Advancing Global Competence in Higher Education through *Education for Sustainable Development* (ESD)

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Abstract
In the world becoming very globalized and the global matters becoming more complicated than ever, institutions of higher learning should prepare students with effective global competencies. Global competence encompasses global awareness, intercultural understanding, moral responsibility, and critical thought, and thus is one the main educational focus. The Education Sustainable Development (ESD) has proven to be a useful educational model that is similar in aspiration to the developmental competence of the globe. Teaching with the help of ESD makes students see the global sustainability problems in different perspectives and perceive the interrelation of the environmental, social, and economic dimensions of development. The current paper discusses the role of Education for Sustainable Development in promoting global competence in higher education. The research applies conceptual and secondary data based study research methodology that depends on the literature, global frameworks, and policy documents of such organizations as UNESCO (United Nations Educational, Scientific and Cultural Organization) and OECD (Organization for Economic Co-operation and Development). The paper follows a systematic review of the literature addressing the relationship between ESD and global competence and ways in which higher education institutions can incorporate ESD into their curriculums, teaching experience, policies, and campus life. The paper further highlights the significance of universities in facilitating practical learning, the interdisciplinary approach, and international collaborations to enhance the involvement and learning outcomes of students. Nevertheless, implementation of ESD in higher education is hindered by several challenges which include rigid curricula, staff preparation, resources and problems with measuring the outcomes of global competence. The paper has concluded that the successful implementation of ESD can only be done through an increased institutional commitment, an improved faculty development, and the use of new assessment methods. On balance, the paper emphasizes the fact that Education for Sustainable Development is an efficient way to prepare graduates that can respond to contemporary global issues and contribute to the establishment of a sustainable, inclusive future.

Keywords: Education for Sustainable Development (ESD), Global Competence, Higher Education, Sustainable Development, Intercultural Understanding, Global Citizenship.

1.   Introduction

In the 21st century, Globalization has transformed the 21 st century world economy, society and culture in the way nations interact with one another. The blistering technological development,

increased interdependence among countries, climate change, social discrimination and geopolitics have posed cross-border problems. In this case institutions of higher learning are very instrumental in equipping students. They require not only knowledge on the subject but also the ability to comprehend and act on the global issues. It has become a major concern of the universities of the world to develop globally relevant graduates, Global competence entails skills, attitudes and behaviors that are needed to accomplish success in a dynamic and a complex world. It provides a fresh perspective to reconsider our education system, whereby all students will be prepared to handle the future. It features a framework that encompasses such key fields of education as STEM, social-emotional learning (SEL), diversity, equity, inclusion as well as justice (DEIJ), project based learning (PBL), civics along with career and technical education (CTE). Through the acquisition of these skills, the students are in a position to be participatory local and global citizens, lifelong learners, creative problem solvers, and competent communicators who are able to sail through a variety of cultures and adapt to change. Furthermore, Education for Sustainable Development (ESD) has also become an effective concept of education. It also equips the learners to offer towards a sustainable future by integrating environmental, social and economic aspects to teaching and learning.

ESD considers education as key to the advancement towards all development goals in the world. It helps people to make wise decisions and act both separately and collectively to make the society better and the planet safe. It equips individuals of every age with the knowledge, skills, values, and abilities to tackle such issues as climate change, biodiversity loss, resource overuse, and inequality that impact people and the planet by cognitive, socio emotional as well as behavioral learning. The inclusion of ESD in higher education is regarded as strategic move to increase the global competence in students. Universities play a critical role in integrating the concept of sustainability into their curriculum, policies of the institution along with even in campus life. With the help of ESD centered education, students get to know the real life global problems and develop the ability to solve them, understand intercultural issues as well as develop a sense of collective responsibility towards sustainable development. The purpose of this paper is to argue out how Education for Sustainable Development plays a role in the development of global competence in higher education. It will discuss the relationship between ESD and global competence and reflect on the part that the institutions of higher learning play in implementing ESD. Through this, the paper aims at highlighting the significance of ESD as an efficient method of equipping students to address multifaceted global issues in the world that is becoming more integrated.

2. Literature Review

Global competence is a concept that has gained more literature in higher education due to globalization and increasing complexity of international challenges. As the OECD (2018) explains, global competence enables people to research global and intercultural problems. It enables them to appreciate other visions, interact effectively in other cultures and be responsible towards sustainable development. According to Deardorff (2006) global competence does not only relate to knowledge acquisition it is also the attitudes, values and the skills associated with the intercultural learning experiences. It has been demonstrated in numerous studies that higher education organizations contribute to the enhancement of global competency by designing their curricula, providing international opportunities as well as engaging students in learning activities

(Knight, 2015; UNESCO, 2021). Much of the literature is devoted to Education for Sustainable Development (ESD) as a means of changing education. According to UNESCO (2017), ESD involves education which prepares learners to make informed choices and embrace responsible actions to ensure the environmental health, economic stability, and fair society. Studies indicate that ESD fosters the interdisciplinary study and asks students to address the sustainability challenges in reality (UNESCO, 2020). Wiek et al. (2011) signify such important sustainability skills as systems thinking, anticipatory thinking and ethical reasoning, which are critical products of ESD in higher education. A number of researchers have considered the relationship between ESD and global competence and have observed that both have a strong association. Leicht et al. (2018) suggest that ESD is useful in becoming a global citizen through intercultural understanding, social responsibility as well as critical thinking. Research has indicated that sustainability-based curricula provide students with a global perspective and can comprehend the way local activities affect the global systems (OECD, 2018). Through the interaction with global sustainability issues, students increase their world perspective and enhance ability to deal with problems.

The studies of the implementation of ESD in higher education indicate both opportunities and difficulties. Universities that incorporate ESD in various courses achieve good outcomes in student involvement and in competencies (UNESCO, 2020). Nevertheless, research also points to such problems as inflexible curricula, inadequate training of the faculty along with the problem of assessing learning outcomes pertaining to global competence (Leicht et al., 2018). These observations indicate that ESD holds immense potential but to be successful, institutions should be committed to the practice and innovative teaching approaches must be applied.There are gaps in research even despite increasing literature on global competence and ESD. Numerous researches consider these concepts individually and there is no empirical study that investigates the combined effect of these concepts in higher education. Furthermore research on the different contexts of different institutions and regions particularly in developing countries is lacking. This demonstrates that further research on the ways in which Education for Sustainable Development can contribute to the systematic development of global competence in higher education is needed.

3. Conceptual Framework

3.1 Global Competence in Higher Education

In Global competence is an important learning outcome in higher education in reaction to the increasing globalization and interconnectedness. As societies confront dynamic transnational challenges such as public health crisis, economic disparities, climate change as well as cultural wars, universities are supposed to deliver graduates capable of operating in different international environments. Thus, global competence focuses on building skills, values, and attitudes that can make individuals act responsibly in the global arena and transcends academic knowledge.
Global competence is the capability to grasp and assess global and intercultural problems, respect divergent position, communicate well and collaborate within the cultural boundaries and make ethical decisions on the behalf of the greater good. Among the key aspects of global competence that have been pointed out by scholars and global organizations are global awareness, intercultural understanding, and ethical responsibility. Intercultural understanding refers to the ability to interact

in a polite and effective manner with people of diverse cultural backgrounds whilst global awareness refers to the understanding of global systems, problems, and interdependencies. Ethical responsibility emphasizes such values as social justice, empathy, and commitment to inclusive and sustainable development. The role of global competence in the university graduate has been multiplied in the current world. Employers are now increasingly demanding graduates who are cross-culturally communicative, flexible critical thinkers capable of working with diverse teams. Moreover, globally competent individuals can contribute to society in a greater way by addressing global issues through responsible action and sound decision making. Global competence has become an important characteristic of graduates in all fields who are ready to work in the future.

The Higher Education Institutions will be an important channel of transmitting global competency among students they serve. It is in the universities that intellectual curiosity can be nurtured by sharing of cultural perspectives ideas and the creation of new social norms through the process of increased learning opportunities availed through such institutions. Higher Education Institutions can create the development of the citizens who have a global perspective through their curriculum, their teaching strategies their internationalization campaigns and co curricular activities. Some of the ways through which Universities build global competency in their students include integration of global issues and theme in the academic experiences, developing student exchange programs, collaborating with other universities and colleges and creating and maintaining an inclusive university campus.Global Competence cannot be considered as an extravagant feature of higher education anymore, but it is a fundamental educational objective. Nevertheless, to achieve this objective, it is required to employ purposeful and organized strategies that would support the build-up of Global Competence in students instead of applying conventional teaching strategies. The growing interest in Frameworks for Education to Sustainable Development is an indication that there is a willingness to develop a value-based and holistic approach to the development of Global Competence in a higher education setting.

3.2 Education for Sustainable Development (ESD)

Education Sustainable Development is a new innovative method of education that equips students with the means necessary to bring change to their societies and the world in general. This program has been promoted by UNESCO and through this, colleges and universities have been encouraged to bring sustainability in all dimensions of higher education to enable them assist in solving problems globally. The Sustainable Development Goals (SDGs) and the environmental development have been evolving at the same time at the U.N. level, namely, SDG 4 which relates to education as the means of sustainable and inclusive development (UNESCO, 2017). SDG 4 appreciates the connection between environmental protection and social equity and consequently economic development and thus provides a holistic approach to education that has a multi-sided view of learning that involves both the natural and social environment of the student and social responsibility as the summary of the learning outcomes (i.e., sustainability).The main goal of ESD is to develop an environmental, social and economic sustainability that will be used to offer a comprehensive approach to sustainability in matters of learning in this three dimensional structure. Environmental sustainability encompasses the natural environment such as climate change, protection of natural resources as well as ecological sustainability and Social Sustainability encompasses such areas as social equity safeguarding of the human rights, fostering cultural

diversity and other values of Social Justice. Economic Sustainability incorporates the means of responsible utilization of the resources and sustainable Economic Development at the stage of a Global Community. ESD allows students to obtain and implement the most important competencies that include critical thinking, system approach, collaboration, and ethical responsibility (Wiek et al., 2011). These skills also go in line with the goal of establishing global competencies which involve enhancement of inter cultural awareness and world citizenship. ESD enables students to critically analyze and understand the global issues and think about the implications of their behaviors by introducing the themes of sustainability in their institutional practices and curriculum (UNESCO, 2020). All in all ESD offers a powerful model of developing globally competent graduates by connecting local and global worldviews, and empowering them to play a role in creating a more sustainable and fairer future.

4. Relationship between ESD and Global Competence

ESD and global competence are closely related to education. The two have the goal of equipping learners to be able to comprehend and deal with complicated international issues (UNESCO, 2017). ESD provides a feasible and economical model of preparing international competence in tertiary education. It helps students to address such global challenges as climate change, inequality, and sustainable development in multiple perspectives. The learning aimed at sustainability helps students learn more about how all things are interconnected, students are exposed to how local actions can have a global impact. This enhances their critical analysis of the global issues. Also, ESD fosters intercultural comprehension and social responsibility.

It underlines inclusiveness, equality and cultural diversity. Students are able to sympathize and understand to collaborate not just on cultural and social boundaries but they also learn to collaborate by addressing issues to do with sustainability and which involve different places and people. System thinking and problem solving are also essential capabilities to be able to be globally competent as well as ESD can be beneficial in this regard (Wiek et al., 2011). Students are taught to view problems in a general manner, consider the long term consequences and come up with sustainable solutions. Consequently ESD assist learners to go beyond theory. It makes them engage in responsible decision making. In general, Education for Sustainable Development plays a significant role in global competence. It prepares higher education students with knowledge, skills and values response that are necessary to solve challenges facing the world (Leicht et al., 2018).

5. Role of Higher Education Institutions

Universities and colleges have an important role to play in the development of global competence through the inclusion of Education for Sustainable Development (ESD) (UNESCO, 2020). Universities are in a good position to integrate the concept of sustainability within their academic (as well as institutional and social) activities since they are the locations of knowledge creation and distribution. Their primary task is to include ESD in their curriculum in different fields. With sustainability ideas being incorporated in various disciplines, universities enable students to address the global issues in their respective disciplines. The interdisciplinary curriculum design motivates learners to make connections between theoretical content and sustainability challenges in real life (Wiek et al., 2011). The institutional policies and leadership support are essential in the effective implementation of ESD also. University leaders are also required to be committed in

order to allocate resources, promote sustainability projects, and establish a culture of global responsibility. The effectiveness of ESD endeavors is enhanced by strategic planning and governance structures that give preference to sustainability.

Internationalization and global partnerships by higher institutions of learning also facilitate global competence. Student exchange programs, joint research and international academic networks expose learners to different cultures and international perspectives. Such programs enhance cross cultural awareness and equip the students to work in the international setting.
Besides, campus sustainability projects also offer practice-based learning settings through which students can put ESD concepts to the test. Living laboratories are sustainable practices of the campus in terms of energy waste management, and social inclusion and help in experiential learning and strengthening global competence (UNESCO, 2017).

6. Teaching and Learning Strategies for Advancing Global Competence
Education for sustainable Development (ESD) in higher education is significant in developing and enhancing global competence by the use of effective teaching and learning strategies. These approaches revolve around being active learner based and practical in nature and aimed to assist the students to qualify in being of relevance and concern to the sustainability issues in the globe. Interdisciplinary and transdisciplinary approaches also allow students to look at sustainability concerns in different academic perspectives. Learners can obtain a general understanding of the intricate global issues and their interrelations by integrating the knowledge across the fields.
The problem based and project based approaches to learning assist students in applying their theoretical knowledge to address sustainability problems in the real world (OECD, 2018). By working in teams, students gain critical thinking, problem solving, and collaboration skills in addressing global and local problems. Service learning, community engagement, and internships are other forms of experiential learning that enhance global competence through providing experience in sustainability efforts. These experiences aid students to develop ethical consciousness, social responsibility, and more knowledge about various social situations.
Also, digital technologies and worldwide virtual cooperation can help students to contact international students and professionals. There are virtual interactions, web-based projects and forums that facilitate intercultural communication and global learning even without necessarily traveling.

7. Impact of ESD on Higher Education Students
The education of the Sustainable Development (ESD) greatly corresponds to the higher education level as it helps to enhance the global competence of students and equip them with a range of challenges in the future (UNESCO, 2017). Students using ESD-based learning appreciate better sense of global citizenship and moral responsibility. They get to appreciate more about issues of the world, and realize the essence of sustainable and inclusive development (OECD, 2018). ESD is also useful in preparing the students with future skills, including critical thinking, problem-solving, collaboration, and adaptability. The skills enhance the employability of students and make them be able to respond to the developmental needs of the global labor force. Graduates who are able to think sustainably and work in a cross cultural setting are more appreciated by employers.

Studies and case analyses indicate that those students who have been exposed to ESD have better intercultural knowledge, systems thinking and social interactions. Learning based on ESD will make students think about the issues that they may face in the real world and what the future effect of their actions may be. Several students have mentioned that they are more motivated, aware and committed towards doing things that can facilitate sustainability. On the whole, ESD is positively related to personal, academic, and professional development of students providing them with the ability to be responsible in a global environment that is complex and inter-linked.

8. Challenges in implementing ESD in Higher Education

Although it is important, there are various issues that come with the implementation of Education for Sustainable Development (ESD) within higher education. Rigid curricula and disciplinary silos are one of the challenges. These restrict the incorporation of the idea of sustainability in academic programs (Leicht et al., 2018). Conventional curricula tends to be subject-centered knowledge in lieu of holistic and sustainability-based learning. The lack of faculty training and institutional support is also another major challenge. The lack of exposure to ESD concepts and innovations in teaching methods affects their implementation by many educators (UNESCO, 2020). The lack of funds and financing also constrain sustainability efforts in universities. There are also challenges in evaluating the results of global competence. Such competencies as ethical responsibility, intercultural understandings as well as systems thinking are complicated and cannot be easily tested using conventional measures. This makes it hard to measure the effectiveness of ESD initiatives by the institutions. Diversity in culture and context between institutions and regions also have a bearing on ESD uptake. The institutional priorities, socio-economic conditions and policy environments vary and can influence the level of ESD integration in higher education.

9. Strategies and Recommendations

Higher education institutions need to respond in a coordinated and strategic manner to come up with effective ways of promoting global competence via Education for Sustainable Development (ESD). The leadership and policy support are important in the process of incorporating ESD into academic curricula, governance frameworks, and strategic planning (UNESCO, 2020).

Professional development of the faculty is critical in the implementation of ESD (Leicht et al., 2018). Consistent training, interdisciplinary cooperation and workshops may provide the educators with the knowledge and pedagogical competencies to incorporate the notions of sustainability and the global outlook into their instruction. It is also significant to use innovative methods of assessment to determine global competence outcomes. Reflective journals, project, portfolios, and peer assessment could provide more insight on the learning of students beyond standard exams. Moreover, the international and local collaborations can be used to empower ESD efforts. Cooperation with institutions, industries, communities, and non-profit organizations is also very practical and helps students to learn practically. All these strategies assist in the incorporation of ESD and also in the development of globally competent graduates.

10. Implications for policy, practice and research

In higher education, the incorporation of Education for Sustainable Development (ESD) has profound implications on the policy, pedagogic practices and future research. ESD is an important instrument that policy makers in higher education should consider in establishing global

competence. They are also supposed to guarantee that the national education systems are aligned with the international sustainability objectives, including the Sustainable Development Goals set by the United Nations (UNESCO, 2017). Institutions can be encouraged to institute sustainability and global competence in their major learning outcomes with the help of supportive policies.

Practically speaking, colleges and universities must apply pedagogical approaches that foster intercultural interaction, interdisciplinary studies and critical thinking. Studies indicate that both learner-centered and sustainability-centered teaching has a significant positive effect on global competence and civic responsibility of students (OECD, 2018). Thus, curriculum, faculty, and campus sustainability efforts are to be promoted through institutional leadership to improve the implementation of ESD.As to research implications, additional research needs to be conducted investigating the long-term outcomes of ESD on the global competence of students and their professional results. The available literature indicates that there are positive correlations between ESD and the acquisition of global citizenship, although more detailed research is needed to determine the quantifiable learning outcomes in different cultural and institutional environments (Leicht et al., 2018). The further study may also be interested in the new approaches to assessment and comparative research across nations and disciplines. In general, enhancement of the linkage between ESD and global competence by means of informed policies, effective teaching practices, and extensive research can significantly empower the higher education in addressing the global sustainability issues.

11. Conclusion

In a highly globalized society, colleges are very vital in equipping students to address international issues. This paper has identified Education for Sustainable Development (ESD) as one of the effective methods to enhance global competency through fostering global awareness, intercultural understanding, ethical responsiveness and critical thinking.

ESD is aligned with global agendas such as the Sustainable Development Goals of the United Nations and contributes to the building of sustainability-related skills in institutions of higher learning (UNESCO, 2017). Universities can develop people with the potential to participate in sustainable development by incorporating ESD into the curriculum, teaching using new methods, and making an institutional commitment. Although such issues as inflexible curricula and complicated tests are still present, the strategic implementation of ESD can provide substantial opportunities to change the world of higher education. In general, enhancing ESD in tertiary needs enhance graduates capable of responding in a responsible manner to global challenges (OECD, 2018).

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