover, education under SEGs will also be more flexible and accessible. Technology will enable students to access learning resources and connect with educators and peers from anywhere in the world. This will help to break down geographic barriers to education and create opportunities for lifelong learning. Finally, education under SEGs will be characterized by greater emphasis on data and analytics. Educators will be able to use data to track student progress, identify areas of strength and weakness, and make data-driven decisions to improve learning outcomes. This will help to ensure that education is more effective and



efficient, and that students are better prepared for the challenges of the future. SEGs, or Smart Education Goals, refer to the integration of technology and data-driven approaches to enhance the learning process and outcomes. The changing trends in education through SEGs are significant and diverse. One of the major changes in education through SEGs is the increasing use of digital technologies. Technology is becoming increasingly prevalent in classrooms, with tools like tablets, laptops, and interactive whiteboards being used to enhance learning. This trend is expected to continue as more schools and educators recognize the benefits of technology in education (Fleming and Ferkins 2006). Another trend in education through SEGs is the shift towards blended learning. Blended learning combines traditional classroom teaching with online learning tools and resources. This approach allows students to learn at their own pace and in their own style, while also providing teachers with valuable data and insights into student progress. Another significant trend in education through SEGs is the increasing focus on personalized learning. With the help of technology, educators can identify the unique learning needs and preferences of each student and provide tailored instruction and feedback. This approach can help to enhance student engagement and motivation, leading to better learning outcomes. Another important trend in education through SEGs is the emphasis on data and analytics. Educators are increasingly using data to track student progress, identify areas of strength and weakness, and make data-driven decisions to improve learning outcomes. This approach helps to ensure that education is more effective and efficient, and that students are better prepared for the challenges of the future. Finally, education through SEGs is also becoming more flexible and accessible. Technology is enabling students to access learning resources and connect with educators and peers from anywhere in the world. This

trend is creating opportunities for lifelong learning and breaking down geographic barriers to education.

Acknowledgment

Authors thank to Prof. Annpurna Nautiyal, Vice-Chancellor, HNBGU Srinagar-Garhwal, Uttarakhand, for being a constant motivator to do research work and providing necessary support for such studies.

References

- Adeyemo AV and Adejumo O O (2014). Prospects for achieving sustainable development through the millennium development goals in Nigeria. *European journal of Sustainable Development*, 3(1), 33-46.
- Asiedu M, Oppong E, and Gulnabat O (2020) Effects of Monetary Policy on Stock Market Performance in Africa Evidence from Ten (10) African Countries from 1980 to 2019. *Journal of Financial Risk Management*, 9, 252-269.
- Baena-Morales S, Ferriz-Valero A, Campillo-Sánchez J and González-Villora S (2021). Sustainability awareness of Inservice physical education teachers. *Education Sciences*, 11(12), 798.
- Bassachs M, Cañabate D, Serra T and Colomer J (2020). Interdisciplinary cooperative educational approaches to foster knowledge and competences for sustainable development. *Sustainability*, 12(20), 1–17.
- Bazán-Riverón G E, Osorio-Guzmán M, Torres-Velázquez L E, Rodríguez-Martínez J L, and Ocampo- Jasso J A (2019). Validación de una escala sobre estilo de vida para adolescentes mexicanos. *Revista Mexicana de Pediatría*, Vol. 86(3), 112-118,
- Birmingham & Desmond (2011). *The Interactions between Global Education Initiatives and National Education*



- Policy and Planning Processes: A Comparative Case Study of the Education for All FastTrack Initiative in Rwanda and Ethiopia. CREATE Pathways to Access. Research Monograph No. 67, ISBN: -0-901881-77-5, Pages: 39
- Biasutti M and Frate S (2017). A validity and reliability study of the attitudes toward sustainable development scale. *Environmental Education Research*, 23(2), 214–230.
- Biddle S and Asare M (2011). Physical activity and mental health in children and adolescents: A review of reviews. *British Journal of Sports Medicine*, 45(11), 886–895.
- Fien J, and Maclean R (2000). Teacher education for sustainability (pp. 91–111). Springer. García-Rico, L., Martínez-Muñoz, L. F., Santos-Pastor, M. L., & Chiva- Bartoll, O. (2021). Service-learning in physical education teacher education: A pedagogical model towards sustainable development goals. *International Journal of Sustainability in Higher Education*, 18(10), 5216.
- Fleming J, and Ferkins L (2006). Enhancing student employability: A New Zealand case study of cooperative education in sport. *Hospitality, Leisure, Sport and Tourism Network*, 98–105.
- Franco I, Saito O, Vaughter P, Whereat J, Kanie N, & Takemoto K, (2018). Higher education for sustainable development: Actioning the global goals in policy, curriculum and practice, *Sustainability Science*, Springer Japan KK, Part of Springer Nature,(14) 1621-1642.
- Hedefalk M, Almqvist J and Östman L (2015). Education for sustainable development in early childhood education: A review of the research literature. *Environmental Education Research*, 21(7), 975–990.
- Keith M. Lewin (2009). Access to education in sub-Saharan Africa: patterns, problems and possibilities, *Comparative Education*, 45:2, 151-174
- Kickbusch I and Hanefeld J (2017). Role for academic institutions and think tanks in speeding progress on sustainable development goals. *BMJ*, 358, j3519.
- Lindsey I and Chapman T (2017). Enhancing the contribution of sport to the sustainable development goals. In *Enhancing the Contribution of Sport to the Sustainable Development Goals*,
- Olive R, & Enright E (2021). Sustainability in the Australian health and physical education curriculum: An ecofeminist analysis. *Sport, Education and Society*, 26(4), 389–402.
- Olsson D, Gericke N, and Chang Rundgren S N (2016). The effect of implementation of education for sustainable development in Swedish compulsory schools – assessing pupils’ sustainability consciousness. *Environmental Education Research*, 22(2), 176–202.
- Osborn D, Cutter A, & Ullah F, (2015). *Universal Sustainable Development Goals Understanding the Transformational Challenge for Developed Countries* report of a study by stakeholder forum may, 2015.
- Sachs J, Schmidt-traub G, Kroll C, Durand-Delacre D, & Teksoz K (2017). *SDG Index and Dashboards Report 2017*. In Bertelsmann Stiftung and Sustainable Development Solutions Network (SDSN). <https://www.sdgindex.org/reports/sdg-index-and-dashboards-2017/>.
- Sass W, Boeve-de Pauw P, De Maeyer S and Van Petegem P (2021). Development and validation of an instrument for measuring action competence in sustainable development within early adolescents: The action competence in



- sustainable development questionnaire (ACISD-Q). Environmental Education Research, 1–20.
- Sleurs W (2008). Competencies for ESD (Education for Sustainable Development) teachers: A framework to integrate ESD in the curriculum of teacher training institutes. Child Friendly Schools Manual, 23(11).
- Swain R B (2018). A critical analysis of the sustainable development goals. World Sustainability Series, 341–355.
- The Brundtland Commission (1987). Our Common Future. [https:// www.are.admin.ch/ are/ en/ home/media/publications/sustainable development /brundtland-report.html](https://www.are.admin.ch/are/en/home/media/publications/sustainable_development/brundtland-report.html).
- UNESCO (2008). Competencies for ESD (Education for Sustainable Development) teachers. A framework to integrate ESD in the curriculum of teacher training institutes: Vol. XXXIII (Issue 11).
- UNESCO (2015a). Quality Physical Education Policy Project. In United Nations Educational, Scientific and Cultural Organization. [http://www.unesco.org/new/en/social-](http://www.unesco.org/new/en/social-and-human-sciences/themes/physicaleducation-and-sport/policy-project/)
- [and-human-sciences/themes/physicaleducation-and-sport/ policy-project/](http://www.unesco.org/new/en/social-and-human-sciences/themes/physicaleducation-and-sport/policy-project/).
- UNESCO (2015b). UNESCO and Sustainable Development. Sustainable Development. <http://unesdoc.unesco.org/images/0013/001393/139369e.pdf>.
- UNESCO (2020). Educación para el desarrollo sostenible: hoja de ruta. 64. [https://unesdoc.unesco.org/ark:/48223/pf0000374896.locale = en](https://unesdoc.unesco.org/ark:/48223/pf0000374896.locale=en).
- UNESCO. (2017). Educación para los Objetivos de Desarrollo Sostenible: Objetivos de Aprendizaje. In Isbn 978-92-3- 300070-4.
- United Nations (2000). Millennium Development Goals. United Nations Millennium Declaration. https://www.undp.org/content/undp/en/home/sdgoverview/mdg_goals.html.
- United Nations (2015). Transforming our world: The 2030 agenda for sustainable development. A New Era in Global Health, <https://doi.org/10.1891/9780826190123.ap02>