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Sustainability in the Decision Making of Pakistan Public Universities: A Vital Initiative

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Abstract

The higher education institutions (HEIs) bear a prime responsibility to incorporate sustainability in their functions of teaching, learning, research, operations and services in order to prepare their students to lead in maintaining a balance in economic, environmental and social spheres. However, the reasons to embed sustainability in HEIs have been a variable phenomenon. This paper intends to explore why it is compulsory to make decisions for sustainability at Pakistani Public Universities (PPUs). The nature of the study being exploratory dictated to accomplish it under the grounded theory approach. The sample was selected based on the purposive sampling technique as the participants, academic administrators, had the capacity to decide on the need of sustainability. One-on-one audio recorded interviews were conducted to take deeper understanding of ten participants on the need of sustainability. These interviews were transcribed and analyzed based on the thematic analysis that produced three themes: decision making for sustainability, policy issues, and awareness initiatives. The findings showed that decision making for sustainability is carried out from two different sources: decision making by the Higher Education Commission (HEC) and decision making by the university charter. The findings also highlighted that though there are awareness initiatives yet the concerted and coordinated efforts to promote sustainability are missing from the decision making of PPUs. This study was conducted to a limited number of Pakistan Public Universities. Thus, the findings may not be generalized. However, these findings have the characteristic of transferability to the public universities only and not the private ones. The study implied to explore further the ways through which sustainability can be integrated in PPUs' functions.

Keywords: Decision making, Sustainability, Pakistan public universities.

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Introduction

Sustainability being a mantra among the discourses of academic, non-academic, business, and government institutions since the closing of 21st century has drawn greater attention of key stakeholders (Hecht et al., 2012; Lozano, 2007; Yáñez, Uruburu, Moreno, & Lumbreras, 2019).Containing a number of interpretations about its integration and application, the concept of sustainability began to draw the attention of scholars, researchers and practitioners from the international welfare, governing, non-governing and academic institutions in the form of charters, declarations, summits, and conferences(Adlong, 2013; Filho, 2000; Lozano, Lukman, Lozano, Huisingh, & Lambrechts, 2013; Martins & Pato, 2019).

These efforts have emphasized on the higher education institutions (HEIs) as the central point with the aim of advancing and achieving sustainability(Beringer & Adomßent, 2008; Clugston & Calder, 1999; Conceição, Ehrenfeld, Heitor, & Vieira, 2006; Disterheft, Caeiro, Azeiteiro, & Filho, 2015; Scott, 2018; Velazquez, Munguia, Platt, & Taddei, 2006), as these institution (HEIs) bear a profound responsibility to incorporate sustainability in their functions such as teaching and learning, research, operations and services with respect to prepare the students to lead in maintaining a balance in economic, environmental and social spheres(Compston, 2010; Hopkinson, Hughes, & Layer, 2008; Zyulyaeva & Pertceva, 2019).Grounding on the framework of the triple bottom line of sustainability: environment, economic and social sustainability (Elkington, 1997), most of the HEIs are inclined towards the environmental sustainability that is the non-academic aspect of sustainability (Alshuwaikhat & Abubakar, 2008; Ernst, Blood, & Beery, 2017; Ferrer-Balas et al., 2008). Some have preferred the social aspect of sustainability to the environmental one(Yung, Chan, & Xu, 2014); while a very little number of institutions have focused on the economic sustainability at the HEIs. In this way, embedding sustainability in HEIs' functions has been a variable phenomenon(Chalkley & Sterling, 2011; Savanick, Strong, & Manning, 2008; Yáñez et al., 2019)that has created an imbalance among the three aspects of sustainability.

The concept of sustainability aspects has got a phenomenal and variable growth. A number of scholars (Kitamura & Hoshii, 2014; Lidgren, Rodhe, & Huisingh, 2006; Lozano, 2006; Melanie DuPuis & Ball, 2013)have reported the first and foremost responsibility of the HEIs to revise the curriculum in order to advance and achieve sustainability in a comprehensive way. The revision of curriculum in line with the purpose of sustainability helps to define sustainability in this study that is referred to as, "sustainability requires continuous improvement, adaptation, and collective problem solving in the face of complex challenges that keep arising" (Fullan, 2005, p. 22). The definition sheds light on the fundamental problem of change that is needed at the HEIs.

Elaborating the definition a bit further, it becomes clear that complex challenges indicate the issues of sustainability such as maintaining a balance in the economic, environment and the social aspects of sustainability. While, the collective problem solving shows the comprehensive steps for maximum good of all the HEIs' stakeholders and their interaction with the triple bottom line framework of sustainability. Thus, the need of sustainability with the aim of revising the curriculum to prepare the students to face the complex challenges in a leading way depends upon how the decision makers of the HEIs take it.

Decision making at HEIs is considered a major pillar of an organization that is carried out by different committees in line with the different functions of the HEIs(Castro, Yamada, & Arias, 2016; Oliveira, 2007). To embed sustainability in HEIs' functions, there are two types of decisions made to promote it: decision making for academic activities and decision making for non-academic activities. Different bodies such as board of studies, advanced board of studies and research, academic council, and syndicate or senate look into the issues of academic activities such as the curriculum revision, research development and teaching and learning being the mainstay of the universities (Anwar, Yousuf, & Sarwar, 2011). Decisions about non-academic activities such as campus maintenance, transportation and facilities are carried out by engineering department, transport and other relevant departments.

Decision making about academic and non-academic activities is regulated by the Charter of the universities and the state regulatory body. The state regulatory body can be in the form of Ministry of the higher education, the third party in the form of commission or by both the state and the commission at national level (Sam & Dahles, 2015).Both the university charter and the state regulatory body work collaboratively to embed sustainability in academic and non-academic activities. Thus, it is established that sustainability in any form either in curriculum revision, research development, teaching and learning process or maintenance of the campus has become an inevitable issue for the HEIs(Krizek, Newport, White, & Townsend, 2012; Loorbach, 2007; Scott, 2018; Sharp, 2009).However, there is a lack of embedding sustainability in decision making in Pakistan perspectives. This study intends to fill this gap with the aim of exploring the need of sustainability in decision making at Pakistan Public Universities. How does the literature on the need of sustainability in decision making look into it is presented in the below section.

Literature Review

Sustainability being an integral part of inter and intra-generational development has taken a special place in HEIs' functions since the Brundtland Commission (Brundtland GH, 1987) and is still in developing phase(Ceulemans, Molderez, & Van Liedekerke, 2015). The rationale for HEIs to embed sustainability in their functions is based on the relationship of these institutions with industry and society(Burns, 2012). As HEIs train

the graduates who are the leaders of tomorrow (Dlouhá, Glavič, & Barton, 2017; Kruss, McGrath, Petersen, & Gastrow, 2015; Sterling & Scott, 2008; UNCED, 1992). It is HEIs where training of human capital is determined to enable them to deal with emerging challenges (Hopkinson et al., 2008; Kitamura & Hoshii, 2014). Thus, HEIs bear a profound responsibility to incorporate sustainability in their functions such as teaching and learning, research, operations and services with respect to prepare the students to lead in maintaining a balance in economic, environmental and social spheres(Niu, Jiang, & Li, 2010; Scott, 2018; Shephard, 2008).

The approach of HEIs in embedding sustainability in their functions have been a variable phenomenon. The variability in addressing the issues of sustainability is by virtue of the priorities of HEIs (Drahein, De Lima, & Da Costa, 2019; Holdsworth & Thomas, 2015; Moore, 2005). Some HEIs focus on sustainability as they consider it as an avenue for creating new jobs and engaging the graduates for sustainable development (de Aguiar & Paterson, 2017). While some others consider sustainability as the environmental sustainability and link it with the environment only. These priorities provided a direction to HEIs. Thus, those HEIs who started their journey towards sustainability in tandem with the sustainability concept evolution, they are leading in promoting sustainability(Disterheft et al., 2015). In addition to that, they are setting an example for the institutes who lagged behind to take sustainable initiatives to promote sustainability. However, the division of the HEIs in developing and developed countries becomes inevitable here. In this regard, the current study was conducted in one of the East Asian developing countries, Pakistan.

To review the efforts of Pakistan to promote sustainability, it is necessary to understand that Pakistan got independence from British rule on 14th August, 1947. Considering the priorities of the HEIs, the status of higher education since its independence was very weak as Pakistan inherited only one university. Thus, the status of higher education was very miserable and needed a lot of efforts in order to be self-sufficient in the development of human capital. In addition to that, by the closing of the 20thcentury, higher education in Pakistan was confined only to the teaching. However, the inception of the Higher Education Commission (HEC) began to transform higher education (Pakistan, 2001). Thus, the efforts towards sustainability began too late to take place in Pakistan. The current study is in line with those efforts. This is an initial study with respect to the integration of sustainability in the decision making of Pakistan Public Universities.

Considering the integration and promotion of sustainability at PPUs, it is also vital to know the decision making role of HEC, a commission at state/national level, and the charter of the universities in Pakistan. Both the charter and HEC regulate decisions of academic and non-academic activities(Pakistan, 2002). A critical difference between the

HEC and the charter is that the HEC works at national/state level, while the charter is approved and work at provincial or federal level. Apart from this, HEC provides public universities with the policy guidelines for both academic and non-academic activities(Isani & Virk, 2005). The charter of the universities provides complementary guidelines to PPUs. The role of both of these bodies is to regulate decisions to promote sustainability.

The variability in making efforts and setting priorities for sustainability at HEIs have caused lack of sustainable education. Consequently, a lack of sustainable initiatives in universities' functions such as teaching, research, operations, and finance has prevented the promotion of sustainability at HEIs. In Pakistan, to embed sustainability in universities, especially in Public Universities, is the prime responsibility of Pakistan Environmental Protection Agency (PAK-EPA) in association with the university top management. In this regard, the Environmental Protection Act, 1997(Pakistan, 1997), states that, "The Federal Agency shall a) recommend environmental courses, topics, literature and books for incorporation in the curricula and syllabi of educational institution; and b) promote public education and awareness of environmental issues through mass media and other means including seminar and workshops". However, there is a lack of collaboration between Pak-EPA and educational institutes that has prevented the sustainable education and the promotion of sustainability at Pakistan Public Universities(Arif, 2009; Bukhari & Said, 2013). Based on such situations, a question can be raised that how the Pak-EPA communicates and coordinates with Pakistan Public Universities' management with respect to maintain the campuses and embed sustainable education under the concept of sustainability in universities.

Literature reviewed in the above section has highlighted the serious need of sustainability in decision making of HEIs in general and at PPUs in particular. The efforts of Pakistani universities for sustainability cannot only pave the way for sustainable development for the masses of Pakistan but it is also a source to achieve sustainable development goals. The current study is an effort to explore the need of sustainability in decision making of PPUs. Sustainability, being in an initial phase, is investigated by the qualitative research. The following section sheds light that how the issue was explored.

Research Methodology

Based on the literature review (section 2), it is noticeable that the need and promotion of sustainability at HEIs can be categorized as leaders, strugglers and laggards. The vision and the mission supporting sustainable development can trigger its development efficiently. The need of sustainability in Asian perspectives is seriously needed than ever before. However, the initiatives for its promotion are still in an infancy phase. Evaluating the status of sustainability in Pakistan, our understanding directed us to say that there is

scarcity of literature on sustainability. This fact determined the selection of qualitative exploratory research approach to accomplish it under the grounded theory design. In research, the established and developed disciplines are investigated and re-investigated using various quantitative research designs(Tashakkori & Teddlie, 2010; Thomas, 2017). The rationale to use qualitative research approach for this study is that the field of sustainability in Pakistan is in developing phase. That makes it more appropriate to explore it through the lenses of qualitative research. Thus, we used open-ended semi-structured interview as a tool to collect the data from ten informed participants. The validity of this instrument was double-checked by one of the most senior experts in the field of sustainability. Regarding the reliability of the instrument, it is stated that findings have the characteristics of transferability but these findings cannot be judged as the findings of quantitative with regard to reliability.

We designed the criteria to select the potential participants for this study: the criteria was that the participants hold the academic administrative position, have the qualification in the field of sustainability, have teaching experience and have served in Pakistan Public Universities. Thus, we used the criterion purposive sampling technique(Creswell & Clark, 2011) to select the voluntary participants to enlighten us on the need of sustainability in decision making. The total number of these potential participants initially was nineteen but ten participants showed their interest to share their viewpoints and experiences on the subject of sustainability. These participants were identified, contacted and updated about the study. Thus, the total sample size was ten participants who were selected based on purpose sampling technique. Their permission was also sought to conduct the audio-recorded one-on-one interview. They were also fully assured that their identities and the institutional names would not be exposed and would be codified for research purpose. After having sought their permission, audio-interviews were conducted to take their deeper understanding on the need of sustainability. We developed the following questions based on the argument, “considering the dark side of the industrialization and increasing urbanization, there is a need of rethinking and revisiting about our actions towards our planet. What is the take-up of HEIs in this regard?”

1. Why is sustainability necessary in decision making processes?
2. How has Pakistan Environmental Protection Agency (Pak-EPA) contributed to the management/decision making of the university in terms of revising the curriculum for sustainable education in university programmes?

After having conducted the audio recorded interviews, we transcribed them one by one attentively, listened and re-listened to ensure the clarity and correctness. Upon this, these interviews were sent back to the participants to endorse these transcripts. In order to analyze these transcripts (data), the thematic analysis framework(Braun & Clarke, 2006)was employed. Based on the analysis, firstly data was coded. Secondly, the relevant

codes were assembled together. Finally, these assembled codes emerged in themes form. These themes are discussed in the following section.

Findings

The findings are presented in thematic forms. Three themes emerged from the data analysis. These are: decision making for sustainability, policy issues, and the awareness initiatives. These themes are discussed in detail in the following paragraphs.

Theme 1: Decision Making for Sustainability

This theme showed the findings in response to the need of sustainability in decision making at Pakistan Public Universities-simply, in response to the first research question. This theme highlighted the relationship of sustainability and decision making. The findings showed that decision making is for sustainability that is by two sources: decision making by the higher education commission (HEC) and decision making by the university charter. The Figure. 1 displays this theme and the relationship of its aspects.

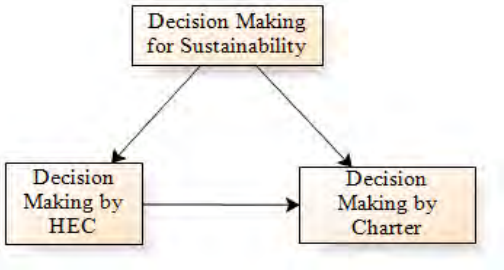

*Figure 1.*Decision making for sustainability

The Figure. 1 exhibits one way directional relationship between decision making for sustainability, the decision making by the HEC and the decision making by the university charter. Apart from this, there is a one way directional relationship between the decision making by the HEC and the decision making by the university charter.Based on the findings, decision making by the HEC and the university charter complements the process of university regulations for sustainability. As the participants stated,

> "…my university as well as any other public sector university is regulated by charter given by the government, Participant-10."

> "Annual budgeting is done directly by the Higher Education Commission and the university, Participant-9."

The above quotes of the participants highlighted the one purpose: sustainability of the university by both decision making sources. However, there is a difference between

these sources with respect to making decisions for sustainability. The first source, the charter of the university is directly implemented by the university decision making bodies; while the second source, the HEC, is indirectly implemented by the chief executive officer (Vice Chancellor) of the university. The charter of the university considers the academic and non-academic areas of sustainability individually. As the participants stated,

> "our faculty members whenever they feel that they want to make some sort of changes in curriculum what they do they request respective board of studies, Participant-7."

> "We have also the vehicles and the university transportation which is under the maintenance or by the head one of the deputy director. Deputy Director from the registrar office who looks after the activities regarding transportation, Participant-6."

The participants' responses in the above quotes stated the need of sustainability in different areas: academic and non-academic. In academics, the board of studies is the decision making body that looks after the revision of the curriculum and its delivery - teaching and learning process. In environmental sustainability, the participants highlighted that there is a separate department that looks after the transportation in order to facilitate the students and teachers and not to pollute the environment with respect to carbon emission from the transports at the campus. However, it is clear from the participants' responses that academic and non-academic areas of sustainability are maintained separately and not in an integrative way - the combined effort of academic and non-academic decision making bodies for sustainability.

This theme has shown the sources of decision making and their relevant areas for sustainability. It also showed the territorial way of decision making for academic and non-academic activities that is inconsistent with the prevalent efforts for sustainability at the higher education institutions. The next theme shows how policy issues create hurdles to maintain the areas of sustainability.

Theme 2: Policy Issues

The theme, policy issues, emerged in response to the contribution of Pakistan Environmental Protection Agency (Pak-EPA) towards the decision making of Pakistan Public Universities for the purpose of sustainability - in response to the second research question. The findings showed the areas of policy that are creating hurdle in order to maintain the sustainability at Pakistan Public Universities. Based on the findings, there are three areas that are relevant to the policy for the sustainability of the universities, as the Figure. 2 exhibits this theme.

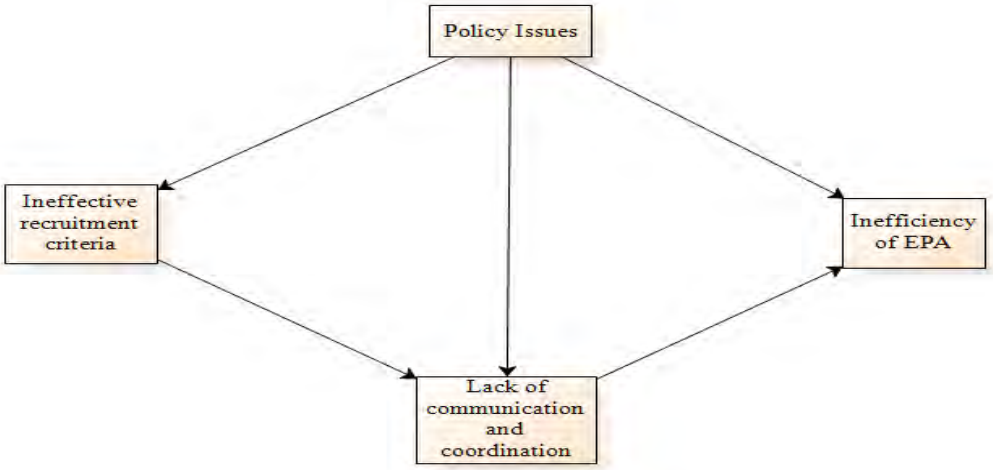

*Figure 2.*Policy issues

The Figure. 2 shows the directional relationship of policy issues with three areas: ineffective recruitment criteria, lack of communication and coordination and inefficiency of the Environmental Protection Agency. In addition to that, the Figure. 2 displays the directional relationship of ineffective recruitment criteria with the lack of communication and coordination that resultantly affects the efficiency of the Environmental Protection Agency. The following paragraphs describe these areas with reference to the participants' responses.

Based on the participants' responses, the first policy issue was relevant to the recruitment of the university top management. As the participant stated,

> "It [recruiting criteria] should be revised and we should look into those professors who have really worked you know, 24/7. And they have done research. And they should not be appointed in the same university. That's another important issue. One from here and another from there. Reshuffling is very important, Participant-8."

The above quote highlights three aspects of the need of sustainability and decision making. Firstly, it makes clear that the university top management, the chief executive officer (CEO), of the university is directly recruited by the government who within the framework of the above mentioned two sources of the decision making (Fig. 1) draws and determines the areas and boundaries of sustainability at Pakistan Public Universities. The findings have shown that the recruitment criteria needs to be defined

and the opinions of the university professors should be sought in order to decide on the selection of the CEO of the university. Secondly, it shows the relationship of the government with the university management in general. The sustainability of the universities in every aspect is the prime responsibility of the government, as the government is the sole bearer of the university expenditures in terms of regulating university activities. In such scenarios, the ineffective recruitment criteria causes to put the wrong people in the right place. Thus, it implies that the vision of university is neither visualized nor realized to sustain the campuses. Finally, when such situation takes place, the decision making bodies cannot weigh equally the sustainability: academic, non-academic/environmental and financial. While, sustainability can only be pursued when there is a synergistic and concerted efforts.

The second policy issue that was found in this study is the lack of communication between the Environmental Protection Agency (EPA) and the decision making bodies of the public universities. The role of EPA is to communicate with the public universities in order to devise and embed the activities (academic and environmental, as the name of this agency is)in the universities' functions such as teaching and learning, curriculum revision and maintaining the campus. Thus, the isolatory condition of concerned agencies suggests exploring further the ways of such territorial performance, as the EPA has not communicated with the university management in terms of discussing to deal with the issues of sustainable education by revising the curriculum. As the participant stated,

> "They [EPA] are not very efficient, I must say. They have not given anything yet. They have not approached to us. We ourselves for our own safety and security at the campus, for our students, for our faculty, and for better environment we have approached and we invited the director. But they have not done anything by themselves, no curriculum has been revised by them, Participant-4."

> "The EPA does not keep a liaison with the academic institutions regarding environmental sustainability which is very much required and is the need of the time, Participant-5."

The participants' responses highlighted the lack of communication and coordination of the PAK-EPA with the university top management despite of inviting the Pak-EPA officials for sustainability. This finding indicates the lack of interest from the Pak-EAP to address the issues relevant to sustainability in association with the university. As revision of curriculum is one of the best and prime initiatives to bring changes in the attitudes, skills and abilities of the students, which is not taking place with reference to the Pak-EAP communication and coordination.

The third policy issue that participants highlighted is about the performance of the Pak-EPA. In one way this is relevant to the above discussed issue. The participants stated its inefficiency as given below,

> "No environmental impact assessment has been done even for the Metro bus system which has been introduced in city X. And for emergent purposes or emergency situations the city has been actually debarred. It has been divided by those large grills of iron into two major parts. And there are less crossing areas which I think could really be a problem in case of a havoc or any environmental catastrophe, Participant-5."

> "Environmental Protection Agency has not intervened in the institute, Participant-3."

Since, the Pak-EPA is responsible for maintain in the environment and keeping environmental sustainability at par, doing an environmental impact assessment of any project is vital practically. In the above quote, the participant highlighted the negligence of the Pak-EAP in one of the transport projects that was carried out without assessing the environmental impact of that project. Similarly, with reference to the environmental sustainability at the campuses, there is a lack of environmental impact assessment of the campuses that has become a serious need to address the global issues of sustainability. Thus, the lack of communication and coordination of the Pak-EPA with other institutions apart from the Pakistan Public Universities becomes more pronounced here. It is drawn from the above quotes that Pak-EAP is inefficient in its performance, especially, for its establishment purpose to maintain environmental sustainability across all the spheres of life in Pakistan with the association of different governmental departments.

This theme has shown the policy issues with regards to negligence of sustainability in decision making. Based on the participants' responses, there is a need of revision of the recruitment criteria for the university top management and communication and coordination between the Pak-EPA and the university decision making bodies, as environmental issues are not addressed by these bodies. This theme implies the lack of vision with respect to promoting sustainability and more specifically to weigh equally to the areas of sustainability: academic, non-academic and financial. The next theme is closed with this theme with reference to promoting awareness initiatives for sustainability.

Theme 3: Awareness Initiatives

This final theme emerged in response to the initiatives for making the higher education institutions' (HEIs) stakeholders aware about the importance of sustainability. The following Figure. 3 displays this theme.

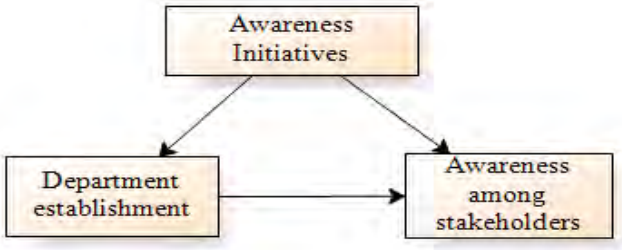

Figure 3. Awareness initiatives

The Figure. 3 shows a directional relationship of awareness initiatives with department establishment and awareness among stakeholders of the HEIs. In other words, there are two types of initiatives that Pakistan Public Universities have taken in order to address the issues of sustainability. The first initiative is the fundamental one that how the disciplinary environmental and sustainable education can be promoted and consequently how the research related to the environment and sustainability can be carried out. In this regard, the universities have established the department with the name of earth and environment or sustainable development department or any other relevant name. As the participants stated,

> "I have opened a department, independent department of Environmental Sciences encompassing the environmental physics, environmental chemistry and environmental biology, Participant-4."

> "We have our own horticulture department of plantation and things like that. They [departmental management] are contributing well who develop a good environment, Participant-2."

Based on the participants' responses, it was found that the prime initiative to extend the contribution in the sustainability field has taken place at Pakistan Public Universities. As the above quotes state that the purpose of the establishment of these departments is not only to consider the natural environment but also to integrate the environmental sciences with other sciences' departments. In this way, the first initiative is a foundational step to take further initiatives. In line with this, the next initiative that is being taken with reference to sustainable education is making different stakeholders aware about sustainability. As it was stated,

> "We have a department of the environmental sciences..… I also encourage them to have a linkage with all the stakeholders, Participant-1."

Since, the second initiative is based on the first one, it is still in initial phase. Regarding the stakeholders, the students and the faculty of the established departments are directly aware of sustainability, sustainable development, environmental education and the sustainable education. However, the above stated quote indicates the other disciplines and departments' stakeholders at the campus, too, in order to disseminate the significance of sustainability. In addition to that, it indicates the futuristic initiatives that are to bridge the gap between the university and the community to transform the communities into the sustainable communities.

This theme has shown that initiatives about awareness of sustainability are being taken. The findings have shown that these are just taken and the journey towards the sustainable university and consequently transformation of societies and the communities is still far away from the destination. Thus, the initiatives are inadequate and there is a need of more visionary and strategic thinking for the purpose of sustainability. It also implies that lack of communication and coordination between different departments is a major barrier to promote sustainability.

Discussion

This study intends to explore the need of sustainability at Pakistan Public Universities' decision making and the way they coordinate with the relevant departments to promote sustainability. Decision making at universities is done by the HEC and the university charter. Decision making by the HEC is in specific areas of sustainability, such as the finance. With respect to decision making, this study has found that decision making determines and draws the sustainability areas in Pakistan perspectives. These findings in terms of decision making for sustainability are consistent with the study conducted by Loorbach (2007)and Disterheft et al. (2015). Sustainability of academic, non-academic and finance are maintained by the decision making of the charter and the HEC. In this way, these sources of decision making look into sustainability in Pakistan. These findings are consistent with the study conducted by Anwar et al., (2011). The findings have shown that lack of complete awareness and coordination have caused inefficiency of the decision making. With respect to the lack of integration between sustainability areas, these findings are supported by the study ofSavanick et al. (2008). Thus, this study recommends exploring the ways of integrating these areas.

Considering the policy issues to promote sustainability, these findings are supported with the study conducted by Hayward (2008) who emphasized on the need of strategic planning in the developing countries. These findings are consistent with the study conducted byAscher (2007) in the way that policy is the first and foremost drive to embed sustainability at the higher education institutions. These findings are also supported by Rogers (2003) in a negative way who emphasized on importance of

communication for a new idea, process or innovation such as sustainability is that demands concerted, comprehensive and synergistic efforts to realize this idea into practice. Thus, based on the findings, it can be stated that the initiatives should be taken by revising recruitment criteria and the visionary leaders who can contribute in minimizing the global issues by transforming the local communities.

Recommendations

Based on the findings, some recommendations are proposed to be taken as suggestions to promote sustainability at PPUs. First of all, HEC and the charter should work collaboratively through thorough deliberations in order to promote sustainability. Secondly, EPA should coordinate with the PPUs so that sustainability can be integrated in university functions and promoted. Thirdly, EPA should also work collaboratively with PPUs to make stakeholders aware about the principles and promotion of sustainability. For awareness campaign EPA can arrange periodical conferences, seminars and road-shows to promote sustainability. Fourthly, policy for sustainability can be devised in association with EPA and HEC. Based on the findings, EPA needs to communicate and collaborate with HEC in terms of drafting a policy that specifically will focus on the promotion of sustainability at PPUs. As HEC is a regulatory authority, if it gives a policy, with the assistance of EPA, to PPUs then it will be a binding for PPUs to follow it. Fifthly, communication and coordination between relevant departments such as EPA, HEC, and universities should be encouraged and promoted. The arrangement for communication and coordination is also vital to revise the curriculum to maintain a balance between academic and environmental sustainability at PPUs. Finally, strategic decision making should be promoted in order to streamline the actions with the policy for sustainability at PPUs.

Limitations and Implications

This study was conducted to a limited number of Pakistan Public Universities. In addition to this, the data was collected by one method the audio-interviews. Based on these limitations, the findings cannot be generalized. However, these findings have the characteristic of transferability to the public universities only and not the private ones, as the management and the decision making of the private universities is different from that of the public ones. This study was conducted at public universities; further study can be conducted to explore the status of sustainability in Pakistan Private Universities. With regard to the findings of this study, it implies to explore the reasons for lack of practice of sustainability at Public Universities.

Conclusion

The need of sustainability in decision making of Pakistan Public Universities was explored with the association of Pak-EPA. The findings have shown that the need of sustainability is established and pursued in line with the decision making sources:

decision making by the university charter and decision making by the HEC. These sources determine sustainability in university functions such as teaching and learning, curriculum revision, finance and the maintenance of the campus in the form of the non-academic activities such as transportation. These activities are carried out in a territorial way. In addition to that, the potential source (Pak-EPA) to combine these activities and communicate and cooperate with the university decision making was found in passive form. In this way, though the awareness initiatives for the importance of sustainability are being taken, there is a lack of concerted and synergistic efforts from the relevant departments. The findings also highlighted that sustainability at PPUs is still in developing phase. The findings imply the existence of lack of vision and lack of collaboration among relevant stakeholders.

Based on the findings, it can be stated that the officials of Pak-EPA need to communicate, collaborate and coordinate with the decision makers of PPUs in order to minimize the barriers and promote sustainability and sustainable education, as well for drafting the programs to encourage the awareness among all the stakeholders of the HEIs. Apart from this, the higher education commission (HEC) can invite the decision makers of the Public Universities, Pak-EPA officials and the political representatives in order to design the programs that specifically focus on the sustainable education and sustainable education research, as it is needed in response to combat with every type of pollution and the climatic changes in the East Asia. In this way, the strategies from each department such as the HEC, the Pak-EPA and the Public Universities' top management can be devised to transform the university functions for the purpose of sustainability.

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