

The Role of Pakistani Universities in Achieving Sustainable Development Goals (SDGs): A Qualitative Investigation From Faculty Studying Abroad

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Abstract

In the past decade, universities have achieved excellence in Sustainable Development Goal 4, which is about quality education. Globalization has increased the number of international students leaving their home countries for higher education, subsequently returning to serve their local institutions. Such transitions are a hub of increased indigenous knowledge, a product of the interaction between the local challenges with local resources. It is considered a significant contributor to sustainable development. It involves a critical appraisal of the home institutions in the light of cultural and educational experience gained by international students in host countries. This fund provides them with an intellectual platform to compare and contrast educational standards, academic procedures, and teaching methodologies owing to a diverse and greater exposure. The current study draws on data from the understanding and experiences of 10 Pakistani international students who left their home country after 16 years of education and spent almost 4-5 years at international universities. Data was collected through in-depth interviews and analyzed in terms of broad themes. These include the necessity for up-to-date educational practices and curriculum, the call for restructured and modernized teaching pedagogies, the requirement for competent teachers and teaching approaches, the need to promote indigenous research and innovation, and the necessity for collaboration between academics and industry. The findings are significant for reform policies of the higher education institutions to achieve the sustainable development goal of quality education.

Key words: Sustainable Development Goals, Pakistani Higher Education Institutions, Teaching Pedagogies, Academic and Industry, Indigenous Knowledge.

Introduction

In the past semi-centennial, sustainability has materialized as a compelling notion. This concept has shifted the direction of the educational landscape towards overcoming the emerging challenges of tenacity while conceptualizing effective mechanisms to do so (Zahid et al., 2020). In addition to providing sustainable education and popularizing research activities, the current agenda of educational institutions today includes integrating sustainability into educational systems and mandates. This concept is called sustainable higher education (Alghamdi et al., 2017). Under this approach, educational institutions are expected to organize their education system including teaching activities, teacher training, research topics, budget matters, and day-to-day affairs to promote sustainability while overcoming the presenting obstacles in doing so. Educational institutions are globally taking practical steps to incorporate this into their system (Habib et al., 2021).

Higher education institutions pursue a broader agenda of sustainable development. The Brundtland Commission Report described it as the "development that is capable of meeting the needs of the present generation as well as the needs of future generations." Under the framework of sustainable development, educational institutions worldwide are urged to commit all available resources to assist students in overcoming economic difficulties (Zahid et al., 2018). However, limited advancements are seen in developing countries to explore and embrace sustainable development. Owing to this, limited literature, measures, and legislation regarding sustainability in higher education institutions of developing countries are available as compared to developed nations (Sady et al., 2019). There is hence an exigency for educational institutions to take practical steps to incorporate sustainable development.

Pakistan is the sixth-largest country in the world in terms of population, according to the annual report published by the State Bank in 2009. As a developing nation, it has been struggling since its independence. While battling challenging political and economic instability, security and leadership issues, and allegations of religious extremism and terrorism, it also struggles with a lack of defined policy and funding (Zahid et al., 2020). As a result, the development process of Pakistan has slowed down further; particularly in pursuit of incorporating the goals of sustainable development (SDGs). Moreover, poverty and poor literacy rates are major impediments to Pakistan's pursuit of SDGs (Khan & Khan, 2018b).

In such a situation, education and educational institutions play an unparalleled role in domestic development. Unfortunately, Pakistan experiences a dire educational system nationally (Malik et al., 2019). Indigenous historical literature demonstrates that throughout the last six decades, Pakistani politicians and government officials have placed greater emphasis on crafting policies on education and the economy than incorporating actual initiatives (Parveen et al., 2011). The grim circumstances are exacerbated by the dearth of teacher training, lengthy curriculum, dated test process, and an ineffective evaluation system offered in higher education institutions (Khushik & Diemer, 2018). Pakistan's educational institutions demonstrate a calamitous situation (Hussain et al., 2019). The pace of establishing universities and colleges in Pakistan has accelerated in the recent decade (Kayani et al., 2015). These are serious obstacles to the provision of quality education.

Moreover, reports on educational institutions' performance are described as unsatisfactory. According to a Times Higher Education survey, Pakistan had only three academic institutions that ranked among the top 500 (Ali et al., 2013). The curriculum, in particular, that has been in place for years needs modification to meet the needs of the present-day market. Examination system reforms are necessary to ensure that students prepare the entire curriculum rather than preparing for only certain examination materials under this archaic educational system (Khan et al., 2017; Malik et al., 2019). Similarly, contrary to international

educational standards, students play a passive role in the learning process in classrooms. The Pakistani educational system demands teachers to prepare students for tests, not to provide conceptual clarity (Gujjar et al., 2010). Under this teaching method, instructors are hence prohibited from providing any recommendations to higher authorities regarding the school system or students. Such an education system inhibits the success of the national economy (Akhter, 2013; Ullah et al., 2011). As is it difficult to attain sustainable development goals without developing the education system; there is an urgent need to reform the current educational structure nationally.

Pakistan's educational status began to improve in the 1990s as the government implemented proposed educational programs that were advocated. During this period, one of the most significant educational changes was the creation of Pakistan's Higher Education Commission (HEC). Founded in 2003 by the Pakistani government; HEC was aimed at promoting higher education, increasing educational standards, and satisfying globalization demands in Pakistan's higher education notably (Kayani et al., 2015; Zakaria et al., 2016). Due to the internationalization of education, the Higher Education Commission of Pakistan (HECP) placed great emphasis on student mobility to contribute to the progress and integrity of Pakistan's educational system. This was done by providing grants to students to study abroad. Notably, the trend of students' mobility became more systematic with the establishment of the Higher Education Commission of Pakistan (HECP) in 2003. Thousands of students were sent overseas with hopes that such students would develop a comparative understanding of education systems in their host and home nation upon their return after receiving their degrees. This exposure would aid them in identifying loopholes in the education system of the home country and suggesting better practices in the impacted domains (Alandejani, 2013a, 2013b).

The purpose of the present study is to highlight the important role of Pakistani international students in achieving sustainable education, sustainable universities, and a sustainable community and to emphasize the need to take practical steps in this regard. For the said purpose, the current study records the observations of students who have studied abroad and served in their home country's educational institutions upon their return. The observations of the participants provide a fresh insight as they compared various domains of the local and foreign education systems including pedagogical approaches, assessment criteria, and quality of different standards. Their experiences and views are a robust source for policymakers looking for educational reforms in the country. The current study is based on the premise that the development of an indigenous knowledge fund in terms of improving educational systems can be seen as a step toward sustainable solutions for the education and the economy of a country. In this context, the study highlights the comparative observations regarding the educational systems of faculty members working at Pakistani universities after completion of their degrees from abroad. By emphasizing the experience and suggestions of the Pakistani faculty members, the study reduces the gap between the awareness of international standards in education and the ground reality of local education systems. It also contributes to the knowledge and experience of faculty members working in Pakistani universities as a crucial aid to the sustainable development goals of Pakistani institutions to be at par with developed higher educational institutions internationally.

The results of the present study will give a new direction to various stakeholders i.e. students, educational institutions, policymakers, and higher education institutes in particular to achieve sustainable development goals. Further, as Pakistan is a developing country, the gap in the literature regarding sustainable development goals will be reduced, which will surely help other developing countries to take practical steps to achieve the SDG goals. The study tries to answer the following questions. First, to what extent do foreign-qualified faculty members working at Pakistani institutions observe a difference between the Pakistani and foreign educational systems, and how did these educational practices affect

the achievement of long-term sustainable development objectives? Second, how do Pakistani faculty members propose local education systems may achieve sustainable development goals to strengthen Pakistan's economy based on their educational experiences gained while studying abroad? And final, how can higher education institutions in Pakistan contribute to the country's long-term educational and economic development goals, according to foreign-qualified faculty members working at Pakistani universities?. The reminders of the paper consist of a literature review, followed by the methodology and findings, and ends with the conclusion and way forward.

Literature Review and Theoretical Framework

Studying abroad succors societal transformation. Experience in a different political, cultural, social, and economic environment aids in inspiring transformation in educational institutions (Fry, 1984; Tamas, 2014). Therefore, developing countries encourage their students to study abroad to contribute to societal development on their return back home and contribute to improving local educational and economic conditions (Alandejani, 2013a; Senanayake, 2006). Before the Covid-19 pandemic, UNESCO projected that over five million students studied abroad; including 20% of these students being recipients of scholarships to study overseas. The global trend of students studying abroad has caused a surge in research on student mobility and the internationalization of higher education (Bashir et al., 2019). Globally, the United Nations' 2015 Sustainable Development Goals program elevated the eminence of international higher education and student SDG as clause 4B stated that "by 2020, less-developed master students will be given scholarships for education and vocational training (in technical, engineering, and science programs) in established universities." With the SDGs, over 150 nations aimed to enhance international scholarships for students to study at these universities (Khan & Khan, 2018b; Michael, 2008). This participation was projected to facilitate national development projects and assist in achieving the SDGs.

Students studying overseas contribute immensely to the sustainable development goals of nations both at the micro and macro levels. International students improve their personal, institutional, local, and national capabilities while studying abroad. This increased skill and academic aptitude not only assist the economy in their country but also leads to a global economic rebirth (Zakaria et al., 2016). Thus, international students are seen as a valuable human resource for developing countries. Overseas education opens horizons for experiencing new academic cultures; aiding students in developing sensitivity towards the functionality of education systems in prestigious educational institutions. As a result, apart from their training in the preferred area of study, they acquire a novel understanding, which enables them to critically examine the education system they experienced back home (Bashir et al., 2019; Teichler, 2009). In addition, their knowledge and understanding of the education system of foreign universities evolve into a new approach and perspective for intervening in the education system in the home country. These students could serve as the best source to implement new knowledge, suggest curriculum changes, and introduce new teaching methods in the light of their experiences studying abroad (Brandenburg et al., 2019).

In several studies, upon their return after completion of their degree, international students favorably affected their home universities and helped to improve their educational institution's culture (Orîndaru, 2015). Small (2015) cited the University of Hawaii students as an example who gained exposure to diverse cultures, faiths, and traditions, thereby refining their perspective. With this new and polished perspective, these students educated and shared their experiences with their parent university students and professors. This included offering answers to new challenges, improving and reorganizing educational environments, recommending improvements to the university based on their academic experiences, and undertaking research to benefit the local community. Similarly, Students at the American University of

Beirut helped restructure the education system, compiled new textbooks, and promoted numerous political ideas. This improved the country's integrity and student employment (Baytiyeh, 2017; Campbell & Neff, 2020; Perna et al., 2015). About 17,500 Australian Government Scholarship Program graduates also established the "Australian educational mafia" which aided the growth of municipal government. However, the implementation of these students' ideas and vocabulary on repatriation is greatly influenced by university rules, instructor attitudes, and government assistance. How much they can help implement the students' ideas. It is also imperative to decipher how conducive the environment may be provided to these ideas (Kalisman, 2015; Senanayake, 2006).

Incorporating the knowledge and understanding of these students for educational reforms in the home country means developing the "local indigenous knowledge fund". In common parlance, an indigenous knowledge fund refers to knowledge acquired from local resources and experience (Mawere, 2015). The students who join the home country's educational institutions after studying abroad can be seen as local resources with foreign qualifications and hence contributors to the indigenous knowledge fund (Allwood & Berry, 2006; Senanayake, 2006). The local indigenous knowledge fund can be enriched by incorporating the learning experience of international students who had the experience of foreign education and return to aid the nation's educational system. On similar grounds, Higher Education Commission in Pakistan and other policymakers working in academic and administrative positions at Pakistani universities can use this Pakistani indigenous knowledge as an enriched resource to introduce reforms and reconstruct the current educational structure of Pakistani higher education institutions. Currently, more than 50,000 scholars are studying in established universities abroad and about half of those students return home to work in Pakistan's higher education institutions (Abbasi, 2018). Many of these students are now faculty members at Pakistani universities. The present study takes into account the observations, experiences, and suggestions of such students as an auxiliary to the indigenous knowledge fund for reforming the education system of the country according to sustainable development goals.

The framework of this study is based on transformational learning. Transformational learning abets in the comprehension of a concept in both the human and social contexts. As proposed by Mezirow (2000), transformational learning is defined as the process of replacing previously learned skills, methods, and ways of thinking with novel knowledge, thinking, and methods of working to improve a situation. Transformational learning assists participants in comprehending their experiences in other cultures (Mezirow, 2000; Tisdell, 2009). It also describes how students with limited knowledge acquire new knowledge perspectives, skills, and competencies. The transformational learning approach is rapidly gaining traction. Aside from Mezirow's (2000) traditional transformational learning aspects, the literature emphasizes that this approach should be used in a variety of educational perspectives including in the context of students, teachers, and institutions.

This approach is hence deemed appropriate for the current study in three ways. Firstly, under this approach, prior knowledge serves as the foundation for new knowledge that guides future actions. Transformational learning of cultural perspectives, in particular, emphasizes the importance of students sharing transformational educational experiences and knowledge construction experiences in their own or other cultures (Simsek, 2012). Secondly, the transformational learning perspective has a wealth of literature on the learner perspective. Literature emphasized the importance of a sustainable society by implying that students should not be confined to the classroom but should be given opportunities to solve society's problems (Christie et al., 2015). These students should also be involved in such activities so that they can recreate society by practically applying what they have learned (Nohl, 2015). Similarly, teachers bear a responsibility to provide students with updated knowledge and techniques. As a result, teachers must constantly transform and update their knowledge and teaching methods (Lee & Brett, 2015).

Competent teachers, students, and educational institutions indeed lay the groundwork for a competent society. Thirdly, achieving sustainable development goals and creating a sustainable society is not probable unless local educational institutions undergo continuous change while matching international educational and market standards (Boström et al., 2018; Lange, 2012). Consequently, continuous transformation is required for the growth of students, teachers, educational institutions, and society holistically.

Methodology

The term "methodology" refers to the process through which new information is obtained. The current study was qualitative. In a qualitative study, the goal is to gain a better understanding of a phenomenon through the viewpoints of the people who participated (Bengtsson, 2016). As a result, in-depth interviews spanning 60-80 minutes were used to document the students' perspectives. Snowball sampling was used to recruit these faculty members. Each participant received a detailed email outlining the study's objectives. All candidates provided their agreement voluntarily and knowingly, and as a result, their interviews were conducted.

The current qualitative study recorded the experience and views of Pakistani faculty members who were teaching at various Pakistani universities after their return from studying overseas. The choice of these professors is appropriate as they are equipped to draw comparisons between the educational institutions of their home and foreign educational institutions abroad based on their education and teaching experience. The sample comprised five male teachers and five female teachers; including six full-time faculty members and four contract employees who were likely to remain in their positions in the future. These individuals were between the ages of 30 and 45. Participants belonged to Lahore (4), Multan (2), Islamabad (2), and Peshawar (2). Well-known Pakistani public sector universities and colleges employed them. Eight of the participants were married while one was single and one was a widow. The service life of these faculty members ranged from three to 12 months. They completed their education in Germany (3), Hungary (2), the Netherlands (1), Indonesia (1), the UK (1), Austria (1), and China (1). Except for one female participant who served in a place other than her parent city to meet the HEC obligation to serve the sponsoring university for five years after completing her, all participants served in their home cities. When conducting qualitative research, the sample size should be decided by the amount of information required to answer the study questions (Bengtsson, 2016). That is why a sample size of ten participants (10) was selected (see table 1).

The current study used an in-depth interview methodology. In addition to getting primary information, the interview method has the advantage of allowing follow-up interviews for any clarification. This aids in understanding and clarity. Interviews with faculty members began with two general questions: How would you describe your educational experience in the foreign university? In light of your experience abroad and current teaching experiences at Pakistani higher educational institutions, what are your views on educational standards at Pakistani Higher education institutions? What changes would you suggest for improving the education system in the universities of the home country and making it align with the achievement of sustainable development goals? To get a detailed answer to above mentioned general inquiry, various probing questions were asked. All interviews were transcribed to create categories of data in line with the qualitative approach of the current study.

Table 1: Demographic Information of the Participants

Participant Id	Gender	Teaching Experience (months)	Parent institute Public or private sector	Host institute	Degree obtained
P1	M	12	Public Sector	Germany	Management Science
P2	M	15	Public Sector	Germany	Social science
P3	M	9	Private Sector	Germany	Applied science
P4	M	20	Public Sector	Netherlands	Agriculture
P5	M	18	Public Sector	Indonesia	Pure science
P6	F	22	Public Sector	UK	Social science
P7	M	24	Private Sector	China	Food and Nutrition
P8	M	6	Public Sector	Austria	Management Science
P9	F	10	Public Sector	Hungary	Social science
P10	F	19	Private Sector	Hungary	Health Science

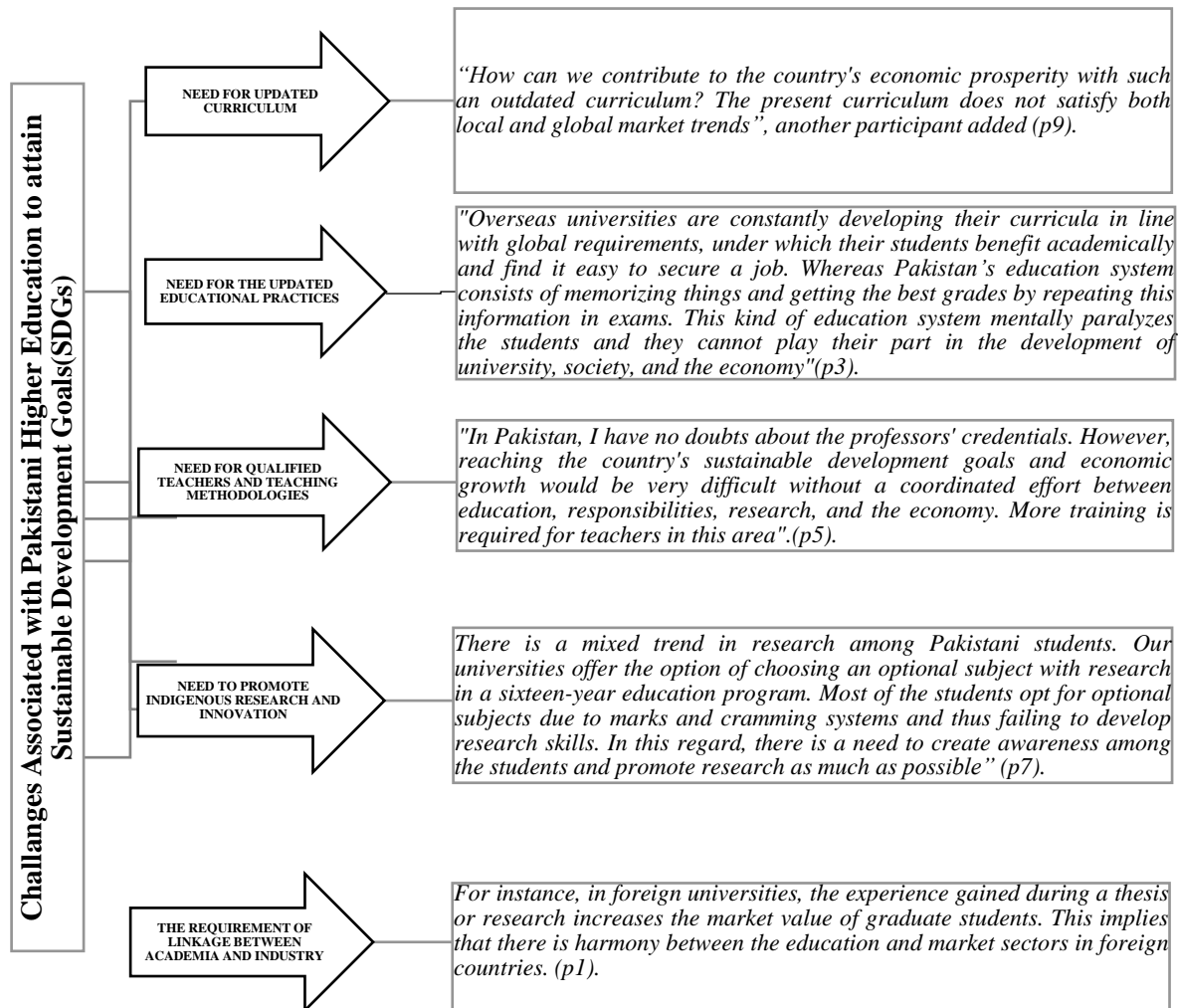
Thematic data analysis was conducted on the collected data. This method allows researchers to obtain detailed information from the raw content/transcripts by using a coding system. The codes aid in gaining insight into a certain group's perspective on a given phenomenon. These codes are merged to establish a specific theme (s). The concept of a theme can be defined as the common and shared experiences of a particular group regarding the phenomenon being studied. A study's theme is derived from participants' shared perspectives on a particular point of view. To conduct the analysis, the transcript/data was repeatedly read and studied to gain insights into themes. Since the principal focus was the content, therefore, an inductive approach was used to make categories of the information obtained from the interview and pre-existing coding was avoided (Patton, 2014).

All the interviews were audiotaped and immediately transcribed after the completion of an interview method. With an initial understanding of participants' experiences and an emerging awareness of their impressions of the data, the researchers then reviewed the interviews paying closer attention to participants' voices, from which five significant meaningful themes emerged. It is imperative to mention that many key themes emerged from this research, such as instructional practices, nature of the curriculum, qualification of teachers, critical thinking, and integration of educational and economic sectors. These themes were classified into broader categories by similarities and differences in the available data/transcripts which resulted in five final themes including the need for competent teachers and teaching approaches, the necessity for up-to-date educational practices and curriculum, the requirement for collaboration between academics and industry, and the need to promote indigenous research and innovation.

Results

The result of the study highlighted 5 major to attain sustainable development goals through higher education institutes, including the necessity for up-to-date educational practices and curriculum, the call for restructured and modernized teaching pedagogies, the requirement for competent teachers and teaching approaches, the need to promote indigenous research and innovation, and the requirement for collaboration between academics and industry (see figure 1). The resultant themes and participants' quotes are presented below.

Figure 1: Main theme, Subthemes with illustrative quotes



The Necessity For Up-To-Date Educational Practices And Curriculum

Participants stressed the importance of altering the curriculum to meet current needs. Research proposals must consult outcomes from the last five years as international colleges' curriculum is constantly revised. Pakistan's curriculum was deemed obsolete. Students also cited a lack of a framework for frequently monitoring courses concerning market demands and international norms.

"I would say that our outdated curriculum is a big factor in our higher education institutions' struggles. (p2).

“How can we contribute to the country's economic prosperity with such an outdated curriculum? The present curriculum does not satisfy both local and global market trends”, another participant added (p9).

Call for Restructured and Modernized Teaching Pedagogies

The development of classroom methods, assessment, and curriculum was the focus of the second theme. Pakistani students emphasized modern and evolving requirements as they discussed the examination structure and curriculum. Participants highlighted how the students had been studying for years in Pakistani educational institutions and how they have done well in exams by preparing particular stuff. However, their presence in classrooms remained non-existent. Higher education institutions remained unable to fulfill their potential under such a system of education. Participants agreed that Pakistani educational institutions should seek and follow policies prevalent in the developed world's higher education institutions so that students can play their role in society's progress.

For instance, a faculty member said,

“Overseas universities are constantly developing their curricula in line with global requirements, under which their students benefit academically and find it easy to secure a job. Whereas Pakistan's education system consists of memorizing things and getting the best grades by repeating this information in exams. This kind of education system mentally paralyzes the students and they cannot play their part in the development of the university, society, and the economy” (p3).

Another participant observed,

“The method of education abroad, books, practical, tutorials, and mini-research projects have been designed in a way that discourages rote memory, and students have to engage in deep learning to succeed. The concept of memory-oriented learning and assessment seems alien and misfit in their actuated educational practices”. Their policy is to enable the students to think outside of the box. He further added that he had to shift his approach from memorizing to understanding to adjust there. (p4).

One of the participants highlighted

The culture of corruption in Pakistani universities, particularly favoritism in assessing students, whereas, the foreign model is much more transparent (p8).

The availability of academic resources was also considered an important aspect of the education system. One of the participants was of the view that

“if the university is to contribute to economic and social development, it must provide an uninterrupted supply of the best resources, promote the best research, and improve the quality of teaching” (p1).

The Requirement for Competent Teachers and Teaching Approaches

The participants shed light on the importance of teacher training and development for Pakistani education. They compared the qualifications, dedication, and intellectual flexibility of educators in Pakistan and overseas when making their comparison and emphasizing the teachers' training.

One participant suggested a need to work on education to achieve a sustainable society highlighting that competent faculty members play a critical role. For instance, teachers abroad provided them with free extra training sessions after university hours and helped in meet educational challenges, a practice that is rare in Pakistani universities (p5).

Another participant was of the view that "the teachers had an exceptional academic background and had won awards of excellence in their research areas and therefore guided students in an innovative way that reflected in their academic results". He added that "Pakistani institutions need to have well-qualified and skilled teachers to meet international standards" (p1).

One of the participants reported, "Teachers would welcome students' opinions even if it is about justifying the content of an assignment". He observed that in comparison, "Pakistani teachers are fixed and seldom show flexibility" (p4).

A participant who informed that teachers in foreign universities appreciate critical skills and innovation on part of students highlighted a quite important area of comparison. These observations focus on the qualification, dedication, and intellectual flexibility of the teachers.

"The students are encouraged to think original and out of the box and are not discouraged even if the topic is controversial". Pakistani professors lack this mentality, despite my efforts as a new faculty member to put my efforts into reality in my class (p3).

In Pakistan, I have no doubts about the professors' credentials. However, reaching the country's sustainable development goals and economic growth would be very difficult without a coordinated effort between education, responsibilities, research, and the economy. More training is required for teachers in this area (p5).

The Need to Promote Indigenous Research and Innovation

Listing shortcomings in the Pakistani research curriculum, the participants stressed promoting research-oriented syllabi. Students believed that addressing society's problems should be part of the educational process so that students get familiar with them on a personal level and come up with answers. Such an approach will help preserve indigenous knowledge while reducing the need for external aid seeking solutions to problems. According to academic research, universities want to help students find solutions to the difficulties of today's technological age. As a result, the curriculum should be created such that students can easily find solutions to the problems plaguing society today.

One participant was of the view that

"There is a mixed trend in research among Pakistani students. Our universities offer the option of choosing an optional subject with research in a sixteen-year education program. Most of the students opt for optional subjects due to marks and cramming systems and thus fail to develop research skills. In this regard, there is a need to create awareness among the students and promote research as much as possible" (p7).

Another participant suggested,

“I strongly encourage my students to bring indigenous challenges and work on them. To me, the purpose of the research is to follow the research procedure by choosing to work on limited or large-scale solutions to real-life problems, with research ethics in mind. By doing this, indigenous knowledge at the national and international level will increase, and research in students will also be promoted” (p9).

The Requirement for Collaboration Between Academics and Industry

Graduating students from four-year colleges and universities hoped to land the greatest job possible. Getting a job was reported as easier for students when they had an education that fulfilled the market's standards as well as their own. Participants discussed the need to modernize and standardize the course materials and content because of this. They agreed that a syllabus should be introduced that is per global standards and can provide students with both theoretical knowledge and practical/vocational training.

To make it simpler for students to seek employment post-graduation, these professors pushed for changes to the existing curricula in higher education institutions that aligned with market demands. Because of this, the local market places a high value on education and experience to contribute to the recovery, survival, and growth of the country's economy. Most students stressed the relationship between colleges and the local, state, and federal economies.

For instance, in foreign universities, the experience gained during a thesis or research increases the market value of graduate students. This implies that there is harmony between the education and market sectors in foreign countries. (p1)

Another participant stated, “The courses taught in Pakistan do not provide practical knowledge other than being updated, which makes it difficult for students to perform in the job market in general, reported a similar concern. Above and beyond, the link between market requirements and trends and our course outlines is missing” (p4).

Discussion and way forward

The purpose of the present study was to review the important role of Pakistani higher education institutions in sustainable development. To assess this construct, interviews with Pakistani graduates who completed their degrees from overseas-developed universities were conducted. These faculty members emphasized the role of higher education institutions in achieving sustainable development, highlighting the current performance of Pakistani educational institutions and the barriers to achieving sustainable development goals. Furthermore, they suggested reforms based on their own experiences at foreign reputed institutes for enhanced performance of the Pakistani higher educational institutes to achieve sustainable development goals.

The first research question implored the participants to chronicle the current practices in Pakistani higher education institutions assessing the extent to which educational practices in Pakistani higher educational institutions differed from western higher educational practices for the attainment of long-term SDGs. The second research question urged participants to describe their teaching and learning experiences at Pakistani higher education institutions. Similarly, the third inquired them to present their suggestion and reforms they proposed to contribute to Pakistan's long-term educational and economic development

goals. The three research questions resulted in five themes. These themes were grouped under three research questions consisting of qualified and experienced professors; updated educational techniques; a more effective interface between academics and the market; respect for innovation. These themes were a product of the responses to questions about the general procedures of Pakistani higher educational institutions compared to their host universities overseas. Previous research findings support the responses of these participants.

The first theme highlighted the necessity of rewriting Pakistan's university curricula. Courses developed to examine the real issues in society should develop a curriculum that is in line with market development. Students can contribute to the country's economic prosperity significantly in this regard (Barrett et al., 2015; Raza & Naqvi, 2011). Although teachers in Pakistani higher education institutions praise the current syllabus, they are interested in reforming the curriculum to align it with current educational requirements and market trends. There are several problems with the existing curriculum in Pakistan (Ali & Baig, 2012; Mahmood, 2010). Officials recognize these drawbacks and are eager to adapt them to better meet modern needs. Some private and semi-government universities are considering collaborating with overseas universities to establish curricula. Public institutions however are urged to take measures that are more concrete in this direction. Currently, available research confirms that increasing sustainability awareness in higher education is essential for the achievement of sustainable development goals (Sady et al., 2019). Organizations hire individuals with little skill as well as unauthorized degrees creating an upheaval in the system (Khan & Khan, 2018a). Pakistani authorities have already raised concerns about degree verification. As a result, universities must restructure and redesign their mission, policies, instruction, and curriculum to reflect this new information (Malik et al., 2019). It is impossible to attain sustainable development goals through education if sustainability is not part of the curriculum. Students will not be able to learn technical, economic, social, or environmental skills, nor will they be able to identify solutions (Ali & Baig, 2012; Irby et al., 2015; Kalsoom & Qureshi, 2019). This necessitates collaboration between the government and policymakers of the country. If the redundancy of the curriculum persists, Pakistani graduates and degree holders may experience increased employment difficulties.

According to this study's, second theme, educational institutions bear a significant amount of responsibility for helping to identify answers to global problems under the Sustainable Development Goals. It is hence necessary to research and disseminate findings to society in accordance with the norms and regulations to benefit the masses. This methodology will be valuable to students as it exposes them to concrete problems while receiving intellectual stimulation from colleges and universities. Educators must emphasize active and collaborative learning, challenging students intellectually as well as signifying the development of higher-order life skills. This enables students to succeed in both personal and professional endeavors in the future (Sayed & Ahmed, 2015). For a contented student population and prosperous economic growth, the implementation of the aforementioned teaching approaches is necessary for higher education institutions.

The third theme highlighted that the positive and professional actions of teachers were critical in assisting students to contribute to the attainment of sustainable development goals through the educational system (Malik et al., 2019; Michael, 2008). The study's findings indicated that Pakistani universities' pedagogical culture and instructional procedures require reform (Ali et al., 2009). Additionally, instructors' qualifications, teaching abilities and tactics, effective communication, subject quality, curriculum, and collaboration between theory and practice all contribute to the quality of teaching. Hence, educational institutions must not only train teachers in new teaching aids and novel teaching methods, but also introduce problem-based, active, and inactive teaching strategies (Reid & Johnston, 2010). The diverse

stakeholders, including students, professors, educational institutions, and market representatives are urged to collaboratively work together to solve matters. The current study corroborates previous research indicating that teaching and learning are the primary drivers of HESD. Universities rely on highly qualified, knowledgeable, and efficient faculty to enhance their performance by conducting research and delivering education on a national level, implementing its agenda, and increasing the university's global ranking. Holistically, the practices of the Pakistani educational system need to be ameliorated (Jumani & Abbasi, 2015; Kalsoom & Qureshi, 2019; Khan & Khan, 2018b).

The fourth theme emphasized the necessity of promoting Pakistani higher educational institutions' indigenous research and innovation (Michael, 2008). Discussions focused on fostering indigenous research and development. The progression of educational institutions and the stability of the economy necessitate the introduction of collaboration, cooperation, and partnership between educational institutions, local markets, and industry (Lee, 2014; Sady et al., 2019). Various types of research activities may be carried out because of this collaboration. Participants in this research believed that a lack of an indigenous research culture prevents students from becoming aware of contemporary concerns and their solutions. As a result, they experience drawbacks when seeking employment in the competitive market. Students must hence be encouraged to conduct research as part of the Strategic Action Plan (Hussain et al., 2019). It is also necessary to facilitate national and worldwide research possibilities through collaboration and cooperation in academia (Malik et al., 2019). According to the findings of this study, faculty members working at Pakistani universities stressed the importance of research and promoted a research culture at their respective institutions and in the curricula. To achieve sustainable development goals, address the dearth of knowledge, and alleviate poverty, local and indigenous knowledge can work in tandem with science to make a significant impact (Ambros & Biberhofer, 2018).

The necessity to link academic and market developments is also emphasized in the fifth theme (Appe & Barragán, 2017). Research purports that universities have been introducing new curricula and research cultures, as well as promoting studies that benefit society in terms of both social and economic progress. Basic and applied research-based intellectual capital is as critical to the long-term sustainability of higher education institutions as primary and human capital are to the growth of society. Unfortunately, the vast majority of research is conducted not to address societal issues, but to advance one's career, gain status in the hierarchy, or generate money (Aleixo et al., 2018). Teachers must be encouraged to engage in research for the betterment of society than for personal gains. For undergraduate and postgraduate students, research culture can undoubtedly act as an incubator (Calafell et al., 2019; Hussain et al., 2019). Students who are involved in practical research under the guidance of academics and a research culture can contribute to the growth of the institution and play a significant role in the national economy. Likewise, current literature underscores a need to establish a cogent link between the culture of universities, academic practices, and achieving sustainability targets (Hussain et al., 2019; Lee, 2014).

Achievement of sustainable development goals in Pakistan is the end goal for effective internationalization in educational institutions. It is imperative to identify the national obstacles to achieving these goals. The current study highlighted themes signifying fundamental areas where the education system of Pakistan in higher learning institutions needs improvement. To uplift the education system in line with the agenda of sustainable development, faculty, curriculum, and research expertise are the three principal areas where policymakers must focus. Universities are urged to implement a course of study that focuses on solving real societal problems. Undergraduate and graduate students should be urged to research as part of their coursework. Students who have an undergraduate background with research variants are more likely to pursue graduate-level research subjects. To create harmony between the educational and economic sectors, the implementation of up-to-date employee

recruiting with modern instructional approaches and procedures is recommended. Fresh Pakistani faculty members who have studied in universities in rich countries, and who are regarded as forerunners of the indigenous knowledge fund, can help make this change far more effective and efficient. Conclusively, the internationalization of Pakistani universities can only be achieved with sustainable solutions by incorporating comprehensive reforms in the education system.

Data Availability Statement

The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

References

- Abbasi, K. (2018, 20 february). 428 HEC scholars sent abroad are absconding, Senate body told. DAWN. <https://www.dawn.com/news/1390562>
- Akhter, N. (2013). An investigation of Pakistani university teacher-educators' and student-teachers' perceptions of the role and importance of inquiry-based pedagogy in their professional learning experiences in initial teacher education University of Glasgow. <http://theses.gla.ac.uk/4383/1/2013Akhterphd.pdf>
- Alandejani, J. (2013a). Coming home after studying abroad: How Saudi female scholars re-adapt, re-adjust, and transfer their knowledge Colorado State University. Libraries.
- Alandejani, J. (2013b). Coming home after studying abroad: How Saudi female scholars re-adapt, re-adjust, and transfer their knowledge. 2000-2019-CSU Theses and Dissertations.
- Aleixo, A. M., Leal, S., & Azeiteiro, U. M. (2018). Conceptualization of sustainable higher education institutions, roles, barriers, and challenges for sustainability: An exploratory study in Portugal. *Journal of Cleaner Production*, 172, 1664-1673. <https://doi.org/10.1016/j.jclepro.2016.11.010>
- Alghamdi, N., den Heijer, A., & de Jonge, H. (2017). Assessment tools' indicators for sustainability in universities: An analytical overview. *International Journal of Sustainability in Higher Education*.
- Ali, A., Tariq, R. H., & Topping, J. (2009). Students' perception of university teaching behaviours. *Teaching in Higher Education*, 14(6), 631-647.
- Ali, A., Tariq, R. H., & Topping, K. J. (2013). Perspectives of academic activities in universities in Pakistan. *Journal of Further and Higher Education*, 37(3), 321-348.
- Ali, S. K., & Baig, L. A. (2012). Problems and issues in implementing innovative curriculum in the developing countries: the Pakistani experience. *BMC medical education*, 12(1), 1-8.
- Allwood, C. M., & Berry, J. W. (2006). Origins and development of indigenous psychologies: An international analysis. *International Journal of psychology*, 41(4), 243-268.
- Ambros, M., & Biberhofer, P. (2018). Fostering Higher Education for Sustainability-Driven Entrepreneurship: The CASE Knowledge Platform. *GAIA - Ecological Perspectives for Science and Society*, 27(1), 185-187. <https://doi.org/10.14512/gaia.27.1.18>
- Appe, S., & Barragán, D. (2017). Universities, NGOs, and civil society sustainability: preliminary lessons from Ecuador. *Development in Practice*, 27(4), 472-486. <https://doi.org/10.1080/09614524.2017.1303035>
- Barrett, A., Sayed, Y., Schweisfurth, M., & Tikly, L. (2015). Learning, pedagogy and the post-2015 education and development agenda.
- Bashir, A., Brinkman, D., Biemans, H., & Khalid, R. (2019). A Qualitative Exploration of Educational Experiences of Pakistani Students at Dutch Universities. *Pakistan Journal of Social and Clinical Psychology*, 17(2), 3-11.
- Baytiyeh, H. (2017). Has the educational system in Lebanon contributed to the growing sectarian



- divisions? *Education and Urban Society*, 49(5), 546-559.
- Bengtsson, M. (2016). How to plan and perform a qualitative study using content analysis. *NursingPlus Open*, 2, 8-14.
- Boström, M., Andersson, E., Berg, M., Gustafsson, K., Gustavsson, E., Hysing, E., Olsson, J. (2018). Conditions for transformative learning for sustainable development: A theoretical review and approach. *Sustainability*, 10(12), 4479.
- Brandenburg, U., De Wit, H., Jones, E., & Leask, B. (2019). Internationalisation in higher education for society. *University World News*, 20.
- Calafell, G., Banqué, N., & Viciano, S. (2019). Purchase and Use of New Technologies among Young People: Guidelines for Sustainable Consumption Education. *Sustainability*, 11(6), 1541. <https://www.mdpi.com/2071-1050/11/6/1541>
- Campbell, A. C., & Neff, E. (2020). A systematic review of international higher education scholarships for students from the global south. *Review of Educational Research*, 90(6), 824-861.
- Christie, M., Carey, M., Robertson, A., & Grainger, P. (2015). Putting transformative learning theory into practice. *Australian journal of adult learning*, 55(1), 9-30.
- Fry, G. W. (1984). The Economic and Political Impact of Study Abroad. *Comparative Education Review*, 28(2), 203-220. <http://www.jstor.org/stable/1187348>
- Gujjar, A. A., Naoreen, B., Saifi, S., & Bajwa, M. J. (2010). Teaching Practice: Problems and Issues in Pakistan. *International Online Journal of Educational Sciences*, 2(2).
- Habib, M. N., Khalil, U., Khan, Z., & Zahid, M. (2021). Sustainability in higher education: what is happening in Pakistan? *International Journal of Sustainability in Higher Education*.
- Hussain, T., Eskildsen, J., Edgeman, R., Ismail, M., Shoukry, A. M., & Gani, S. (2019). Imperatives of sustainable university excellence: A conceptual framework. *Sustainability*, 11(19), 5242.
- Irby, D. M., O'sullivan, P. S., & Steinert, Y. (2015). Is it time to recognize excellence in faculty development programs? *Medical Teacher*, 37(8), 705-706. <https://doi.org/10.3109/0142159X.2015.1044954>
- Jumani, N. B., & Abbasi, F. (2015). Teacher education for sustainability in Pakistan. *Journal on Innovation and Sustainability RISUS*, 6(1), 13-19.
- Kalisman, H. F. (2015). Bursary scholars at the American University of Beirut: Living and practising Arab unity. *British Journal of Middle Eastern Studies*, 42(4), 599-617.
- Kalsoom, Q., & Qureshi, N. (2019). Teacher education for sustainable development in Pakistan: content analysis of teacher education curriculum and standards. Available at SSRN 3388457.
- Kayani, A. S. & Ali. (2015). International Students Mobility: A Case of Pakistan.
- Khan, M. A., Khurshid, M. A., Malik, N. A., & Hameed, S. (2017). A Study of Narrative Teaching in Pakistani Universities in the Backdrop of Critical Pedagogy. *Bulletin of Education and Research*, 39(1).
- Khan, S., & Khan, A. M. (2018a). A Phenomenological Study of Education for Sustainable Development in Higher Education of Pakistan. *Pakistan Journal of Education*, 35(2).
- Khan, S., & Khan, A. M. (2018b). A Phenomenological Study of Education for Sustainable Development in Higher Education of Pakistan. *Pakistan Journal of Education*, 35(2), 117-136.
- Khushik, F., & Diemer, A. (2018). Critical Analysis of Education Policies in Pakistan: A Sustainable Development Perspective. *Social Science Learning Education Journal*, 3(09), 01-16.
- Lange, E. (2012). Transforming transformative learning through sustainability and the new science. The handbook of transformative learning: *Theory, research, and practice*, 195-211.
- Lee, K.-J. (2014). Development of boundary-spanning organisations in Japanese universities for different types of university-industry collaborations: a resource dependence perspective. *Asian Journal of Technology Innovation*, 22(2), 204-218.
- Lee, K., & Brett, C. (2015). Dialogic understanding of teachers' online transformative learning: A qualitative case study of teacher discussions in a graduate-level online course. *Teaching and Teacher Education*, 46, 72-83.

- Mahmood, K. (2010). Textbook evaluation in Pakistan: Issue of conformity to the national curriculum guidelines. *Bulletin of Education and Research*, 32(1).
- Malik, M. N., Khan, H. H., Chofreh, A. G., Goni, F. A., Klemeš, J. J., & Alotaibi, Y. (2019). Investigating Students' Sustainability Awareness and the Curriculum of Technology Education in Pakistan. *Sustainability*, 11(9), 2651.
- Mawere, M. (2015). Indigenous Knowledge and Public Education in Sub-Saharan Africa. *Africa Spectrum*, 50(2), 57-71. <https://doi.org/10.1177/000203971505000203>
- Mezirow, J. (2000). Learning as Transformation: Critical Perspectives on a Theory in Progress. The Jossey-Bass Higher and Adult Education Series. ERIC.
- Michael, S. (2008). The Role of Universities in Sustainable Development with Special Focus on Pakistan.
- Nohl, A.-M. (2015). Typical phases of transformative learning: A practice-based model. *Adult Education Quarterly*, 65(1), 35-49.
- Orîndaru, A. (2015). Changing perspectives on students in higher education. *Procedia Economics and Finance*, 27, 682-691.
- Parveen, A., Rashid, K., Iqbal, M. Z., & Khan, S. (2011). System and Reforms of Higher Education in Pakistan. *International Journal of Business and Social Science*, 2(20).
- Patton, M. Q. (2014). Qualitative research & evaluation methods: Integrating theory and practice. Sage publications.
- Perna, L. W., Orosz, K., & Jumakulov, Z. (2015). Understanding the human capital benefits of a government-funded international scholarship program: An exploration of Kazakhstan's Bolashak program. *International Journal of Educational Development*, 40, 85-97.
- Raza, S. A., & Naqvi, S. (2011). Quality of Pakistani university graduates as perceived by employers: Implications for faculty development. *Journal of Quality and Technology Management*, 7(1), 57-72.
- Reid, D. J., & Johnston, M. (2010). Improving Teaching in Higher Education: Student and teacher perspectives. *Educational Studies*, 25(3), 269-281. <https://doi.org/10.1080/03055699997792>
- Sady, M., Źak, A., & Rzepka, K. (2019). the role of universities in sustainability-oriented competencies development: insights from an empirical study on Polish universities. *Administrative Sciences*, 9(3), 62.
- Sayed, Y., & Ahmed, R. (2015). Education quality, and teaching and learning in the post-2015 education agenda. *International Journal of Educational Development*, 40, 330-338.
- Senanayake, S. (2006). Indigenous knowledge as a key to sustainable development. *Journal of Agricultural Sciences-Sri Lanka*, 2(1).
- Simsek, A. (2012). Transformational Learning. In N. M. Seel (Ed.), *Encyclopedia of the Sciences of Learning* (pp. 3341-3344). Springer US. https://doi.org/10.1007/978-1-4419-1428-6_373
- Tamas, A. (2014). Advantages of study abroad from the students' perspective. *International Journal of Teaching and Education*, 2(4), 67-88.
- Teichler, U. (2009). Internationalisation of higher education: European experiences. *Asia Pacific education review*, 10(1), 93-106.
- Tisdell, C. (2009). Economic reform and openness in China: China's development policies in the last 30 years. *Economic Analysis and Policy*, 39(2), 271-294.
- Ullah, R., Richardson, J. T., & Hafeez, M. (2011). Approaches to studying and perceptions of the academic environment among university students in Pakistan. *Compare*, 41(1), 113-127.
- Zahid, M., Ghazali, Z., & Rahman, H. U. (2018). Sustainable education: a buzzword of Universiti Teknologi PETRONAS, Malaysia. In Sustainable Development: Concepts, Methodologies, Tools, and Applications (pp. 843-867). IGI Global.
- Zahid, M., Rahman, H. U., Ali, W., Habib, M. N., & Shad, F. (2020). Integration, implementation and reporting outlooks of sustainability in higher education institutions (HEIs): Index and case base

validation. *International Journal of Sustainability in Higher Education*, 22(1), 120-137.
Zakaria, M., Janjua, S. Y., & Fida, B. A. (2016). Internationalization of higher education: Trends and policies in Pakistan. *Bulletin of Education and Research*, 38(1).