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Tech Talent for a Greener Future: The Impact of Green HRM and SDG 13 Commitment on Eco-Literate IT Graduates and IT Organizational Performance in Pakistan

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Abstract: Environmentalism is of increasing interest worldwide and the business stakeholders are demanding increased environmental responsibility from industries. Consequently, it is becoming a trend in industries to shift to green organizations from the traditional operations models, which is in line with the UN's target 13.3 of SDG 13. The questions are whether the universities are playing their due role in helping to achieve target 13.3 'building knowledge and capacity to meet climate change' and also, are the green-sensitized graduates contributing to the prosperity of organizations when the companies hire them. The level of environmental awareness among the masses in Pakistan and industrial performance are less explored subjects, despite, universities working to support SDGs through curriculum and creating their environment green. Hence, this research is to find such initiatives of the universities and their impacts on sub-goal 13.3 in Pakistan and to find whether the graduates learned the concepts of green from the environment-sensitized faculty moderated by the universities' green environment. Further, whether the organizations are benefitting from such graduates. With the positivist approach, SEM has been used for testing five hypotheses based on the responses from 210 IT units using a convenience sampling technique. Results of this study reveal that there is a direct association between the curricula, including the environmental concepts, and the faculty members' awareness of environmental issues, which positively influences the environmental concerns of their students. A green university environment strengthens the influence of eco-aware faculty and graduates, ultimately contributing to organizational success and prosperity.

Keywords: Green HRM, SDGs, Organizational Prosperity, IT Industry, Pakistan

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Introduction

The driving force of this research is the report of WHO which highlights that nine out of ten individuals on earth breathe toxic air and seven out of ten drink contaminated water (World Health Organization, 2018). Further, UNEP (2021) noted, "In 2019, 99% of the world population was living in places where the WHO's strictest 2021 air quality guideline levels were not met" (p. 1), which became reinforcement for the investigation of the issue. In 2023, the situation remains largely unchanged. To overcome this issue, several initiatives, such as environmental protection acts and contracts, have been signed to reduce pollution (land, water, and air) under the public policy by the states at the individual level. The world community has already begun to find alternatives to protect the earth after realizing the need for environmental sustainability through the 2030 Agenda of the United Nations under SDG 13 in 2015. In this

reference, SDG 13 seeks urgent action to combat climate change and its impact on the nations, specifically, under its five targets. This paper investigates the contributions of Pakistani universities to environmental promotional activities by producing environmentally sensitized graduates and their contributions to organizational prosperity in light of SDG target 13.3.

Like other developing countries, Pakistan has been facing the threat of climate change at a dangerous level for the last two decades. The country has faced many floods since 2010 and has continued in recent years. Last summer, the megacity of Karachi faced a severe heat wave, which was the highest in recent history, and the MET department declared it 'extraordinary'.

In the country, forests have been decreasing during the last three decades, as the present forest area in Pakistan is 2.1% which was 4.2% in 1980. From 2001 to 2022, Pakistan lost 9.80 kha of tree cover, equivalent to a 1.0% decrease in tree cover since 2000, and 3.62 Mt of CO_2 emissions (Global Forest Watch, 2023). Water pollution is causing serious diseases in the public, especially in towns and villages. Air pollution is touching the highest dangerous levels according to international scales due to industrial and auto vehicle emissions (NIH-NLM, 2022). The traditional practices of industrial operation in the last many years have only contributed to carbon emissions and increased environmental degradations (Haq et al., 2022). In a nutshell, unchecked industrial output, deforestation, and waste disposal are being traced as major causes of climate change in Pakistan.

Climate change is happening more quickly than expected because carbon dioxide levels are rising globally, particularly, the situation in Pakistan is grim (Rahman et al., 2022). Therefore, there is a need to develop green human resources (GHRM) which can turn the table in the gradation of the environment through knowledgeable human resources in the country. But the question is whether the college and university graduates are groomed with the necessary education, skills, and training, in Pakistan, and can become knowledgeable human resources capable of executing the concept of environmental gradation demanded by the sub-goal 13.3 of SDGs.

The problem being investigated through this research is that the interest in environmentalism has grown worldwide and the stakeholders, as customers, communities, and employees, have been demanding greater environmental responsibility from industries (Hameed et al., 2020). Consequently, a wide trend in business organizations is observed for the shift into green models from the traditional models via the implementation of green initiatives and management in various operations (Wagner, 2011). Though literature validates a connection between GHRM and the industries' performance internationally, there are obvious gaps in Pakistani companies as researchers found the fact that the level of environmental awareness among the masses in Pakistan is generally low (Sultan et al., 2016). These not-up-to-mark considerations of the importance of the ecological system in Pakistan are also reflected in business organizations' outlook. In the above backdrop, the broader objective of this research is to find the status of sub-goal 13.3 of SDG 13 in Pakistan. Hence, there is a need to have a scientific inquiry into the curriculum being taught by the universities, teachers' level of environmental sensitization, and universities' green outlook in Pakistan.

Research Objective
Accordingly, the broad objective has been further specified as follows:
   a. To find the effects of knowledge, skills, and positive attitudes being imparted to the university graduates on Green Management in producing university graduates
   b. To find the effects of green-sensitized faculty on university graduates
   c. To find the effects of sensitized university graduates on companies' prosperity

To achieve the above specific objectives, the question raised for this research is whether the universities in Pakistan have green management concepts in their curriculum, have green-sensitized teachers, have a green environment at the university, and also are IT-related companies in Pakistan hiring university graduates to achieve prosperity for organizations?

This article further proceeds with a literature review, conceptual framework, variable identification, methodology, interpretation of results, discussion, and conclusion in proceeding sections and sub-sections.

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Literature Review

Generally, the term "Green Management" refers to a green organization that is environment-friendly well-organized in terms of resources, and socially responsible (Loknath & Azeem, 2017). The concept of green management for sustainable growth has several meanings in environmental writing; all of which generally assist in determining its need for balance between organizational growth and natural environment conservation so that future making may be achieved (Zhou et al., 2019). Green management is described as the process by which organizations manage the environment through the promotion of green management strategies (Lee, 2020a.). Earlier, companies and their shareholders assessed the economic performance of the business to ensure corporate success. As a result, the new strategic challenge of corporate ecology or green management emerged in the 1990s and became an internationally recognized phrase in the 2000s (Lee, 2020b.). This idea has evolved into a strategic core issue for businesses, namely multinational enterprises functioning on a global scale.

Green Human Resource Management (GHRM) is a functional area of Green Management that has been defined by Bombiak and Marciniuk-Kluska (2018) as a modern approach to HR functions to incorporate environmental goals in all HRM activities. It refers to strategies, procedures, and processes that make workers of the company green for the benefit of individuals, the community, the physical environment, and workplaces. Typical going green includes video recruitment or using video and online interviewing to reduce travel needs. Green rewards may include the use of career and lifestyle perks, such as carbon credit compensation and free bicycles, to get participants involved in the green initiative and to identify their commitment. Furthermore, Wagner (2013) stated that investment in social activities such as GHRM practices within organizations leads to increased employee retention, customer loyalty, creativity, and staff recruitment, which altogether leads to environmental success. Longoni et al., (2018) have stated that GHRM uses human capital to develop innovative processes to achieve environmental goals. Such activities further reduce incidents, maintain quality development and advancements in recycling efficiency, strengthen stakeholder perceptions, reduce waste, and ensure cost savings.

Nowadays, companies realize the need to have a stronger grip on social, economic, and accountability for green sense to create a brand image and to have all the necessary resources for it. To develop a sustainable business, the organization and its human resources personnel should develop effective methods, learn how to carry out the process in a limited period, allocate monetary resources should be efficient and innovative, and unnecessary travel and overtime spent in the office should be avoided.

Organizations that encourage green management such as less paperwork, innovative use of energy, and companies with flexible operating hours, need employees who have knowledge, skills, and positive attitudes towards environmentally sustainable matters; therefore, organizations should recruit employees accordingly. To implement green activities, specific goals should be set for enhancing environmental sustainability such as green management, reporting green performance assessments, environmental procurement guidelines, green knowledge sharing programs, and accurate policies are required to reduce the use of fossil fuels and other unsustainable goods (Anwar et al., 2020).

Research related to sustainability and GHRM is limited and has mixed results. For example, Masri and Jaaron (2017) investigated the link between manufacturing firms and GHRM, where sustainability is used as a context for emerging nations. In his research, he established six green HR practices: Green recruitment and selection, Green training and development, green performance evolution, green reward management, green health and safety, and green employee relationship. These practices have an impact and positive link with green management and sustainability in organizations. Conversely, the findings of Yong et al. (2020) in the Malaysian perspective state that green organizational capital is not related to green HRM. Other researchers confess the significance of future studies in exploring or investigating this relationship between organizational sustainability and the community as a whole. Green HRM practices establish an essential modification in the manufacturing industry.

According to Ahmed et al. (2019), natural resources have limitations; therefore, environmental sustainability includes the assurance of the allocation of scarce natural resources. It means that environmental resources are used in such a way that nations may sustain themselves perpetually. It is one of the three key pillars of long-term growth.

Yong, et al., (2020) further argue that natural capital should be placed in such a way that the depletion of non-renewable resources is supplemented by the creation of renewable alternative resources. Similarly, the rate of depletion of a renewable resource should not be greater than the rate of renewal. Moreover, human waste creation should not surpass the ecosystem's carrying capacity. For environmental sustainability, the availability of natural capital stocks is significant. The environmental impact of human activities is reduced in natural capital or environmental degradation. The use of environment-friendly technologies, improved implementation of organizational resources and environmental preservation may minimize the human impacts (Tien et al., 2019). Thus, technological changes (TC) and green-sensitized human resources can manage resources efficiently. This efficient resource management has a beneficial impact on the NCS, as it reduces the environmental impact of human activities.

According to Luukkanen et al. (2019), economic sustainability refers to an economy's capacity to maintain a specific level of gross domestic production (or capital stock) over a considerable duration of time. In other words, economic development is about the rise in the income level of employees. Economic sustainability depends upon the significant change in capital stock. Dynamics that affect economic development include foreign direct investment macroeconomic policy and investment level. Investment in technology diffusion and investment in research and development are also important aspects of economic growth. Technology diffusion escalates total factor productivity. Economic prosperity is equally good for the developing as well as the developed nations. However, developing/emerging economies invest very little in R&D, but gain benefits from the developed countries' economic consequences. Furthermore, they are significant economic development factors this is why, Pakistani companies have been taken into account for comprehensive analysis.

The field of environmental education is broad and rapidly expanding globally. The framework of environmental education is broad because it encompasses major science subjects. Since the 1960s, the goal of environmental education has frequently been to create more informed, driven, and engaged citizens (Stapp, 1969). Since 1960, scientists have been working to advance environmental science. For the past 50 years, a few global nongovernmental organizations have been working to ensure environmental sustainability. In order to spread the ideas of conservation and preservation throughout the world, the United Nations Environmental Education Program (UNEEP) has a comprehensive charter.

Despite the efforts being undertaken by the individual states, the United Nations, and the different forums at the international level for environmental protection, more resources (material and intellectual) need to be channelled to counter environmental degradation. Pakistan is no exception in this context.

Since this kind of education can also be promoted to the college and university level, where they can also participate in better initiatives, the Pakistani government should place a high priority on the environment and take initiatives like the "Green Schools Programme" seriously. This way, a proper system of higher environmental education can be introduced and maintained in the nation (Finnigan, 2019).

This is required because environmental degradation has become a threat to Pakistan's economy as well as public health. According to the United Nations Food and Agriculture Organization's (FAO) 2007 "State of Forest Report," for example, Pakistan's annual deforestation has skyrocketed to 41,000 hectares, causing economic losses through increased illegal timber smuggling in areas like Gilgit Baltistan, where the timber mafia problem has caused excessive illegal tree cutting and frequent floods in the province. Recent examples of this were the series of floods from 2010 to 2023 where people lost their lives and properties due to floods caused by the rapid melting of glaciers and the absence of trees to protect the region.

These kinds of disasters can be less frequent and cause less damage if the Pakistani government first makes sure that the country's forest laws are appropriately enforced at the federal and provincial levels. According to some Pakistani news reports, the mafia is able to cut down trees through the cooperation of forest department officials and locals, who do nothing to stop the mafia from doing so. This is made possible by the shadowy network of politically connected people and businesses.

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Since Pakistan already lags behind other developing nations in literacy, it also lags behind in teaching contemporary solutions to environmental problems, like the value of recycling domestically, the sustainable use of agricultural land, and the significance of clean and drinkable water (Finnigan, 2019). The government must reform the education curriculum at the state level and include a comprehensive proportion of the environment in it, so that the works and initiatives like the 'Green Schools Programme' do not go in vain, rather they could be used as an inspiration to promote the Green Education and can also help Pakistan towards achieving the SDG 13. Despite the early education in Pakistan having missed out on the children's sensitization to environmental protection, still, the youth bulge can still be educated with the knowledge and skills for green practices at the bachelor's and master's levels by the green-sensitized teachers in the green environment. There is a need to insert environmental upgrade-related subjects in the curriculum as cross-cutting themes, green-sensitive teachers and greenery in educational institutions.

Conceptual Framework and Variable Identification

Based on the above literature review, this research has been conceptualized in Figure 1.

Figure 1

Conceptual Framework & Variables
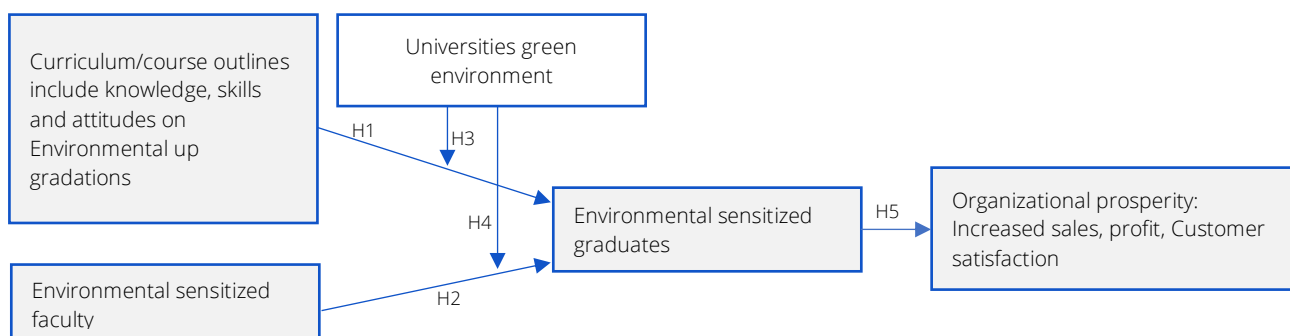
Hypothesis Formulation

Hence, in light of the above, the five hypotheses are formulated, for testing and finding the truth, as below.

Green Course Outlines and Environmentally Sensitized-Graduates

Environmental goals are becoming a part of the curriculum, with either environmental courses or sustainability as a major. Coy et al., (2013) noted that when sustainability is incorporated into students' curriculum, green intention intensifies because students acquire knowledge and skills in managing environmental sustainability issues.

The assumption that the integration of environmental education, in educational institutions produces environmentally sensitized graduates, has been widely endorsed. Ardoin et al. (2018) and Kosta et al. (2022) found in their separate studies that the incorporation of environmental concerns into course modules is very effective in contributing to student knowledge and perception of the environment. Further, it is a common observation that the Green sensitized individuals develop a deeper understanding of environmental issues and have the skills to make informed and responsible decisions. Erhabor and Don, (2016) found that the topics covering environmental up-gradation at the university level help in building the natural world and give knowledge and methods to solve complex environmental issues. Further Jhariya et al. (2021) observed environmental education is a process that allows individuals to explore environmental issues, engage in problem-solving, and take action to improve the echo system. Hence, we hypothesize as below.

H1: Course outlines that include green-related topics help produce environmentally Sensitized-graduates

Environmentally Sensitized Faculty and Environmentally Sensitized Graduates

It is a common phenomenon that a teacher pro to certain ideologies will be influencing the students with the same thought. Hence, researchers like Ardoin et al. (2018) and AlKetbi and Rice, (2024) are of the view that the role of faculty

in environmental affairs has a deep effect on students, as the faculty members become involved with environmental concerns leads students to take action for environmental up-gradation. Ardoin et al. (2018, 2020) and Kosta et al., (2022) found that the green sensitized teachers as mentors and role models transfer an environmental ethos from teachers to students. Students mentored by environmentally conscious faculty perform more in line concerning sustainability tasks and green action. Further Finnerty (2024) observed that the level of engagement in environmental activism and the supervised actions can affect the level of a student's commitment toward sustainable development. Hence, we hypothesize as below.

H2: Environmental-sensitized faculty help produce environmentally sensitized graduates

Green Campus Moderates Curriculum and Environment Sensitization of Graduates

The influence of the environment on its habitats is a common phenomenon, hence, the university campuses' influence on the students is no exception. It is acknowledged that university graduates who spend time in a green environment will be green-sensitized and will be able to be comfortable in the green management team at the workplace. Elegbede et al. (2023) found true the same phenomenon that green university campuses affect students' intentions towards environmental conservation.

Khalili et al. (2015) and Wang, (2024) found that the students enrolled at institutions with green campuses exhibited a greater amount of environmental knowledge to students preparing them for managing waste effectively at the workplace. Research published in Environmental Education Research indicated that sustainable campus infrastructures enhance the effectiveness of environmental education by providing practical that campus green initiatives stimulated students' interest in environmental studies in more significant ways, as well as, the curricular effect in a more intense manner Sharp (2002). Hence, we hypothesize as below.

H3: The green environment of the university/campus has moderating effects on the curriculum taught for producing environmentally sensitized graduates.

Green Campus, Green-Sensitized Faculty, and Environmentally Sensitized Graduates

This a common assumption that the green campus inspires the green-sensitized faculty to inculcate sensitivity amongst students towards green practices. The same assumptions have been tested by the researchers and found if there is provision for environment conservation-related structures within the HEIs, the students are likely to have their intentions blend well with their organizations' sustainable development plans (Sousa & de Bem Machado, 2022). In this reference, Zahrani, (2024) investigated the synergy between faculty and campus environment and found that the effects of environmentally conscious faculty on students' environmental behaviours can be heightened by the presence of a green campus. Also, AlKetbi and Rice (2024) observed that the Faculty members working towards sustainability are most effective in their efforts with the assistance of university green spaces. The relevance of faculty and campus context, on the development of environmental consciousness for the students, has also been established. According to a recent article in the International Journal of Environmental Research and Public Health, the implementation of environmental education in the students' school setting can be achieved by faculty and campus resources, if the former and latter supports sustainability (Wu et al., 2022; Zahrani, 2024). Chen (2024) posited that by possessing sustainable infrastructure including buildings, renewable energy, environmentally friendly transport systems, and recycling facilities the HEIs demonstrate a clear commitment towards environmental sustainability. Hence, we hypothesize that:

H4: The Green environment of the university/campus has moderating effects green sensitized faculty by producing environmentally sensitized graduates.

Environmentally Sensitized Graduates and Organizational Prosperity

The common relationship that the environmentally sensitized graduates employed contribute to organizational prosperity has been tested by the researchers. For example, Merlin and Chen (2022) investigated employee environmental behaviour and firms' performance. They found that employees with strong environmental values

contribute to improved organizational performance through sustainable practices. More recently, some studies in Frontiers in Environmental Science have addressed the redeeming value of green HRM towards the attractiveness of the organization and that environmentally conscious graduates are a good asset for the organization (Merlin & Chen, 2022). Further, AlKetbi and Rice (2024) observed that the companies that take up recruiting environmentally aware graduates attain not only better environmental performance and competitive edge but also generate innovation and efficiency in organizations, which ultimately increases profitability. Such green-sensitized graduates, taught by the green-sensitized faculty, if employed, contribute to the economic performance of organizations (Malik et al., 2022; Malik et al., 2021). Hence, we hypothesize as below:

H5: Environmentally sensitized graduates if employed help in achieving organizational prosperity.

Methodology

This study is deductive and has a positivist approach. This approach has been operationalized by hypothesis development and testing based on the data collected through a questionnaire having a five-point Likert Scale. Non-probability sampling method for data collection has been applied, more particularly convenience sampling has been used. The sample size of this study is 210 IT units operating in Pakistan for the last 10 years. The collected data has been processed through SEM, more particularly, a correlation test along with regression analysis have been performed to find the result of this study.

Results

Based on the data analysis through SEM, the Measurement Model given in Figure 2 and the Structural Model in Figure 3 are given subsequently. Table wise, descriptive statistics, convergent validity, discriminate validities, R2 value, hypotheses results, and moderating effects results have been presented subsequently.
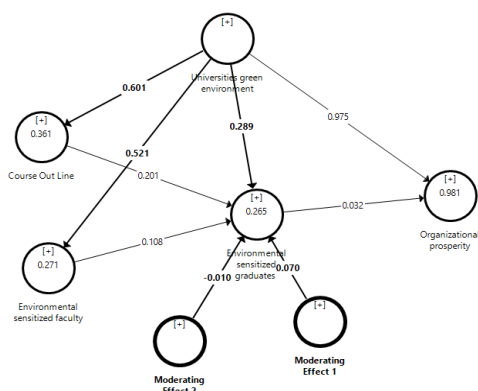
Figure 2
Measurement Model
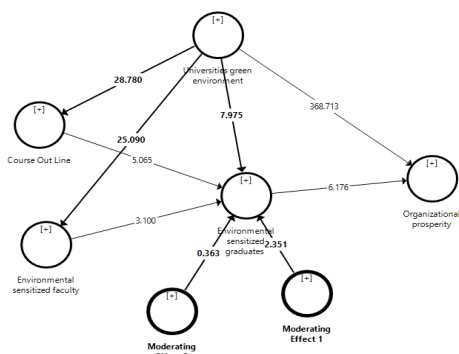

Figure 3
Structural Model

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Table 1

Descriptive Statistics

	Cronbach'Alpha	Mean	SD.	Skewness	Kurtosis
Course Outline	0.896	4.300	1.628	2.237	1.882
Environmental Sensitized Faculty	0.848	4.183	1.833	1.585	1.346
Environmental Sensitized Grad	0.824	3.402	1.509	1.042	2.026
Organizational Prosperity	0.863	3.488	1.764	1.577	2.161
Universities Green Environment	0.871	4.266	1.900	2.032	0.973

The descriptive analysis is presented in Table 1, the results of the descriptive analysis show mean, standard deviation, skewness and kurtosis.

The results show the skewness and kurtosis values ranged between + 3.50, suggesting the constructs have univariate normality. "Cronbach's values are larger than 0.70, proposing the construct has an acceptable range of internal consistency".

Table 2

Convergent Validity

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Course Outline	0.896	0.899	0.928	0.763
Environmental sensitized faculty	0.848	0.853	0.908	0.768
Environmental sensitized graduates	0.824	0.824	0.919	0.85
Organizational prosperity__	0.863	0.881	0.902	0.649
Universities green environment	0.871	0.873	0.912	0.722

Convergent Validity calculated the relationship between indicator and latent variables. The results have been summarized in Table 2.

The result shows that all the composite reliability values are greater than 0.70 and AVE values are bigger than 0.60, signifying the constructs do not deviate from the requirements of convergent validity. The results recommended that the constructs used in this research are unique and distinct since all AVE square root values are greater than Pearson correlation values.

Table 3

Discriminant Validity (Fornell & Larker, 1981)

	COL	ESF	ESG	OP	UGE
Course Outline	0.874				
Environmental sensitized faculty	0.505	0.876			
Environmental sensitized graduates	0.429	0.371	0.922		
Organizational prosperity	0.632	0.63	0.484	0.806	
Universities green environment	0.601	0.521	0.463	0.804	0.849

Discriminant validity according to (Fornell & Larker, 1981) criteria for assessing the discriminant validity. Discriminant validity assesses the" uniqueness and distinctiveness of latent variables".

The results of the discriminant in Table 3 show that all "Pearson Correlation values are lesser than the square root of AVE (diagonally). Therefore, it is concluded that all the variables used in this study are unique and distinct.

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Table 4

Discriminant Validity (HTMT)

	COL	EFS	ESG	OP	UGE
Course Outline	-				
Environmental sensitized faculty	0.572				
Environmental sensitized graduates	0.496	0.443			
Organizational prosperity__	0.728	0.793	0.581		
Universities green environment	0.678	0.603	0.545	0.789	-

The results in Table 4 represent the HTMT values. The results of the HTMT show that ratios are within the recommended limit of 0.90.

Discriminant validity according to the HTMT criteria all the values presented diagonally are less than 0.90 and the HTMT ratio is less than 1.00, reflecting that all the constructs used in this study do not have similarities (Henseler et al., 2015).

Table 5

R^2 value

	R Square	R Square Adjusted	SSO	SSE	Q^2(1=SSE/SS)
Course Outline	0.361	0.361	4792	3487.511	0.272
Environmental sensitized faculty	0.271	0.271	3594	2855.374	0.206
Environmental sensitized graduates	0.265	0.262	2396	1870.42	0.219
Organizational prosperity__	0.981	0.981	5990	2225.711	0.628

Table 5 represents the values of R^2 and Q^2. This research used R^2 and Q^2 values to assess the predictive power. All of the values above R^2 are greater than 0.20. Whereas all values presented in the Q^2 column are greater than 0, suggesting adequate predictive relevance of the model (Henseler et al., 2015).

Through bootstrapping, we have tested two direct and three indirect relationships and have summarized the results in Tables 6 and 7

Table 6

Hypotheses Results

Direct Relation	Beta	T-Stat	P-Value	Results
Course Out Line -> Env. sensitized graduates (H1)	0.201	5.065	0	Accepted
Env. Sensitized faculty -> Env. Sens. graduates (H2)	0/18	3.1	0.002	Accepted

Table 6 represents the results of direct relationships between dependent and independent variables.

The values of the results suggest that both the variables, i.e. Course outline and environmentally sensitized faculty have a significant impact on environmentally sensitized graduates. According to the suggested results

Table 7

Moderating Effects Results

Indirect Relationship	Beta	T-Stat	P-Value	Results
Moderating Effect 1 -> Env. Sens. Graduates (H3)	0.07	2.351	0.019	Accepted
Moderating Effect 2 -> Env. Sens. Graduates (H4)	-0.01	0.363	0.717	Rejected
Env. Sens. Graduates -> Organizational Prosperity(H5)	0.032	6.176	0	Accepted

Table 7 represents the values of the results of the moderating effects of a university green environment, and Course outlines include knowledge, skills, and attitudes on Environmental gradations on environmentally sensitized graduates.

We have found support for both the direct and indirect relationships except the results of hypothesis H4 suggest an insignificant moderating impact (B=-0.01, T-stat=0.363, P-Value=0.717).

Discussion

The study's findings offer profound insights into the nexus between course outlines, environment-sensitized faculty, and the environmental cognizance of graduates. The first hypothesis (H1) postulated a direct association between the course outline and the environmental sensitization of graduates. The data strongly validates this hypothesis, suggesting that the course outline is instrumental in moulding the environmental consciousness of graduates. This observation is congruent with De Almeida et al. (2017) who underscored the significance of academic activities and course structures in shaping graduates' employability and decision-making capacities in environmental management. The second hypothesis (H2) delved into the impact of environment-sensitized faculty on the environmental awareness of graduates. The findings affirm this hypothesis, indicating that faculty members attuned to environmental issues can markedly influence the environmental awareness of their students. This aligns with Lambert (2015) who emphasized the role of personal, behavioural, and environmental factors on students' performance. It's also worth noting that while both the course outline and sensitized faculty play pivotal roles in influencing environmental awareness among graduates, the course outline appears to exert a slightly more pronounced influence. This suggests that while faculty sensitization is vital, the content and structure of the curriculum might have a marginally more dominant role in shaping students' environmental consciousness.

In summation, the study accentuates the criticality of both curriculum design and faculty sensitization in nurturing environmental awareness among graduates. As environmental challenges intensify, it becomes imperative for educational institutions to prioritize these elements to cultivate graduates poised to proactively address environmental concerns. For the third hypothesis (H3), the research proposed that the university's green environment moderates the relationship between the course outline and the environmental sensitization of graduates. The presence of a green environment within a university setting can enhance the effectiveness of the course outline in fostering environmental awareness. This is in line with the findings of Bilec et al. (2009) who emphasized the importance of integrating sustainability and product innovation into curricula, suggesting that a conducive environment, such as a green campus, can amplify the impact of the curriculum on students' environmental consciousness.

The fourth hypothesis (H4) explored the moderating impact of the university's green environment on the relationship between sensitized faculty and environment-sensitized graduates. Faculty who are already sensitized to environmental issues can further enhance their impact on students when operating within a green university environment. This resonates with the study by (Ortiz et al., 2015), which highlighted the role of knowledgeable mentoring faculty in shaping students' awareness of sustainable design issues and career motivation in the field.

In essence, while course outlines and faculty sensitization play pivotal roles in shaping graduates' environmental awareness, the presence of a green environment within the university can significantly enhance these effects. This underscores the importance of holistic approaches in environmental education, where curriculum design, faculty sensitization, and the physical environment work to produce environmentally conscious graduates.

The fifth hypothesis (H5) tests the assumption that environmentally sensitized graduates employed help in achieving organizational prosperity. The result of this test emphasizes the vital role of environmental sensitization of graduates in driving organizational prosperity. This positive association is consistent with the observations of Salamatov et al. (2020) who highlighted the significance of professional environmental and economic competence in university graduates, suggesting that such sensitization can have broader implications for organizational and societal outcomes. Furthermore, the research by Lalani et al. (2021) on the financial performance of major teaching hospitals in the U.S. underscores the importance of external environmental dimensions, hinting at the broader implications of environmental sensitization on organizational success.

Conclusion

This study has been conducted in light of SDG 13's sub-goal 13.4 to find the logic of the SDGs set by the UN in the backdrop of the increasing environmental challenges globally, particularly in the developing world. For this purpose, universities' curriculum, faculty, university environment, university graduates and their impacts on the prosperity of IT companies have been checked as sub-goal 13.4 of SDG seeks "Build Knowledge and Capacity to Meet Climate Change" in Pakistani context. This study is justified as the prime source of knowledge is the university from where the graduates make their way to the industries for performance as their knowledge and capacity have been built by them.

The results of the study, clearly indicate the importance of a green curriculum, green-oriented faculty, green outlook of the campuses and environmentally sensitized graduates for the prosperity of the organizations operating in Pakistan are a requirement. The findings of this study are also unique in the sense that the people working in the IT industry are less concerned about the green environment as they assume that the IT industry is not a big contributor to air or water pollution as they work with the non-smoke led machine or without the use of water. However, the fact is, presently, the ICT sector contributes over 2% of global emissions. Moreover, if the trend continues, by 2040 it will constitute 15% of global emissions which will be half of the world's transportation sector's emissions (Tandem n d). The results of the study support the environmental development initiatives taken by the UN under SDG 13. It further reinforces the efforts of the universities and industries being dedicated to environment sensitization to their stakeholders and builds knowledge in the field of green organizational development.

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