

# Analysis of English Undergraduate Curriculum Through the Lens of Sustainable Development Goals

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<https://doi.org/10.62345/jads.2024.13.2.138>

## Abstract

*English language has been recognized as the lingua-frank and had wider scope throughout the globe. Degrees with specialization in English have higher scope in the job market and bureaucracy as well. Sustainable development Goals (SDGs) are the most important concepts for sustainable development that must be considered in our curriculum to increase awareness among learners to promote sustainability. This study is vital because of it investigates potential contributions of undergraduate English courses to sustainable development. In order to improve the world the sustainable development goals (SDGs) aim to solve problems with justice, quality education, gender equality and climate change. Through this lens of analysis, the study aims to demonstrate how the literature, critical thinking and language skills taught in courses can raise students' awareness of global issues, promote conservative behavior, and motivate them to make a constructive contribution to society. The scope of the study is that it is novel in nature and focuses the curriculum development. It helps to create a strong and stable society. The study used qualitative approach and collects the data from the content of English curriculum courses that based on content related to SDGs concept to increase awareness in learners to promote sustainability. The study aims to analyze the content related to the Sustainable Development Goals SDGs concept to increase awareness in learners to promote sustainable development in the current curriculum of the English in undergraduate Program in universities at Karachi Sindh Pakistan. The total 8 courses of the English curriculum are the sample of this research, and the themes are generated from this content that related to the SDGs concept such as environmental aspects, human rights and dignity, global issues and citizenship and education and empowerment. The findings indicates that the English curriculum courses at undergraduate level includes content and has a course related to the concept of SDGs that increases awareness in students about sustainable development.*

**Keywords:** English Curriculum, Sustainable Development Goals, Undergraduate.

## Introduction

Sustainable Development (SD) is viewed as a comprehensive and integrative term that blends numerous aspects and values from the perspective of environmental, economic and social factors as well as how they affect future generations. The definition of “sustainability” mentioned in the Brundtland Report as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs” (World Commission on Environment and

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Compliance with ethical standards: There are no conflicts of interest (financial or non-financial). This study did not receive any funding.

Development, 1987). One of the most important contributions to promoting the Sustainable Development Goals (SDGs) and the sustainable development concept in society is education which gives everyone the tools they need to help to implement this ambitious essential global agenda. Additionally, to being a goal in itself, education is also seen as a means of achieving all the other SDGs. It is an essential enabler for sustainable development as well as an essential element of it (UNESCO, 2017). The first step in encompassing education is to include SDG related topics into the curriculum. By designing sustainable curricula higher education institutions (HEIs) are able to better prepare students with the skills to pursue SD by enhancing their knowledge, increasing their motivation and beliefs and enhancing their behavior (Salimova et al, 2015). In order to ensure a better world for the next generation the international community has adopted the sustainable development goals (SDGs) as a working agenda (Rehman et al., 2023). In this sense higher education institutions face a challenge in developing competencies that are associated with SDGs (Salman et al., 2023). Without education for sustainable development in our curriculum, especially at a formal level, it is impossible to achieve and implement sustainable development goals. Curriculum plays a very important role through their courses to promote awareness about sustainability.

Around the world a large number of higher educational institutions (HEIs) are implementing plans to achieve the 17 SDGs using an institutional approach. Updating the curriculum, organizational culture, campus operations, community, students' involvement, leadership and management, connections and research are all parts of the institutional approach (Fayaz et al., 2023). Utilizing the full institutional approach to the university's implementation of the new philosophy even include redefining HEIs goals and objectives and reorganizing it in accordance with the priorities. In some situations, reorganization and reframing will need significant resources but the results will be worthwhile (Maykova et al, 2017). The Sustainable Development Goals (SDGs) are a new framework that the international community has developed in response to the after comparatively successful implementation of Millennium Development Goals (MDGs) (Sachs, 2012). Protect the planet, reducing poverty and promoting peace and security are the three core goals of the SDGs. With a time, frame of 2015 to 2030. The SDGs has 17 objectives, 169 targets and 263 indicators and the based on five pillars: people, prosperity, peace, partnership and planet. The three main characteristics of the SDGs are: (1) they are universal in nature developed and developing for all countries, (2) they are indivisible and (3) they are transformative (General Assembly of United Nations, 2018). Many authors pointed out that In the achievement of SDGs the higher education institutions play a very important part (Boni et al., 2016; Gusmao et al., 2018; Owens, 2017; Martinez-Martinez et al, 2019). Incorporating the SDGs in curriculum will promote the development of human capital as well as increase the number of people pursuing sustainable living. These results could have a big impact on ensuring the goals are achieved and leading to a better future (Filho et al, 2018). The objective of this study is to analyze the English curriculum of HEC of undergraduate level that how sustainable development goals considering and incorporated in this curriculum to promote sustainable development goals, sustainable awareness and practices among students. This study will be helpful to know about the topics of English curriculum of HEC which emphasizes on SDGs. This study will help teachers to know about how SDGs are very important to teach to enhance the learning experience of students. This study will be helpful to know about that how SDGs are very important to incorporate in curriculum to improve the student's awareness about sustainability and this study will be helpful for curriculum developer to shape the curriculum that align with sustainable development goals improving an impactful educational framework.

### Statement of the Problem

There are lots of issues we have in our country and the main reason for this is lack of awareness towards SDGs concept to promote sustainability. We need to do in depth study that which types of practices we are doing to make aware our young generations to implement SDGs to promote sustainability. Awareness about sustainable development goals (SDGs) is very important to make the planet sustainable so there is dire need to do research that what our educational institutes doing for increasing SDGs concept to promote sustainability. This research is helpful to know about how curriculum is important and plays their role to increase SDGs awareness towards sustainability. The researcher selected this area for study because researcher wants to identify and find out that current English curriculum at universities how helps learners in understanding and supporting global goals. Researcher wants to identify how well the current English curriculum gets students ready to be critical engaged and active global citizens. The study aims to analyze the Sustainable Development Goals (SDGs) content knowledge in the current curriculum of the English in undergraduate program at universities of Karachi Sindh Pakistan.

### Objectives of the Study

1. To analyze the English curriculum through the lens of Sustainable Development Goals (SDGs) in undergraduate level at universities of Karachi Pakistan.
2. To identify the English curriculum courses which is consider Sustainable Development Goals (SDGs) concept to promote sustainability in undergraduate level at universities of Karachi Pakistan.

### Research Questions

1. What is the role of English curriculum through the lens of Sustainable Development Goals (SDGs) in undergraduate level at universities of Karachi-Pakistan.
2. How English curriculum courses consider Sustainable Development Goals (SDGs) to promote sustainability in undergraduate level at universities of Karachi Pakistan.

## Literature Review

### Curriculum and Sustainable Development Goals

In 2015 the general assembly of the United Nations established specific goals for sustainable development by 2030. There are 17 sustainable development goals (SDGs) and 169 objectives of SDG. The 17 goals are broken down into three categories: economic, social and environmental (Herrero et al, 2021; Suryanto et al, 2021). Promoting SDGs concept for sustainable development is very important in our society and it's very important to make the students shape the sustainable future (Fayaz et al., 2023). Education plays a very important role promoting SDGs concept in our educational institutes and one of the best ways to promote the SDGs concept in educational institute is curriculum (Bushra et al., 2024). It is essential to incorporate the sustainable development goals into the curriculum which assists learners about significant worldwide issues such as eliminating poverty, ensuring equality for all and conserving the environment (Fayaz et al., 2023). We are educating the next generations to recognize and address these issues, improving everyone's quality of life on the planet by including these SDGs concepts into the curriculum. It gives learners the trust they need to take initiatives and contribute to building a world that is equitable and sustainable (Buriro et al., 2023).

As they demand collaborative action the 17 SDGs, which were officially approved by all united nations members states in September 2015 enhance the scope of the 8 MDGs by addressing a wider

range of actions and areas (Filho et al, 2019). Global SDGs goals in curriculum enables all students to get the information, abilities, attitudes and values that necessary to create a sustainable development future (Shava et al, 2023). For students and universities, the connection between SDG related employability and curriculum is very important. Universities are assessed based on their capacity to improve the employability of their students and their involvement in sustainable development (Lozano et al, 2013; Swaim et al, 2014). One key aspect that brings about change in the path of sustainable development is education and particularly higher education (HE). With the education for sustainable development (ESD), peoples, groups and society have greater capacity to make choices and decisions that promote sustainable development. Education for sustainable development is not Only providing courses that covers topics to sustainable development. Education for sustainable development promotes transformational interactive learning methods that increase the capacity of learners to bring change. It is a transformative interactive approach to learning and teaching. Education for sustainable development depends on the values and beliefs that supports many aspects of life such as ecological sustainability, human rights, poverty reduction, democracy, poverty reduction, climate change, peace, health, gender equality, preservation of indigenous cultures, biological and landscape diversity (UNESCO, 2004; World Bank, 2002; UN 2000; Gabay 2015; WEF 2000). By developing professional SDG practitioners and transmitting sustainability lessons to all graduates that they may use in their future careers a focus on teaching the SDGs improves students' sustainability capabilities (Sanchez-Carracedo et al, 2021). The 2030 agenda is not only broader but also more transformative (Fukuda-Parr, 2016). HEIs are essential to solving UNs issues in reaching the ambitious goals and targets set by the agenda 2030 because of their unique blend of teaching, research, societal mission and curriculum (Gratzer et al, 2019). The study has confirmed the numerous advantages that could result from incorporating the UN sustainable development goals into higher education institutions teaching methods, research, operational practices and in the curriculum (Leal Filho et al, 2023). Higher education is essential to accomplishing the SDGs. These establishments bear the responsibility of providing information and skills necessary for the upcoming generation to tackle sustainability possibilities and challenges (Junior et al., 2019). The study confirmed that higher education plays an important role in providing interactive learning environment to promote sustainability (Rehman et al., 2023). Initiatives to incorporate sustainability into HEI curriculum, policies and practices, will not be successful unless they are strategically supported by an integrated and coordinated governance framework (Franco et al, 2019). This indicates that in order to incorporate the 2030 Agenda into their strategy, HEIs are systematically reconsidering their core activities (Paletta & Bonoli, 2019). Cases of the integration of sustainable development strategies, in particular HEIs have been shown in the literature (Mori et al., 2019; Paletta & Bonoli, 2019; Purcell et al., 2019; Ramisio et al, 2019). Furthermore additionally (Bieler & Mckenzie, 2017; Do, 2020; Farinha et al., 2019; Larran et al., 2016; Shawe et al, 2019). The study indicates that environmental awareness and conservation behavior in students is essential to promote sustainable development (Fayyaz et al, 2023). The majority of the institution's leaders are making every effort to carry out the SDGs objectives within their power they have responded enthusiastically to efforts to enhance the current curriculum related to SDGs concept and have been motivating their members (Salman et al., 2023). Teachers' communication skills impact on students' skills development to shape their better future (Fayyaz et al, 2023). Interest in introducing SD into the curriculum at all levels has developed as a means of assisting students in understanding the effects of their choices and actions on society and the environment (Lozano, 2010). The opportunity to add the SDGs in curriculum can result has more benefits where the quality of learning and the experience of students are improved. Even

though this change may go against previous ideas and methods of functioning. This provides into a positive a beneficial feedback cycle where early attempts to address the challenges are repaid with improved methods of working and learning where a more attractive educational offering draws in future students to a sustainable global context (UNESCO, 2017). The sustainable development Goals (SDGs) are an ambitious constructive commitment to worldwide sustainability that will assist ensure a legacy for coming generations. If the Sustainable development goals (SDGs) are successfully achieved then many different actors globally as part of extended efforts to bring change (UN, 2015). The SDGs implementations provide higher education institutions new chances and a fair chance to assess their previous efforts in terms of enhancing capacity within the context of a platform that includes multiple stakeholders with involvement from all institutions (Shiel et al, 2015). The participation of universities in the implementation of SDGs is associated with a wide variety of instructional and learning activities, professional training, leadership and adult education, extracurricular activities distance learning, students' societies and clubs and graduate and undergraduate activities (SDSN, 2017; Mooman et al., 2023). The study reveals that teacher's performance is very important to improve students' performance and to enhance their skills which are also helpful to promote sustainable development (Fayyaz et al, 2023; Imran et al., 2022). Integrating SDGs concept for sustainability into higher education curriculum many universities are focusing on this concept education for SD at the heart of their mission. SDGs concept in curriculum can better understand the courses contributions to sustainability (Bataeineh & Aga, 2022). After the 2030 agenda was approved it was necessary to integrate the SDGs into partnerships, research and curriculum in order to develop the skills that future decision-makers will need. The research shows that new courses, modules and disciplines have been added the SDGs concept into curriculum to increase the awareness in learners towards the contribution in sustainability (Avelar et al., 2023).

### **Basic Curriculum Courses of English in Undergraduate Program**

The department of English in different universities at Karachi Sindh Pakistan offers a four-year academic degree program called BS in English and provide them 4 years bachelor's degree in English that aims to provide learners with the skills and knowledge to. This four years academic program depends on a minimum of 120 credit hours and eight semesters throughout time at the university. To receive BS four-year degree students must pass each subject with in the four years (eight semesters) that courses are delivered. The curriculum courses are divided into eight semesters and 15 to 18 credit hours has each semester. In 4 years, degree program the total number of the English department courses semester wise are 46 which is consist of 136 total credit hours within total eight semesters. These courses provide linguistics, writing, reading, communication, presentation, and professional skills in students and increase knowledge related to different environmental cultural and social perspectives. Some courses are also related to literature and university requirements courses. English curriculum courses depend on 6 categories such as foundational, compulsory, compulsory general, general, subject-specific foundational, subject-specific. The number of courses and the credit hours are mentioned above in the table.

### **Methods and Procedures**

This study used a qualitative approach to collect and analyze the data. The data has been collected from the content of the English curriculum courses at undergraduate level. While 8 courses of the English curriculum at the undergraduate level is the sample of this research were selected with purposeful sampling technique on the basis of included topics which is increase related sustainable

development goals awareness in learners and generated the themes from this content that is increases awareness related to the SDGs concept in learners in the English curriculum of undergraduate level.

This study used qualitative content analysis because it is an accessible technique for analyzing the data of the research study. Content analysis is a research technique for achieving valid and replicable inferences from written material and texts to the contexts of their use (Krippendorff, 2013). The study aims to analyze the SDGs content knowledge in the current curriculum of the English in undergraduate Program in universities at Karachi Sindh Pakistan. The purpose of this study is to assess the topics in curriculum of English courses which is considering to increase the awareness of students about sustainability. The initial phase is to analyze the SDGs content of the English curriculum courses that generated the identification of four major themes. These themes covered in the ensuring areas in order to answer the research question.

### **Environmental Aspects**

In analyzing the content of the curriculum courses of undergraduate English at the universities of Karachi Pakistan in terms of the SDGs it's found that there are 2 courses introduction to Geography, introduction to environmental studies are related to environmental aspects which is related to the SDGs concept such as SDG (13) Climate change and SDG (15) Life on land. Introduction to Geography course code is GC102 depend on 2 credit hours include topic atmosphere and its main characteristics in unit 4 knowledge of different spheres on and around earth. In unit 5 relationship between physical environment and man include 5 topics such as man-environment interaction, introduction to theories of environmental determinism/possibilism, Human activities in relationship with environment, human activities and their impact on environment, human activities, and utilization of environmental resources and concept of sustainability. This course examines the physical features of the earth's surface, such as the weather, landforms, climate and biogeography. This course emphasizes knowledge of the characteristics that make each point on earth unique as well as the various ways that people interact with the physical system. Introduction to environmental studies the course code is GC302 depends on 3 credit hours this course design to provide the basic environmental knowledge in students which is necessary to understand the environmental issues we face in our daily life. The course is developed to demonstrate understanding and knowledge of environmental pollution, including its impacts and causes on ecosystems and human beings. The course addresses modern environmental issues using multidisciplinary approach. The course provides an introduction to a range of "global environmental challenges" that humanity is currently facing. This course provides the necessary background to understanding the politics, policies, ethics and decision-making process that support the causes of and reactions to environmental change. An understanding of the social construction of the term "global environmental challenges" and its implications covered in this course.

**Table 1: Environmental aspects Curriculum Courses**

Course Codes	Course Title	Course Type	Semester	Cr. Hrs.
GC102	<b>Introduction of Geography</b> Atmosphere and its main characteristics Man-environment interaction. introduction to theories of environmental determinism/possibilism Human activities in relationship with environment Human activities and their impact on environment Human activities, utilization of environmental resources and concept of sustainability	General	1	2
GC302	<b>Introduction to Environmental Studies</b>	Compulsory General	5	3

As demonstrated in table 1 these topics are related to environmental aspects that indicates that curriculum of English provides content that increase knowledge about environmental aspects for sustainability that also concept of SDGs including SDG (13) climate change and (15) Life on land. The curriculum must add the environmental aspects in any stage of education. The students must be aware of environmental aspects to protect the environment. It indicates that curriculum of English course content at undergraduate level considering the SDGs concept related to environment aspects these courses are design to develop learners' abilities to understand that how humans' activities impact on environment.

### Human Rights and Dignity

The second theme human rights and dignity concerned with the content analysis of the English curriculum courses which is belong to SDGs concept including SDG (1) no poverty (2) zero hunger (3) good health and wellbeing (4) quality education (5) gender equality (6) clean water and sanitation (10) reduced inequalities (11) sustainable cities and communities. These goals related to human rights if human rights of people will full fill so these goals can achieve as same time successfully. There is one course related to this theme in this curriculum which is Human rights & Citizenship which is dependent on 3 credit hours the course code is GC 203. This course is developed to promote human values, human rights, cultural understanding, tolerance and this course is developed to relate human progress through a sense of diversity, good citizenship & tolerance for social harmony. This course content discusses the topics that are related to human rights and dignity that is mentioned below in the table.

**Table 2: Human rights and dignity Curriculum Course**

Course Codes	Course Title	Course Type	Semester	Cr. Hrs.
GC203	Human Rights & Citizenship	Compulsory General	4	3

Table 2 shows the course human rights & citizenship that is offered in the 4th semester and comprises of 3 credit hours. The theme is generated from this content is human rights and dignity that also belong to the concept of SDGs including SDG (1) no poverty (2) zero hunger (3) good health and well-being (4) quality education (5) gender equality (6) clean water and sanitation (10) reduced inequalities (11) sustainable cities and communities. It indicates that English curriculum include the content that promote awareness in students about SDGs. The curriculum must add the courses related to the human rights to increase awareness in learners about human

rights because when students know about the human rights and human rights provide in society, so it helps to achieve sustainable development goals SDGs. If human rights will be full fill of people it helps to reduce poverty, hunger and inequality so SDGs can be achieved successfully. Providing human rights helps to create strong and stable society sustainable cities and communities. When people have access to good health and well-being, education, fair opportunities, and feel safe they can live a more sustainable and balanced world for upcoming future generation it motivates peoples to make constructive contribution in society which is essential for sustainability and for better future.

### Global Issues and Citizenship

The third theme emerged from the content analysis of the English curriculum course is the global issues and citizenship which are the focuses on one course introduction to international relationship. This course is intended to introduce to modern study of international relations. To fully understand international issues and circumstances in the modern world, students will study the main theories of international relations. Focus is given on recognizing the change from internationalization to globalization and on fully understanding the connection between international conflicts and cooperation. Learners will be able to stay up to date on modern international topics and develop critical thinking skills by using a lot of information from the internet, professional publications and newspapers. This theme is related to SDG concept including SDG (1) no poverty (4) quality education (10) reduced inequalities (13) climate change (17) partnerships for the goals because of this course discussed on international issues which is very important for student's awareness towards the promote SDGs concept for sustainable development. It helps learners to be aware about challenges and issues that affect people globally such as inequality, climate change, poverty quality education and about peace and justice. When learners are aware of these issues it can develop more awareness, motivation empathy and enthusiasm to solve problems and to promote sustainability to achieve SDGs successfully. Our society is facing issues because of a lack of awareness towards SDGs concept for sustainability. Through awareness, talking actions, collaborating with others and making wise decisions create positive changes for sustainable development future for all peoples on the planet. Individuals can contribute to the achievement of sustainable development goals due to this awareness. The content of this course is mentioned below in the table.

**Table 3: Curriculum Course of Global issues and citizenship**

Course code	Course Title	Course Type	Semester	Cr. Hrs
GC301	Introduction to international Relations	General	5	3

This table shows the 1 course introduction of international relationship that is offered in 5<sup>th</sup> semester dependent on 3 credit hours and the course code is GC301. By studying this course students will be able to understand the global issues and their solutions that are useful to promote SDGs concept for sustainability. It indicates that the English curriculum course includes the content related to the awareness about global issues and citizenship to promote sustainable development. Awareness about global issues in learners is important for a stable society.

### Education and Empowerment

The last theme emerged from the content analysis of the curriculum courses is education and empowerment which are the focuses of 4 courses. These courses are related to skills development



which helps to increase quality education and empowerment. It shows relevancies to SDG 4 quality education because of these courses are promoting the skills development of students and Skills development in students is the part of improvement quality education in country. The skills development courses must add in the courses because of they provide the practical skills which is necessary for real life students who learn these courses will be more capable of handling challenges and succeed in the workplace by developing technical abilities such as problem solving, communication and technical knowledge. To be more simply we can say that these courses enhance a student's overall talents by bridging the gap between academic knowledge and practical application. The topic of the courses is mentioned below.

**Table 4: Education and Empowerment curriculum courses**

Course code	Course Titles	Course Type	Semester	Cr. Hrs
GC101	Study skills	General	1	3
ELL103	Introduction to Language Studies	Foundational	1	3
GC201	Introduction to Information & Computer Technology (ICT) Skills	Foundational	3	3
ELL201	English III: Communication and Presentation Skills	Foundational	3	3

Table 4 shows the 4 courses related to this theme that are offered in the first and third semester of the program. The credit hours of these courses are 3. By studying these courses students will improve their study skills, language skills, ICT skills, and communication and presentation skills because these courses include knowledge about study, language, ICT, communication and presentation. These courses are related to skills development which helps to improve quality education.

## Discussion

The aim of this research is to analyze the content of English curriculum which is considering the SDGs concept to increase awareness in learners to promote sustainable development. Data was collected from the content of English curriculum total 8 courses selected using by purposeful sampling technique as a sample of this study on the basis of SDGs concept. This study analyzed the content of English curriculum through the content analysis procedures and generated the themes such as environmental aspects, human rights and dignity, global issues and citizenship and education and empowerment. After analyzed the content the findings shows that the English curriculum at undergraduate level has a content which is considering the SDGs concept for increasing awareness in learners to promote sustainability. Findings show that the courses cover content related to the sustainable development goals. The courses included content related to sustainable development goals that helps to reach to the student's knowledge and enable them to contribute to in their daily life. The 8 courses of English curriculum covered content related to the sustainable development goals to increase the awareness about SDGs concept to promote sustainability in learners at undergraduate level. By considering the sustainable development goals in the curriculum it can help students develop an understanding of responsibility and awareness while teaching them how to improve communities and a better world. It promotes an understanding that every person must contribute to building a better future that is equitable and sustainable.

## Conclusion

This study provides analysis of the English curriculum content which is considering the SDGs concept in the courses. It focused on how SDGs concepts are important in curriculum towards

improve student's awareness for sustainability and how SDGs shape the sustainable environment. The SDGs are very important concept globally for improving the planet. It is important for students everywhere. It addresses significant issues related to poverty, the environment, and equal opportunities for everyone. Understanding the SDGs helps learners in considering their part in bringing about a happier and healthier world where everyone has an equal opportunity to live a better quality of life, and the curriculum is also a best way to aware learners about SDGs concept to promote sustainability. It is offering them a road map for improving everyone's quality of life and equality in the globe.

### Recommendations

To promote SDGs framework in educational institutes study suggests the following recommendations:

Firstly, training and awareness programs for teachers and students should be organized in educational institutes, which should help them to increase their skills and understanding for the collective contribution for sustainable development. Secondly curriculum should be designed in a way to reflect the SDG goals in lessons and practical examples for the learners. Thirdly, to promote creative thinking and innovation in the discipline students should be encouraged to conduct research projects that are aimed at addressing specific needs of SDGs. Fourthly, teachers are encouraged to reflect on SDG goals on their teaching and learning.

### References

- Avelar, A.B.A., da Silva Oliveira, K.D. & Farina, M.C. (2023). The integration of the Sustainable Development Goals into curricula, research and partnerships in higher education. *International Review of Education*, 69, 299–325. <https://doi.org/10.1007/s11159-023-10013-1>
- Boni, A., Lopez-Fogues, A., & Walker, M. (2016). Higher Education and the post- 2015 agenda: A contribution from the human development approach. *Journal of Global Ethics*, 12(1), 17-28.
- Bieler, A., & McKenzie, M. (2017). Strategic Planning for Sustainability in Canadian Higher Education. *Sustainability*, 9(2), 161. <https://doi.org/10.3390/su9020161>.
- Bataeineh, M., & Aga, O. (2022). Integrating sustainability into higher education curricula: Saudi Vision 2030 [version 1; peer review: 1 approved with reservations, 1 not approved]. *Emerald Open Research*, 4(19), 1-13. <https://doi.org/10.35241/emeraldopenres.14499.1>
- Bushra, A., Lashari, A. A., Khan, A., & Pervaiz, A. (2024). Content analysis of social development curriculum for sustainable development in Pakistan. *International Journal of Contemporary Issues in Social Sciences*, 3(1), 1132-1142.
- Buriro, S. A., Mirjat, M. A., Pathan, R. L., Chandio, I., Lashari, A. A., & Gul, H. (2023). Eco-Friendly pedagogies for STEM education: A review. *Journal of Namibian Studies: History Politics Culture*, 34, 3018-3044.
- Do, N. M. (2020). An overview of strategic responses of Vietnamese higher education institutions. *International Journal of Educational Management*, 34(1), 35–44. <https://doi.org/10.1108/IJEM-02-2019-0074>
- Fukuda-Parr, S. (2016). From the Millennium Development Goals to the Sustainable Development Goals: shifts in purpose, concept, and politics of global goal setting for development. *Gender & Development*, 24(1), 43–52. <https://doi.org/10.1080/13552074.2016.1145895>
- Fayyaz, S., Lashari, A. A., Channar, H. B., Chang, M. A., Bano, N., & Buriro, S. A. (2023). Impacts of newly government-induced teachers' performance on learners' outcomes. *Al-Qanṭara*, 9(4), 262-279.

- Fayyaz, S., Lashari, A. A., Rafiq, K., Ammara, U., Madiha & Jabeen, N. (2023). Montessori teachers' communication effects on cognitive development of children. *Journal of Namibian Studies*, 33, 115-131. doi: <https://doi.org/10.59670/jns.v33i.4413>
- Fayyaz, S., Lashari, A. A., Nandwani, S., & Chang, M. A. (2023). Assessing environmental awareness and conservation behavior in schools for sustainable development. *Pakistan Journal Of Humanities and Social Sciences*, 11(04), 4086-4097. DOI: <https://10.52131/pjhss.2023.1104.0676>
- Franco, I., Saito, O., Vaughter, P., Whereat, J., Kanie, N., & Takemoto, K. (2019). Higher education for sustainable development: actioning the global goals in policy, curriculum and practice. *Sustainability Science*, 14(6), 1621–1642. <https://doi.org/10.1007/s11625-018-0628-4>
- Farinha, C., Caeiro, S., & Azeiteiro, U. (2019). Sustainability Strategies in Portuguese Higher Education Institutions: Commitments and Practices from Internal Insights. *Sustainability*, 11(11), 3227. <https://doi.org/10.3390/su11113227>
- Gusmao, F. D., Christiananta, B., & Ellitan, L. (2018). The influence of strategic leadership and organizational learning on organizational performance with organizational citizenship behavior as an intervening variable. *International Journal of Scientific Research and Management*, 6(04), 2018.
- Gabay, C. (2015). Special forum on the millennium development goals: Introduction. *Globalizations*, 12(4) 576-580 <https://www.tandfonline.com/doi/full/10.1080/14747731.2015.1033173>
- Gratzer, G., Muhar, A., Winiwarter, V., Lindenthal, T., Radinger-Peer, V., & Melcher, A. (2019). The 2030 Agenda as a challenge to life sciences universities. *GAIA - Ecological Perspectives for Science and Society*, 28(2), 100–105. <https://doi.org/10.14512/gaia.28.2.7>
- Herrero, M., Thornton, P. K., Mason-D'Croz, D., Palmer, J., Bodirsky, B. L., Pradhan, P., & Pikaar, I. (2021). Articulating the effect of food systems innovation on the Sustainable Development Goals. *The Lancet Planetary Health*, 5(1), 50-62. doi: [https://doi.org/10.1016/S2542-5196\(20\)30277-1](https://doi.org/10.1016/S2542-5196(20)30277-1)
- Imran, Q., Kazimi, A. B., & Lashari, A. A. (2022). Examining the impact of extrinsic and intrinsic barriers to adopting information communication technology in classroom teaching in intermediate (K 12) colleges of Karachi, Pakistan. *Journal of Positive School Psychology*, 2458-2478.
- Lozano, R. (2010). Diffusion of sustainable development in universities' curricula: an empirical example from Cardiff University. *Journal of Cleaner Production*, 18(7), 637–644.
- Leal Filho, W., Azeiteiro, U., Alves, F., Pace, P., Mifsud, M., Brandli, L., Caeiro, S., & Disterheft, A. (2018) Reinforcing the sustainable development research agenda: the role of the sustainable development goals (SDG). *International Journal of Sustainable Development & World Ecology*, 25(2), 131-142.
- Leal Filho, W., Simaens, A., Paço, A., Diaz, P. H., de Vasconcelos, C. R. P., Fritzen, B. & Maclean, C. (2023). Integrating the Sustainable Development Goals into the strategy of higher education institutions. *International Journal of Sustainable Development and World Ecology*, 30(5), 564-575.
- Leal Filho, W., Shiel, C., Paço, A., Mifsud, M., Ávila, L. V., Brandli, L. L., Molthan-Hill, P., Pace, P., Azeiteiro, U. M., Vargas, V. R., & Caeiro, S. (2019). Sustainable Development Goals and sustainability teaching at universities: Falling behind or getting ahead of the pack? *Journal of Cleaner Production*, 232, 1-27. <https://doi.org/10.1016/j.jclepro.2019.05.309>
- Lozano, R., Rebeka, L., Francisco, J. L., Donald, H., & Wim, L. (2013). Declarations for Sustainability in Higher Education: Becoming Better Leaders, through Addressing the University System. *Journal of Cleaner Production*, 48, 10–19. <https://doi.org/10.1016/j.jclepro.2011.10.006>.
- Larrán, M., Herrera, J., & Andrades, F. J. (2016). Measuring the linkage between strategies on sustainability and institutional forces: an empirical study of Spanish universities. *Journal of Environmental Planning and Management*, 59(6), 967–992. <https://doi.org/10.1080/09640568.2015.1050485>
- Martinez-Martinez, A., Cegarra-Navarro, J. G., Garcia-Perez, A., & Wensley, A. (2019). Knowledge agents are drivers of environmental sustainability and business performance in the hospitality sector. *Tourism management*, 70, 381-389.

- Maykova S.E., Okunev D.V., Salimova T.A., & Soldatova E.V. (2017). Modeling organisational management structure of the united university. *Integratsiya obrazovaniya Integration of Education*, 21(3), 421-440. DOI: <https://10.15507/1991-9468.088.021.201703.421-440>.
- Mooman, A. F., Ali, S. R., & Lashari, A. A. (2023). Role and responsibilities of public-school principals of Karachi: perceptions & hurdles faced. *Global Educational Studies Review*, 8(8), 102-109.
- Mori Junior, R., Fien, J., & Horne, R. (2019). Implementing the UN SDGs in Universities: Challenges, Opportunities, and Lessons Learned. Sustainability. *The Journal of Record*, 12(2), 129–133. <https://doi.org/10.1089/sus.2019.0004>
- Owens, T., L. (2017). Higher Education in the sustainable development goals framework. *European Journal of Education*, 52(4), 414-420.
- Paletta, A., & Bonoli, A. (2019). Governing the university in the perspective of the United Nations 2030 Agenda. *International Journal of Sustainability in Higher Education*, 20(3), 500–514. <https://doi.org/10.1108/IJSHE-02-2019-0083>
- Purcell, W. M., Henriksen, H., & Spengler, J. D. (2019). Universities as the engine of transformational sustainability toward delivering sustainable development goals. *International Journal of Sustainability in Higher Education*, 20(8), 1343–1357. <https://doi.org/10.1108/IJSHE-02-2019-0103>
- Rehman, M. A., Lashari, A. A., & Abbas, S. (2023). Analysis of Sustainable Academic Performance through Interactive Learning Environment in Higher Education. *Global Economics Review*, 8(2), 129-139. [https://doi.org/10.31703/ger.2023\(VIII-ID\).10](https://doi.org/10.31703/ger.2023(VIII-ID).10)
- Ramísio, P. J., Pinto, L. M. C., Gouveia, N., Costa, H., & Arezes, D. (2019). Sustainability Strategy in Higher Education Institutions: Lessons learned from a nine-year case study. *Journal of Cleaner Production*, 222, 300–309. <https://doi.org/10.1016/j.jclepro.2019.02.257>
- Shava, G. N., Mkwelie, N., Ndlovu, M. J., & Zulu, E. (2023). Higher education institution' sustainable development towards Agenda 2030: A global goals in policy and curriculum. *International Journal of Research and Innovation in social science (IJRISS)*, 7(4), 1320-1336. Doi: <https://doi.org/10.47772/IJRISS.2023.7510>
- Salimova T., Guskova N., & Neretina E. (2015). Education for sustainable development in Russia: problems and challenges. *International Journal of Innovation and Sustainable Development*, 9, (3/4), 246 – 261. DOI: <https://10.1504/IJISD.2015.071855>.
- Salman, H., Rahat, A., Niazi, S., & Lashari, A. A. (2023). Implication of sustainable development goals for quality education in institutions of higher education in Pakistan. *Journal of Positive School Psychology*, 1879-1886.
- Shiel, C., Leal Filho. W., Paco, A., & Brandli, L. (2015) Evaluating the Engagement of Universities in Capacity Building for Sustainable Development in Local Communities. *Evaluation and Program Planning*, 54, 123-134.
- SDSN Australia/Pacific (2017). *Getting started with SDGs in Universities: A guide for universities, higher education institutions, and the academic sector*. Australia, New Zealand and Pacific Edition. Sustainable Development Solutions Network – Australia/Pacific, Melbourne.
- Sachs, J.D. (2012). From Millennium Development Goals to Sustainable Development Goals. *The Lancet*, 379(9823), 2206-2211.
- Salman, H., Rahat, A., Niazi, S., & Lashari, A. A. (2023). Implication Of Sustainable Development Goals for Quality Education in Institutions of Higher Education in Pakistan. *Journal of Positive School Psychology*, 1879-1886.
- Sánchez-Carracedo, F., Ruiz-Morales, J., Rocio, V. H., Muñoz-Rodríguez, J. M., & Gomera, A. (2021). Analysis of the Presence of Sustainability in Higher Education Degrees of the Spanish University System. *Studies in Higher Education*, 46 (269) 1–18. <https://doi.org/10.1080/03075079.2019.1630811>.
- Swaim, J. A., Michael, J. Maloni, Stuart, A., Napshin, & Amy, B., H. (2014). Influences on Student Intention and Behavior toward Environmental Sustainability. *Journal of Business Ethics*, 124(3), 465–84. <https://doi.org/10.1007/s10551-013-1883-z>.

- Shawe, R., Horan, W., Moles, R., O'Regan, B., & O'Regan, B. (2019). Mapping of sustainability policies and initiatives in higher education institutes. *Environmental Science and Policy*, 99, 80–88. <https://doi.org/10.1016/j.envsci.2019.04.015>
- Suryanto, H., Degeng, I. N. S., Djatmika, E. T., & Kuswandi, D. (2021). The effect of creative problem solving with the intervention social skills on the performance of creative tasks. *Creativity Studies*, 14(2), 323-335. doi: <https://doi.org/10.3846/cs.2021.12364>
- The Impact Ranking (2023). *Times Higher Education (THE)*. May 11, 2023. <https://www.timeshighereducation.com/impactrankings>.
- UNESCO (2017). *Education for Sustainable Development Goals: Learning Objectives*. Paris, UNESCO.
- UNESCO. (2004) *Education for All: The Quality Imperative, EFA Global Monitoring Report*, UNESCO Paris. <https://www.unesco.org/gem-report/en/efa-quality>
- UNESCO (2017). *Education for Sustainable Development Goals: Learning objectives*. Paris: UNESCO from <http://www.unesco.de/sites/default/files2018-08/unesco-education-for-sustainable-development-goals.pdf>
- UN (United Nations). (2000). *United Nations millennium declaration*. A/RES/55/2. New York:
- United Nations, (2019). Retrieved May 2019. From <http://www.un.documents.net/a55r2.htm>.
- UN Sustainable Development Solutions Network (SDSN) (2015): *Indicators and a Monitoring Framework for the Sustainable Development Goals. Launching a Data Revolution*. New York.
- WEF (World Education Forum) (2000). *The Dakar framework for action. Education for all: Meeting our collective commitment: Paris: UNESCO*. Retrieved February 2019 from <https://unesdoc.unesco.org/ark48223/p0000121147>
- World Commission on Environment and Development, (1987). *The Report of the World Commission on Environment and Development 'Our Common Future*. Available at: <http://www.undocuments.net/our-common-future.pdf> (accessed on 13 February 2014).